

## RESEARCH RESOURCES

# DRUG SUPPLY PROGRAM CATALOG

**24<sup>TH</sup> EDITION  
MARCH 2015**

CHEMISTRY AND PHYSIOLOGICAL SYSTEMS RESEARCH BRANCH  
DIVISION OF BASIC NEUROSCIENCE AND BEHAVIORAL RESEARCH

NATIONAL INSTITUTE ON DRUG ABUSE

NATIONAL INSTITUTES OF HEALTH

DEPARTMENT OF HEALTH AND HUMAN SERVICES

6001 EXECUTIVE BOULEVARD

BETHESDA, MARYLAND 20892-9555



National Institute  
on Drug Abuse

On the cover: CPK rendering of nalfurafine.

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## A. INTRODUCTION

**The National Institute on Drug Abuse Drug Supply Program (DSP)** is administered by the Chemistry & Physiological Systems Research Branch, Division of Basic Neurosciences & Behavioral Research. As part of its mission to lead the nation in bringing the power of science to bear on drug abuse and addiction, NIDA provides researchers with chemicals and research probes that are either unavailable, difficult to obtain, or very expensive to purchase. In addition, this program also provides analytical services of experimental samples used in research.

**Drugs and Research Compounds.** The NIDA DSP provides a variety of research chemicals and controlled substances for research purposes to all investigators working in the area of drug abuse, addiction, and related disciplines. The availability of controlled substances is regulated by the United States Drug Enforcement Administration (DEA), Department of Justice under the Controlled Substances Act (CSA), and Psychotropic Convention. These substances include hallucinogens, stimulants, sedatives and hypnotics, narcotics, designer drugs, cannabinoids, marijuana, and other miscellaneous categories of drugs. The NIDA DSP maintains an inventory of such drugs and other chemical substances. In addition, continuous efforts are made to synthesize new compounds and add them to the inventory. The stability and purity of all such compounds are monitored and maintained.

**Marijuana and Marijuana Cigarettes.** Marijuana is grown, harvested, processed and analyzed for delta-9-THC and other cannabinoids, stored under controlled conditions to preserve its purity and stability, and distributed for approved research purposes. This substance is subject to control under Schedule I of the CSA (21 U.S.C. 801 et seq.), the most restrictive of the five federally-regulated classes of controlled substances. Persons who wish to conduct research using marijuana for purposes other than research, such as forensic analytical standards, or any other law enforcement purposes must first obtain a special DEA registration under the CSA and then submit a request to NIDA along with required documents for consideration. It should be noted that priority for supply is given to researchers conducting federally-funded studies.

**Nicotine Research Cigarettes.** The NIDA DSP also houses a variety of nicotine research cigarettes (NRC) with specific characteristics for nicotine content and yield, tar, menthol, and ventilation (NOT-DA-13-002). As with other research chemicals or controlled substances supplied by the DSP, NRCs can be provided to investigators working in the area of drug abuse, addiction, or related disciplines at no cost. At this time, NRCs are of limited supply and priority is given to federally-funded grantees including

those working on areas related to the tobacco regulatory science authority of the NIDA Drug Supply Program and the United States Food & Drug Administration Center for Tobacco Products (FDA/CTP). A separate administrative review by the FDA/CTP, in collaboration with NIDA, is required for those working on projects within the FDA/CTP priority areas.

In order to obtain controlled substances, other research chemicals, marijuana, or marijuana and nicotine research cigarettes, research investigators are required to submit their requests along with necessary documents to the NIDA DSP for consideration. Applicants (domestic and foreign) without an NIH grant should note that their research protocol will require additional scientific review. Furthermore, research investigators who are not funded by NIH and plan to use marijuana or marijuana cigarettes in human research should be aware that their research protocol is subject to additional review as required by the US Department of Health and Human Services, Public Health Services. If marijuana is to be used for purposes other than human research, the request is forwarded to NIDA's Office of the Director for review and recommendation.

Foreign applicants must provide necessary documentation to demonstrate that they are allowed to import controlled substances, research chemicals, or marijuana cigarettes into their respective countries.

Approved research investigators are provided with pure drugs, compounds, or marijuana cigarettes along with their respective analytical data sheets.

## **B. NIDA DRUG SUPPLY PROGRAM (DSP) ORDERING GUIDELINES**

To obtain research chemicals and controlled substances from the NIDA DSP, research investigators should prepare and submit a Request Package consisting of the following items for consideration:

1. A cover letter including:
  - a. Name, phone number and e-mail address of Research Investigator (and consignee, if applicable),
    - Provide a current and complete address that would allow shipment by a suitable carrier such as Federal Express (FedEx) (i.e. street address, Building name or number, room number, city and state) - This address should coincide with the address on the DEA order form.
    - For radio-labeled drugs or chemical substances, indicate the address at which the shipment can be made . In case the shipping address is different from the researcher's address, a current copy of the radioactive material license must be submitted.
  - b. If applicable, provide the NIH grant number, project title, and name and contact information of NIH Program Officer. If a non-grantee, no information on program Officer and grant number is required.
  - c. Name and quantity of compounds or other materials being requested, The total radioactivity (preferred unit of measurement, mg per vial, etc.)
    - If multiple studies/tasks are planned, combine projected needs into a single request rather than placing several separate requests in a short time interval. The request should generally be limited to four items or drugs/compounds per request to avoid delay.
    - Avoid drug abbreviations, and include specifications such as (+), (-), (dl), base, or salt. You may consult the NIDA DSP Catalog for such information.
2. The Research Investigator's curriculum vitae (if not a funded grantee)
3. A detailed research protocol clearly indicating:
  - a. The specific aims and goals of proposed study (preferably the study abstract)
  - b. The number of experiments and experimental subjects
  - c. The dosage or concentration of drugs

- Calculate required amount of drugs or chemical substances for your project and submit your request well in advance of your planned experiments or tasks, or 6-8 weeks prior to depletion of stock on hand for ongoing studies/tasks.
- d. Justification for quantity of compounds/drugs, or other substances in request requested.
- If the request is related to a previously submitted protocol, provide a reference to this protocol and a brief description of progress along with references to resulting publications, if any.
4. A statement or commitment that NIDA will be acknowledged in research publications resulting from the use of supplies received from the NIDA Drug Supply Program.
  5. A completed DEA Order Form-222 for Schedule I-II controlled substances.
    - a. DEA Form-222 is not necessary for drugs in Schedules III-V, but a valid registration for the appropriate schedule is required.
    - b. Under the third column of DEA Form-222 (Size of Package), list quantities as bulk weight. Radio-labeled compounds must be listed by weight and NOT by units of activity.
  6. A copy of current DEA registration, Form DEA-223 for controlled substances.
    - a. It is the Research Investigator's responsibility to keep his/her registration current and to verify the drug code for requested drug.
    - b. Investigators who request a Schedule I drug and/or Etorphine HCl or Diprenorphine must provide DEA documentation under which the requested drug is covered under their current DEA registration.
    - c. Avoid drug abbreviations, and include specifications such as (+), (-), (dl), base, or salt, as appropriate.
  7. A copy of a Nuclear Regulatory Commission license for radioactive compounds.  
For more information, you may visit the Nuclear Regulatory Commission licensing website.
  8. Research projects involving human subjects (Clinical research)
    - a. Investigational New Drug (IND) number and a copy of approved IND letter from the FDA. For more information, please visit the FDA IND Application website.
    - b. A copy of your Institutional Review Board (IRB) approval letter

- c. A copy of your Data Safety and Monitoring Plan
  - d. Proof of registration with clinicaltrials.gov (NCT #)
  - e. A copy of the study consent form(s)
9. For basic (non-human) research projects.  
A copy of the document demonstrating that the research is approved by the Animal Care & Use Committee and that adequate care in conducting animal research will be exercised (if applicable). For more information, please visit the Animal Care & Use Committee Animal Study Proposal website.
10. For ongoing research projects (This includes research previously supported by the NIH prior to request)
- a. Reference information pertaining to the previous protocol / FDA approval to the previous protocol
  - b. A brief description of progress (500 words or less)
  - c. A list of relevant publications.
11. Billing Information for Shipping (if applicable):
- a. US investigators should provide their FedEx account number to bill shipping charges,
  - b. International requests for controlled compounds should provide their United Parcel Service (UPS) Supply Chain Solutions account number to bill shipping charges. For non-controlled compounds the investigator should provide their FedEx account number.
12. Foreign research investigators must submit an Import Permit (preferably in English) issued by an appropriate agency of their government for internationally-controlled drug substances.
- a. The name of the supplier on the import permit must be listed as follows:

Research Triangle Institute  
Kenneth S. Rehder, Ph.D.  
William F. Little Medicinal Chemistry Building, Room 282  
3040 Cornwallis Road  
P.O. Box 12194  
Research Triangle Park, NC 27709-2194, USA
  - b. The import permit should be accompanied by a signed statement from the investigator to the effect that the drug will be used solely for the purpose of re-

search and will not be re-exported. The import permit must contain a clear address and individual name to which the requested drug is to be delivered (not a post box number). Shipment should be indicated on the import permit as Air Freight to this individual. Specify the appropriate port for customs clearance purposes and provide the name and address of the Customs Clearance Agent, if one is used.

- c. Please obtain the longest possible expiration date on import permits.
- d. Foreign investigators requesting drugs or other substances that are not very stable should be certain to make advance arrangements that would allow these drugs or other substances to be released to them expeditiously. This is particularly relevant when dealing with radioactive materials with high specific activity ( $>1.0$  Ci/mmol). These compounds are shipped as solutions in ice and will not stay cold for more than 48 hours; they must be retrieved and put in cold storage immediately to prevent decomposition.
- e. Foreign investigators should also be aware that compounds are shipped with a listed value for insurance purposes. Since this may cause problems with customs officials, investigators should determine in advance what steps should be taken to avoid these complications. Often an official statement that the compounds are for research only and have no commercial value is sufficient.

**Failure to comply with aforesaid guidelines may delay the processing of your request.**

#### **ADDITIONAL NOTES:**

1. ETORPHINE AND DIPRENORPHINE - Request for either of these two compounds should be made on separate order forms when ordering additional compounds at the same time. Etorphine hydrochloride and diprenorphine (free base or hydrochloride) are Schedule II drugs, however etorphine free base is a Schedule I drug. Therefore, etorphine free base should be ordered using DEA Form-222 as is appropriate for all Schedule I drugs.
2. CARFENTANIL, ETORPHINE AND DIPRENORPHINE – The DEA registration of a research investigator requesting these compounds must show the proper registration for such compounds.
3. For more information on the Drug Enforcement Administration registration forms including Form 222 and Form 223, please see: <http://www.deadiversion.usdoj.gov/drugreg/index.html>.

4. For more information about the FDA Investigational New Drug Application, please see: <http://www.fda.gov/Drugs/DevelopmentApprovalProcess/HowDrugsareDevelopedandApproved/ApprovalApplications/InvestigationalNewDrugINDApplication/default.htm>.
5. For more information on the Nuclear Regulatory Commission License, please see: <http://www.nrc.gov/about-nrc/regulatory/licensing.html>. Foreign applicants are required to submit additional documentation, including an import permit from the country into which the drug(s) are being shipped.

## **CONTACT INFORMATION:**

All requests or questions should be addressed to:

**Hari H. Singh, Ph.D.**

Phone: (301) 435-1310,

E-Mail: [hsingh1@nida.nih.gov](mailto:hsingh1@nida.nih.gov)

**Paul S. Hillery, Ph.D.**

Phone: (301) 435-1306

E-Mail: [phillery@nida.nih.gov](mailto:phillery@nida.nih.gov)

**Kevin Gormley**

Drug Supply Specialist

Phone: (301) 435-0264

E-Mail: [kgormley@mail.nih.gov](mailto:kgormley@mail.nih.gov)

**Chemistry & Physiological Systems Research Branch**

Division of Basic Neuroscience & Behavioral Research

National Institute on Drug Abuse, NIH

6001 Executive Boulevard, Room # 4262, MSC 9555

Bethesda, MD 20892-9555

Fax: (301) 594-6043

Phone: (301) 435-1310

## C. DRUG REQUEST CHECKLIST

1. A **cover letter** including the name and quantities of compounds or drugs being requested, grant number, and name, phone number and e-mail address of your program officer (for an NIH/NIDA grantee), your shipping address, e-mail address, phone and fax numbers.
2. A **recommendation letter** from your program officer in support of your request.
3. A **research protocol**, including justification for the requested quantity of compounds or drugs being requested.
4. A **DEA Form 222** (for controlled substances).
5. A copy of your current **DEA registration** (for controlled substances).
6. An **approved FDA letter** and **IND number** (for a clinical study).
7. A copy of an **NRC license** for radioactive compounds.
8. A **curriculum vitae** of the principal investigator, if applicable.
9. A **statement of commitment** that NIDA will be acknowledged in publications.

## D. SAMPLE DEA ORDER FORM 222

(THIS IS A SAMPLE OF A CORRECTLY COMPLETED DEA 222 FORM. PLEASE NOTE THAT ALL ENTRIES SHOULD BE IN THE APPROPRIATE COLUMNS.)

See Reverse of PURCHASER'S Copy for Instructions		No order form may be issued for Schedule I and II substances unless a completed application form has been received. (21 CFR 1305.04)		OMB APPROVAL No. 1117-0010													
TO: (Name of Supplier) NIDA		STREET ADDRESS 6001 Executive Blvd, Room 4282, MSC 9555															
CITY and STATE Bethesda, MD 20892-9555		DATE XX-XX-XXXX	TO BE FILLED IN BY SUPPLIER SUPPLIERS DEA REGISTRATION NO.														
TO BE FILLED IN BY PURCHASER																	
LINE No.	No. of Packages	Size of Packages	Name of Item	National Drug Code	Packages Shipped												
1	3	0.1 mg	9-Carboxy-11-nor-delta-9-THC														
2	2	0.1 mg	9-Carboxy-11-nor-delta-9-THC-5'-2H3														
3	5	0.1 mg	9-Carboxy-11-nor-delta-8-THC														
4	1	1.0 mg	11-Hydroxy-delta-9-THC														
5	3	0.1 mg	delta-9-THC-5'-2H3														
6	1	100 tab	75 mg Morphine Base Implant tablets														
7	1	20 g.	Cocaine HCl														
8																	
9																	
10																	
7 LAST LINE COMPLETED		SIGNATURE OF PURCHASER OR HIS ATTORNEY OR AGENT <i>John Doe</i>															
Date Issued XX-XX-XXXX	DEA Registration No. XXXXXXXXXXXX	Name and Address of Registrant <b>SAMPLE ONLY!!</b>															
Schedules 1,2,3,4N,4,5																	
Registered as a XXXXXXXXXXXX	No. of this Order Form 123456789	Please NOTE: Forms which do not indicate the number of packages, the size, the name of item, and the number of lines completed, or those which are not dated or signed by an authorized individual, WILL BE RETURNED.															
DEA Form -222 (Jun. 1983)		U.S.OFFICIAL ORDER FORMS -SCHEDULES I & II DRUG ENFORCEMENT ADMINISTRATION SUPPLIER'S COPY 1			39558785												
<hr/> <b>CONTROLLED SUBSTANCES REGISTRATION CERTIFICATE</b> <b>UNITED STATES DEPARTMENT OF JUSTICE</b> <b>DRUG ENFORCEMENT ADMINISTRATION</b> <b>WASHINGTON, D.C. 20537</b>																	
<p>The Controlled Substances Act of 1970 reads in part as follows:</p> <p>Sec. 304. (a) A registration instrument "to manufacture, distribute, or dispense a controlled substance may be suspended or revoked by the Attorney General upon a finding that the registrant-</p> <ul style="list-style-type: none"> <li>(1) has materially falsified any application filed pursuant to or required by this title or title III,</li> <li>(2) has been convicted of a felony under the title or title III of any other law of the United States, or of any State, relating to any substance defined in this title as a controlled substance;</li> <li>(3) has had his State license or registration suspended, revoked, or denied by competent State authority and is no longer authorized by State law to engage in the manufacturing, distribution, or dispensing of controlled substances.</li> </ul>																	
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SCHEDULES	BUSINESS ACTIVITY	DATE ISSUED															
XXXXX	XXXXXXXXXXXXXXXXXXXX	XX-XX-XX															
<p><b>SAMPLE ONLY!! A COPY MUST BE INCLUDED WITH EVERY ORDER!!</b></p>																	
<hr/> <p>THIS CERTIFICATE IS NOT TRANSFERABLE ON CHANGE OF OWNERSHIP, CONTROL LOCATION, OR BUSINESS ACTIVITY</p> <hr/>																	

## **E. SUPPLY AND ANALYSIS OF STANDARD SOLUTIONS OF Δ<sup>9</sup>-THC**

In discussions with investigators working in the area of quantitative analysis of Δ<sup>9</sup>-THC, the question on the availability of its standard has repeatedly arisen. Because of the difficulties associated with accurately weighing exact quantity of non-crystalline Δ<sup>9</sup>-THC, NIDA provided the following Δ<sup>9</sup>-THC and its standard in solution form upon special request to research investigators in past and it still continues to do so:

1. 1. Small quantity of two stock solutions of Δ<sup>9</sup>-THC, 5 mg/ml in ethanol, and 0.5 mg/ml in ethanol, and Δ<sup>9</sup>-THC 0.70 mg/ml and androst-4-ene-3,17-dione in ethanol. The latter material is an internal standard for GC analysis. This steroid can also be provided in solid form to researchers who want to perform their own GC analyses. Note that both of these stock solutions are analyzed for exact composition and analytical data are provided with the shipment
2. As a final check, NIDA can provide the analysis of your stock solution using standardized procedure. At least 1.0 mL of stock solution should be provided with approximate concentration. If the concentration is greater than 50 µg/mL Δ<sup>9</sup>-THC, a standard GLC or HPLC analysis is performed using a steroid internal standard. For concentrations lower than this, GC/MS technique is used.

For further information, contact:

Hari H. Singh, Ph.D.

Phone: (301) 435-1310

e-mail: hs87j@nih.gov

Paul S. Hillery, Ph.D.

Phone: (301) 435-1306

e-mail: ph44x@nih.gov

Kevin Gormley (RTI)

Phone: (301) 435-0264

e-mail: kg60h@nih.gov

Chemistry & Physiological Systems Research Branch  
Division of Basic Neuroscience & Behavioral Research  
National Institute on Drug Abuse  
6001 Executive Boulevard, Room #4282, MSC 9555  
Bethesda, Maryland 20892-9555

## **F. ALTERNATIVE SOURCES FOR PEPTIDES**

Recognizing a need in the research community for peptides, NIDA has included many peptides in the list of compounds provided to researchers through the NIDA Drug Supply Program. There are, however, a number of commercial suppliers that have many compounds of interest which are currently unavailable from the NIDA program. The addresses and phone numbers of some of these suppliers are:

PolyPeptide Laboratories San Diego  
9395 Cabot Drive  
San Diego, CA 82126  
(800) 338-4965

Pierce Biotechnology  
P.O. Box 117  
Rockford, IL 61105  
(800) 874-3723

Bachem Americas, Inc.  
3132 Kashiwa Street  
Torrance, CA 90505  
(888) 422-2436

Sigma Chemical Co.  
P.O. Box 14508  
St. Louis, MO 63178  
(800) 325-3010

NIDA is always receptive to suggestions for new peptides that are of interest to the scientific community. These suggestions should be in writing accompanied by the structure of the peptide as well as any names by which it is known. These suggestions should be forwarded to:

Hari H. Singh, Ph.D.  
Program Director  
Drug Supply & Analytical Services  
Chemistry & Physiological Systems Research Branch  
Division of Basic Neuroscience & Behavioral Research  
National Institute on Drug Abuse, NIH  
Neuroscience Center, Room # 4282, MSC 9555  
6001 Executive Boulevard  
Bethesda, MD 20892  
Phone: (301) 435-1310; Fax: (301) 594-6043  
e-mail: hs87j@nih.gov

## **G. INSTRUCTIONS FOR ANALYTICAL SERVICES**

NIDA facilitates drug abuse research by providing analytical services to research investigators who do not have necessary analytical facilities in their own laboratories. Priority is given to those investigators who are funded by NIDA.

Experimental samples (such as tissue, plasma, urine, and saliva) are analyzed in a NIDA contract laboratory for determining the concentration of drugs of abuse and their metabolites or precursors. The result of analyses is sent to research investigator with a copy to NIDA program official.

Request for analytical services should be submitted to the NIDA Drug Supply Program official with the following information for consideration and approval:

1. Number and title of your funded NIDA research grant
2. Name and contact information of your program official
3. In case of no grant, a brief research protocol
4. Number and name of drug(s) or drug metabolite(s) for analysis
5. Nature and origin of matrix such as rat/mouse/or human serum, plasma, urine, tissue, or saliva
6. Minimum expected concentrations of each drug/metabolites, and
7. Any other information that could be useful for analysis
8. A commitment to acknowledge NIDA in research publications resulting from this service. Once a research paper is published, a reprint or reference must be provided to NIDA drug supply program official.

After request approval, researcher will be contacted to submit experimental samples with shipping instructions to the following NIDA contract laboratory:

**David E. Moody, Ph.D.**  
Center for Human Toxicology  
University of Utah  
30 South 2000 East  
(for regular mail) Room 105  
(for courier) Room 3956  
Salt Lake City, UT 84112  
Phone: (801) 581-5117; Fax: (801) 581-5034  
E-Mail:[david.Moody@utah.edu](mailto:david.Moody@utah.edu)

**NOTE:** It is recommended that the research investigator obtain authorization prior to conducting any experiments so they can consult with the analytical laboratory about sample preparation and appropriate analyses.

Request for analysis should be submitted to:

Hari H. Singh, Ph.D.  
Program Director, Drug Supply & Analytical Services  
Chemistry & Physiological Systems Research Branch  
Division of Basic Neuroscience & Behavioral Research  
National Institute on Drug Abuse, NIH  
6001 Executive Boulevard  
Room # 4282, MSC 9555  
Bethesda, MD 20892  
Phone: (301) 435-1310, E-mail: [hs87j@nih.gov](mailto:hs87j@nih.gov)

## **H. X-RAY DIFFRACTION ANALYSIS OF COMPOUNDS**

The purpose of this service is to provide definitive three-dimensional structural coordinates of compounds in support of drug abuse research. X-Ray diffraction analysis is performed on two types of compounds. The first type consists of non-peptide drugs, their analogs, related probes or potential analytical therapeutics including substances related to cocaine, phencyclidine, cannabinoids, opiates, and others. The second type consists of opioids and related peptides (CCK related, FMRF related, and alpha MSH-related fragments, etc.).

X-ray diffraction results provide full characterization of a compound even when the empirical formula of the molecule is not known beforehand. It is only the analytical method that can clearly define the absolute configuration of a molecule. An X-ray diffraction experiment requires only one good single crystal ideally about 0.1 x 0.2 x 0.2 mm (~0.1 mg of starting material). Note that single crystals may contain solvent so the best results are often obtained when samples are shipped in their mother liquor. If the submitted sample does not contain suitable single crystals then a minimum of 10 mg of sample is required for crystallization experiments. For these non-crystalline compounds information about stability and solubility should be provided with the sample. In present day research environment growing good single crystal is often the slowest step in the process since the use of high speed computers and state of the art data

collection systems have reduced the time needed to complete a single structure study from several weeks to a few days.

For all samples indicate: 1 – if absolute or relative conformation is required as part of the analysis; 2 – the chirality of any known centers; 3 – provide a diagram of the expected structure including a preferred numbering scheme if applicable.

To request X-ray diffraction analysis of compounds, research investigators should provide the following information for consideration:

### **REQUEST FOR X-RAY DIFFRACTION ANALYSIS**

Name of Investigator: \_\_\_\_\_

Institution: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

Phone & Fax Numbers: \_\_\_\_\_

NIH/NIDA Grant Title: \_\_\_\_\_

NIH/NIDA Grant Number: \_\_\_\_\_

Name of Your Program Officer (NIH/NIDA): \_\_\_\_\_

Type of compound: \_\_\_\_\_

Empirical Formula: \_\_\_\_\_

Anticipated Structure/comments/suggestions:

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Signature of Principal Investigator: \_\_\_\_\_

Provide a recommendation letter from your Program Officer in support of your request. If not a NIDA grantee, provide a research protocol of your study for review signifying the relevance of your study with the NIDA research programs. The priority will be given to research investigators who are funded by the NIDA. A commitment to recognize NIDA must be provided. Once a paper is published, a copy, reprint, or publication reference must be submitted to NIDA program official.

**Note: An incomplete application may not be considered.**

The signed request (or electronic version) for analysis should be submitted to the following for approval before submitting your sample to the Center for Crystallographic Studies, Laboratory for Structure of Matter, Naval Research Laboratory, 4555 Overlook Ave. S.W., Washington, D.C. 20375-5000:

Hari H. Singh, Ph.D.  
Program Director  
Drug Supply & Analytical Services  
Chemistry & Physiological Systems Research Branch  
Division of Basic Neuroscience & Behavioral Research  
National Institute on Drug Abuse, NIH  
6001 Executive Boulevard, Room # 4282, MSC 9555  
Bethesda, MD 20892  
Phone: (301) 435-1310, Fax: (301) 594-6043  
E-mail: hsingh1@nida.nih.gov

## **I. Nicotine Research Cigarettes Drug Supply Program**

The NIDA DSP now provides a variety of nicotine research cigarettes (NRC) to research investigators. For more information on the Notice of Availability, please see <http://grants.nih.gov/grants/guide/notice-files/NOT-DA-14-004.html>.

### **Nicotine Research Cigarette Drug Supply Program Application Process**

To obtain NRCs from the National Institute of Drug Abuse Drug Supply Program, all research investigators will need to prepare a Request Package.

#### **Stepwise Procedure (Basic Non-Human Research)**

1. A Request Package for NRC is submitted to the NIDA Drug Supply Program.
2. Once all request package materials are received, the NIDA Drug Supply Program Director reviews request package for completeness.
3. Materials are reviewed by NIH and assigned to a Program Officer.
  - For non-Grantees, the Program Officer refers to an external Scientific Expert Committee for further review.
4. Once reviewed, the Program Officer provides a recommendation to the NIDA Drug Supply Director for approval.
5. Once approved, if there is adequate inventory of nicotine research cigarettes, the NIDA Drug Supply Director issues shipment authorization.

#### **Stepwise Procedure (Clinical Research with Human subjects)**

1. A Request Package for NRC is submitted to the NIDA Drug Supply Program.
2. Once all request package materials are received, the NIDA Drug Supply Program Director for consideration.
3. Materials are reviewed by NIH and assigned to a Program Officer
  - For non-Grantees, the Program Officer refers to FDA and the Scientific Expert Committee for further review.
4. Once reviewed, the Program Officer provides a recommendation to the NIDA Drug Supply Director for approval.
5. Once approved, and there is adequate inventory of nicotine research cigarettes, the NIDA Drug Supply Director issues shipment authorization.

## **FAQs for the Investigational Tobacco Product (ITP) application**

For researchers, in order for the Nicotine Research Cigarette (NRC) order to be deemed complete by the NIDA Drug Supply Program (DSP) Director, an Investigational Tobacco Product (ITP) application needs to be completed and forward to the FDA for approval. Below are helpful notes which will further your application to approval status. **Please be consistent and as specific as possible throughout your ITP application.** If not, applications may be considered inappropriate and delayed until corrected.

- Include actual date of previously submitted ITPs for cross-reference.

Reference the actual Tobacco Product Master File (TPMF) code name for the requested nicotine research cigarette (NRC) (e.g., NRC 300, RN).

- As specifically as possible, provide the specific grant number, grant title (where appropriate), project and/or protocol number and title, and PI for the study.
- Please provide the study sponsor. Note the distinction between “sponsor” and “investigator”: sponsors are typically considered to be the awarded institution (for NIH grants) to which the funding will be designated. Investigators are the primary research contact who conducts the research at that particular institution.
- Please be sure that the title of SPECTRUM cigarettes should be in all caps and consistent throughout your ITP application.

**All inquiries and requests for the Investigational Tobacco Product application should be forwarded to the:**

Center for Tobacco Products  
Food and Drug Administration  
Document Control Center, Room 020J  
9200 Corporate Boulevard Rockville, MD 20850  
(301) 796-0456

### **Points of Contact:**

**All requests/questions should be addressed to:**

**Chemistry & Physiological Systems Research Branch**  
Division of Basic Neuroscience & Behavioral Research  
*National Institute on Drug Abuse, NIH*  
6001 Executive Boulevard, Room # 4262, MSC 9555  
Bethesda, MD 20892-9555  
Fax: (301) 594-6043

[NIDANRCSupply@mail.nih.gov](mailto:NIDANRCSupply@mail.nih.gov)

## **J. Ordering Guidelines for Nicotine Research Cigarettes (NRCs)**

To obtain NRCs from the NIDA DSP, all research investigators will need to prepare a NRC Request Package. A Request Package should include the following items:

1. A cover letter including:
  - a. Name, phone number and e-mail address of Research Investigator (and consignee, if applicable),
    - Provide a current and complete address that would allow shipment by a suitable carrier such as Federal Express (FedEx) (i.e., street address, building name or number, room number, city and state),
  - b. If applicable, NIH grant number of project and name and contact information of project's NIDA/NIH Program Officer. If a non-NIH grantee, no information on Program Officer and grant number is required.
  - c. Type and quantity of NRCs being requested,
    - If multiple studies/tasks are planned, combine projected needs into a single order rather than placing several separate requests in a short time interval. The request should generally be limited to four items or drugs/compounds per order to avoid delay.
2. The Research Investigator's curriculum vitae (CV).
3. A detailed research protocol clearly indicating:
  - a. The specific aims and goals of proposed study (preferably the study abstract)
  - b. Number of experiments and experimental subjects
  - c. Number and type of NRCs (NOT-DA-14-004), including respective Tobacco Product Master File (TPMF) codes,
    - Calculate required amount of NRCs for your project and submit your request well in advance of your planned experiments or tasks, or 6-8 weeks prior to depletion of stock on hand for ongoing studies/tasks.
  - d. Justification for the quantity needed. If the request is related to a previously submitted protocol, provide a reference to this protocol and a brief statement of progress along with references to resulting publications.
  - e. A timeline indicating approximately when and what quantities of NRC shipments are needed over the duration of the protocol.

- f. Statement of commitment that NIDA will be acknowledged in research publications using the NIDA-supplied cigarettes.

4. For Clinical Research Projects Involving Human Subjects

- a. Investigational Tobacco Product (ITP) application information including: A copy of FDA letter (Advice/Information Request) in response to your ITP application. (NOTE: Suggested guidelines for submitting an Investigational Tobacco Product Application (ITPA) to FDA/CTP are given separately. For more information, please visit [here](#).)
- b. A copy of your Institutional Review Board (IRB) approval letter
- c. A copy of your Data Safety and Monitoring Plan
- d. Proof of registration with clinicaltrials.gov (NCT #)
- e. A copy of the study consent form(s)

5. For Basic (Non-human) Research Projects

- A copy of the document demonstrating that the research is approved by the Animal Care & Use Committee and that adequate care in conducting animal research will be exercised. For more information, please visit the Animal Care & Use Committee Animal Study Proposal website.

6. For Ongoing Research Projects (This includes research previously supported by the NIH prior to NRC request)

- a. Reference information pertaining the previous protocol / FDA approval to the previous protocol (if applicable).
- b. A brief statement of progress (500 words or less)
- c. A list of any relevant publications.

7. Billing Information for Shipping Costs (if applicable):

- a. US investigators should provide their FedEx account number to bill shipping charges,
- b. International requests should provide United Parcel Service (UPS) Supply Chain Solutions account number to bill shipping charges or FedEx account number as appropriated for the import of NRCs.

**Contact Information:**

All requests/questions should be sent to: NIDANRCSupply@mail.nih.gov.

**Please specify materials requested in the subject line.**

**Address correspondence to:**

**Hari H. Singh, PhD**

**Chemistry & Physiological Systems Research Branch**

Division of Basic Neuroscience & Behavioral Research

*National Institute on Drug Abuse, NIH*

6001 Executive Boulevard, Room # 4262, MSC 9555

Bethesda, MD 20892-9555

Fax: (301) 594-6043

Phone: (301) 435-1310

## **K. Ordering Guidelines for Marijuana and Marijuana Cigarettes**

To obtain marijuana and marijuana cigarettes from the NIDA DSP, all research investigators will need to prepare a Marijuana Cigarette Request Package. A Request Package should include the following items:

**1. A cover letter including:**

- a. Name, phone number and e-mail address of Research Investigator (and consignee, if applicable),
  - Provide a current and complete address that would allow shipment by a suitable carrier such as Federal Express(FedEx) (i.e. street address, building name or number, room number, city and state) - This address should coincide with the address on the DEA order form.
  - If requestor's address is outside the US, please provide all necessary documentation to verify whether particular compound requested is permitted in his/her country for importation.
- b. If applicable, NIH grant number of project and name and contact information of project's NIDA/NIH Program Officer (if applicable).  
If a non-grantee, no information regarding the Program Officer and grant number is required.
- c. Name(s) and quantity of compounds or other substances being requested,
  - If multiple studies/tasks are planned, combine projected needs into a single order rather than placing several separate requests in a short time interval.

The request should generally be limited to no more than four items per order to avoid delay.

**2. The Research Investigator's curriculum vitae (CV).**

**3. A detailed research protocol clearly indicating:**

- a. The specific aims and goals of proposed study (preferably the study abstract),
- b. The number of experiments and experimental subjects,
- c. The strength or concentration of marijuana or marijuana cigarettes,
  - Calculate required amount of marijuana cigarettes for your project and submit your request well in advance of your planned experiments or tasks, or 6-8 weeks prior to depletion of stock on hand for ongoing studies/tasks.
- d. Justification for the quantity of marijuana or marijuana cigarettes requested.

If the request is related to a previously submitted protocol, provide a reference to this protocol and a brief statement of progress along with references to resulting publications.

**4. Statement of commitment that NIDA will be acknowledged in research publications using the NIDA Drug Supply Program.**

5. A completed [DEA Order Form-222](#).

- Under the third column of DEA Form-222 (Size of Package), list quantities as bulk weight.

6. A copy of current DEA registration, [Form DEA-223](#) for a controlled substance.

- It is the Research Investigator's responsibility to keep his/her registration current and verify the drug code for the requested materials.

7. For clinical research projects involving human subjects

1. Investigational New Drug (IND) number and a copy of approved IND letter from the FDA. For more information, please visit the [FDA IND Application website](#).
2. A copy of your Institutional Review Board (IRB) approval letter
3. A copy of your Data Safety and Monitoring Plan
4. Proof of registration with clinicaltrials.gov (NCT #)
5. A copy of the study consent form(s)

8. For basic (non-human) research projects

- A copy of the document demonstrating that the research is approved by the Animal Care & Use Committee and that adequate care in conducting animal research will be exercised (if applicable).

For more information, please visit the [Animal Care & Use Committee Animal Study Proposal website](#).

9. For ongoing research projects (This includes research previously supported by the NIH prior to request)

- a. Reference information<sup>1</sup>

pertaining the previous protocol / FDA approval to the previous protocol

- b. A brief statement of progress (500 words or less)
- c. A list of any relevant publications.

10.

Billing Information for Shipping Costs:

1. US investigators should provide their FedEx account number to bill shipping charges,
2. International requests for marijuana and marijuana cigarettes should provide their United Parcel Service (UPS) Supply Chain Solutions account number to bill shipping charges.

11. For Foreign Investigators, please submit the Import Permit (preferably in English) issued by an appropriate agency of your government. The name of the supplier on the import permit must be listed as follows:

Research Triangle Institute

Kenneth S. Rehder, Ph.D.

William F. Little Medicinal Chemistry Building, Room 282

3040 Cornwallis Road  
P.O. Box 12194  
Research Triangle Park, NC 27709-2194, USA

- The import permit should be accompanied by a signed statement from the investigator to the effect that the materials will be used solely for the purpose of research and will not be re-exported. The import permit must contain a clear address and individual name to which the requested material is to be delivered (not a post office box number). Shipment should be indicated on the import permit as Air Freight to this individual. Specify the appropriate port for customs clearance purposes and provide the name and address of the Customs Clearance Agent, if one is used.
- Please obtain the longest possible expiration date on import permits.
- Foreign investigators should also be aware that the material is shipped with a listed value (for insurance purposes). Since this can cause problems with customs officials, investigators should determine in advance what steps should be taken to avoid these complications. Often an official statement that the materials are for research only and have no commercial value is sufficient.

**Failure to comply with aforesaid guidelines may delay the processing of your request.**

**Contact Information:**

**All requests/questions should be addressed to:**

**Hari H. Singh, Ph.D.**

Phone: (301) 435-1310, or

**Paul S. Hillery, Ph.D.**

Phone: (301) 435-1306, or

**Kevin Gormley (RTI)**

Drug Supply Specialist

Phone: (301) 435-0264

**Chemistry & Physiological Systems Research Branch**

Division of Basic Neuroscience & Behavioral Research

*National Institute on Drug Abuse, NIH*

6001 Executive Boulevard, Room # 4262, MSC 9555

Bethesda, MD 20892-9555

Fax: (301) 594-6043

Phone: (301) 435-1310

## **L. IMPORTANT ADDRESSES, TELEPHONE & FAX NUMBERS**

### **NATIONAL INSTITUTE ON DRUG ABUSE**

Hari H. Singh, Ph.D.  
Phone: (301) 435-1310  
e-mail: hs87j@nih.gov

Paul S. Hillery, Ph.D.  
Phone: (301) 435-1306  
e-mail: ph44x@nih.gov

Kevin Gormley  
Phone: (301) 435-0264  
e-mail: kg60h@nih.gov

Chemistry & Physiological Systems Research Branch  
Division of Basic Neuroscience & Behavioral Research  
National Institute on Drug Abuse, NIH  
Neuroscience Center, Room # 4282, MSC 9555  
6001 Executive Boulevard  
Bethesda, MD 20892-9555  
Fax: (301) 594-6043

### **DRUG ENFORCEMENT ADMINISTRATION (DEA)**

Office of Diversion Control Online: <http://www.deadiversion.usdoj.gov/>  
Drug Enforcement Administration  
Office of Diversion Control  
8701 Morrissette Drive  
Springfield, Virginia 22152  
Phone: (800) 882-9539

### **FOOD AND DRUG ADMINISTRATION (FDA)**

U.S. Food & Drug Administration  
Department of Health & Human Services  
10903 New Hampshire Avenue  
Silver Spring, Maryland 20993  
Phone: (888) 463-6332  
Website: <http://www.fda.gov>

## M. AVAILABLE DRUGS, COMPOUNDS, & DOSAGE FORMS



**Disclaimer:** All compound descriptions in this catalog are provided for the purpose of general information only and are not intended to address specific issues or to be a complete or definitive source of such information. Nothing herein is to be considered as a warranty, expressed or otherwise. Users of any the materials provided by NIDA are obligated to understand the proper and safe research applications and to comply with the applicable federal, state, and local laws and regulations. The substances described in this catalog are suitable for basic research only and, unless otherwise indicated, are **not** for human use.

# 1 – New Compounds

(Compounds added to the NDSP catalog since the 22nd edition)

Catalog number	Compound	Page
NICT-019	5-I-A85380	72
9652-069	6'-GNTI dihydrochloride	104
7012-001	AB-FUBINACA	37
7541-001	Butylone; bk-MBDB	142
MPSP-120	(Carboxynitroveratryl)naloxone; CNV-NLX	77
PEPT-060	CJ-15,208	115
NOCD-135	Clozapine N-oxide	155
MPSP-118	CNB-Y-DYN8 (CYD8)	111
MPSP-117	CNB-Y-LE (CYLE)	111
MPSP-119	CNV-Y-LE	111
7927-001	(±)-CP-47497	29
PEPT-061	D-Trp <sup>4</sup> -CJ-15,208	115
9180-021	Ecgonine (1,1,2,2,2- <sup>2</sup> H <sub>5</sub> )ethyl ester perchlorate	147
9652-070	IBNtxA	104
6250-001	JWH-250	34
9668-001	Nalfurafine	104
NOCD-133	ORG 27569	29
NOCD-139	Ro 64-6198 analog [ (+)-isomer of Ro 64-6198 ]	96
NOCD-138	Ro 64-6198 hydrochloride	96
NOCD-134	SB-612111 hydrochloride	96



## 2 – Cannabinoids and Cannabinoid-related

### Cannabinoids: Allosteric Modulators

**Catalog number :** NOCD-133      new

**CASRN :** 868273-06-7

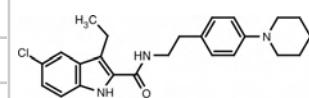
**Name :** ORG 27569

**Mol. formula :** C<sub>24</sub>H<sub>28</sub>ClNO<sub>3</sub>

**FW :** 409.95    **DEA schedule :** 0

**Notes :** CB<sub>1</sub> receptor positive allosteric modulator.

**References :** Price et al (2005) Allosteric modulation of the Cannabinoid CB1 receptor. Mol.Pharmacol. 68 1484. PMID: 16113085.



### Cannabinoids: Cannabichromene Class

**Catalog number :** 7360-007

**CASRN :** 20675-51-8

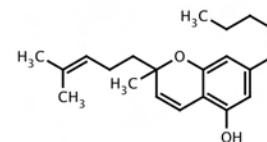
**Name :** Cannabichromene

**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>

**FW :** 314.46    **DEA schedule :** 1

**Notes :** Non-psychoactive constituent of cannabis.

**References :** Turner, CE; Elsohly, MA *J Clin Pharmacol* 1981, 21, 283S–291S.



**Catalog number :** 7360-008

**CASRN :** 20675-51-8 (parent cmpd)

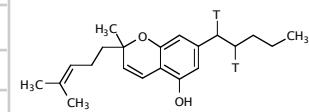
**Name :** [1',2'-<sup>3</sup>H<sub>2</sub>]Cannabichromene

**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>

**FW :** 314.46    **DEA schedule :** 1

**Notes :** Non-psychoactive constituent of cannabis (tritium-labeled).

**References :** Instrumental Data for Drug Analysis, 2nd Ed., 1996, Volume 1, p304.



### Cannabinoids: Cannabicyclohexanol Class

**Catalog number :** 7927-001

new

**CASRN :** 114753-51-4

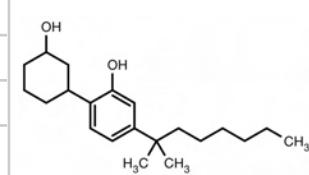
**Name :** (±)-CP-47497

**Mol. formula :** C<sub>21</sub>H<sub>36</sub>O<sub>2</sub>

**FW :** 318.50    **DEA schedule :** 1

**Notes :** Potent CB<sub>1</sub> receptor agonist.

**References :** Melvin, L. S., et al., *J Med Chem* 1984, 27(1), 67–71.



**Catalog number :** 7298-001

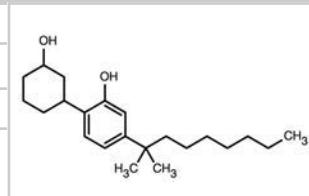
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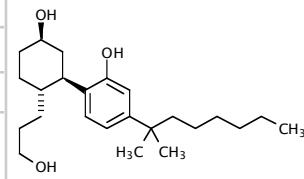
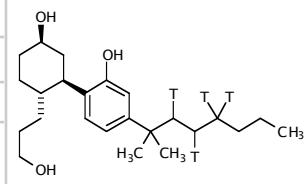
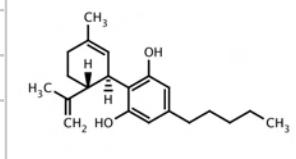
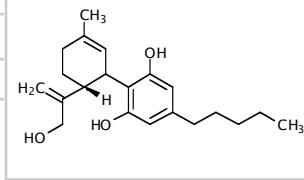
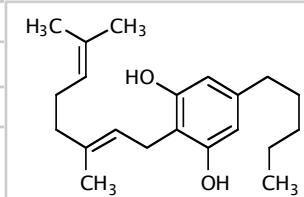
**Name :** Cannabicyclohexanol; (±)-CP-47,497 C8 homolog

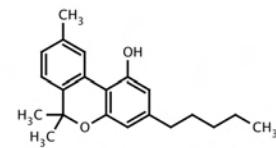
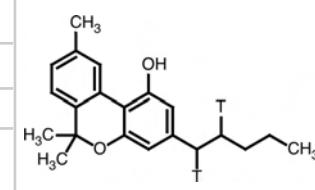
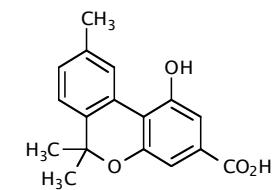
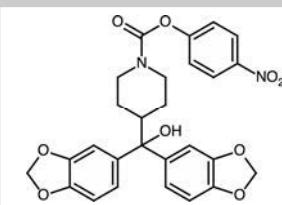
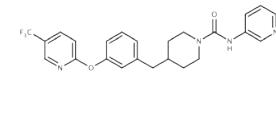
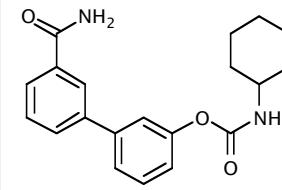
**Mol. formula :** C<sub>22</sub>H<sub>36</sub>O<sub>2</sub>

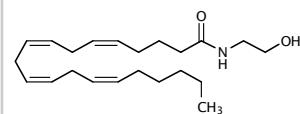
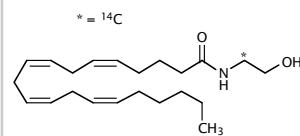
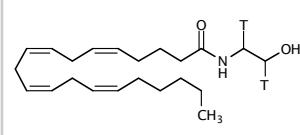
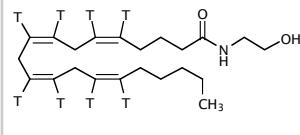
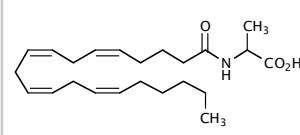
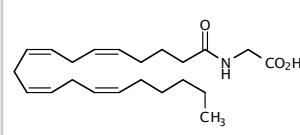
**FW :** 332.52    **DEA schedule :** 1

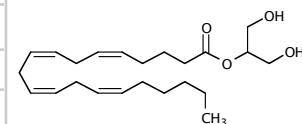
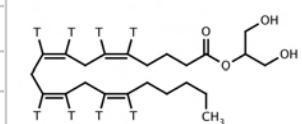
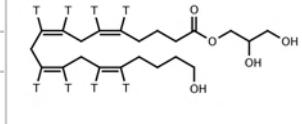
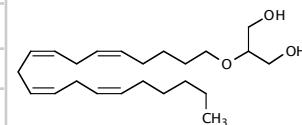
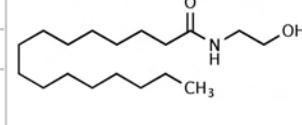
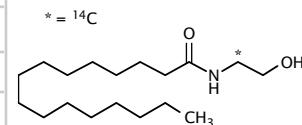
**References :** Compton DR, Johnson MR, Melvin LS, Martin BR, *J Pharm Exp Ther*, 1992, 260(1), 201–209.

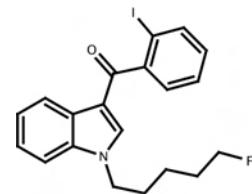


**Catalog number :** NOCD-091**CASRN :** 83002-04-4**Name :** (-)-CP 55,940**Mol. formula :** C<sub>24</sub>H<sub>40</sub>O<sub>3</sub>**FW :** 376.58    **DEA schedule :** 0**Notes :** High-affinity cannabinoid CB1 and CB2 receptor agonist**References :** Melvin, LS; et al. *J Med Chem* 1984, 27, 67–71.**Catalog number :** NOCD-092**CASRN :** 119095-48-6**Name :** [2,3,4,4-<sup>3</sup>H<sub>4</sub>](-)-CP 55,940**Mol. formula :** C<sub>24</sub>H<sub>40</sub>O<sub>3</sub>**FW :** 376.58    **DEA schedule :** 0**Notes :** High affinity CB1 and CB2 receptor radioligand (tritium-labeled).**Cannabinoids: Cannabidiol Class****Catalog number :** 7360-021**CASRN :** 13956-29-1**Name :** (-)-Cannabidiol**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>**FW :** 314.46    **DEA schedule :** 1**Notes :** CB<sub>1</sub> and CB<sub>2</sub> receptor antagonist**References :** Petitet, F; et al. *Life Sci* 1998, 63, PL1–6.  
Costa, B; et al. *Br J Pharmacol* 2004, 143, 247–50.  
Thomas, A; et al. *Br J Pharmacol* 2007, 150, 613–23.**Catalog number :** 7360-022**Name :** 10-Hydroxycannabidiol**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>3</sub>**FW :** 330.46    **DEA schedule :** 1**Notes :** Cannabidiol metabolite.**References :** Lander, N; et al. *J Chem Soc., Perkin Trans 1* 1976, 8–16.**Cannabinoids: Cannabigerol Class****Catalog number :** 7360-010**CASRN :** 25654-31-3**Name :** Cannabigerol**Mol. formula :** C<sub>21</sub>H<sub>32</sub>O<sub>2</sub>**FW :** 316.48    **DEA schedule :** 1**Notes :** Analgesic; anti-inflammatory**References :** Williamson, EM; Evans, FJ *Drugs* 2000, 60, 1303–14.

**Cannabinoids: Cannabinol Class****Catalog number :** 7360-013**CASRN :** 21-35-7**Name :** Cannabinol; CBN**Mol. formula :** C<sub>21</sub>H<sub>26</sub>O<sub>2</sub>**FW :** 310.43**DEA schedule :** 1**Notes :** Inactive constituent of cannabis.**References :** Mahadevan, A; et al. *J Med Chem* 2000, 43, 3778-85.**Catalog number :** 7360-023**Name :** [1',2'-<sup>3</sup>H<sub>2</sub>]Cannabinol**Mol. formula :** C<sub>21</sub>H<sub>26</sub>O<sub>2</sub>**FW :** 310.43**DEA schedule :** 1**Catalog number :** 7360-020**CASRN :** 60788-14-9**Name :** 1',2',3',4',5'-Pentanorcannabinol-3-carboxylic acid**Mol. formula :** C<sub>17</sub>H<sub>16</sub>O<sub>4</sub>**FW :** 284.31**DEA schedule :** 1**Cannabinoids: Enzyme Inhibitors****Catalog number :** NOCD-037**CASRN :** 1101854-58-3**Name :** JZL184**Mol. formula :** C<sub>27</sub>H<sub>24</sub>N<sub>2</sub>O<sub>9</sub>**FW :** 520.49**DEA schedule :** 0**Notes :** Potent and selective inhibitor of monoacylglycerol lipase (MAGL).**References :** Long, JZ; et al. *Nat Chem Biol* 2009, 5, 37-44.**Catalog number :** NOCD-124**CASRN :** 1196109-52-0**Name :** PF-3845**Mol. formula :** C<sub>24</sub>H<sub>23</sub>F<sub>3</sub>N<sub>4</sub>O<sub>2</sub>**FW :** 456.47**DEA schedule :** 0**Notes :** Selective fatty acid amide hydrolase (FAAH) inhibitor.**References :** Ramesh D, Ross GR, Schlosburg JE, Owens RA, Abdullah RA, Kinsey SG, Long JZ, Nomura DK, Sim-Selley LJ, Cravatt BF, Akbarali HI, Lichtman AH, *J Pharmacol Exp Ther* 2011, 339(1), 173-85.**Catalog number :** NOCD-098**CASRN :** 546141-08-6**Name :** Cyclohexylcarbamic Acid 3'-carbamoylbiphenyl-3-yl ester; URB 597**Mol. formula :** C<sub>20</sub>H<sub>22</sub>N<sub>2</sub>O<sub>3</sub>**FW :** 338.41**DEA schedule :** 0**Notes :** Fatty acid amide hydrolase (FAAH) inhibitor.**References :** Cravatt BF; et al. *Nature* 1996, 384, 83. Kathuria S; et al. *Nat Med* 2003, 9, 76.

**Cannabinoids: Fatty Acid Derivatives (Anandamides)****Catalog number :** NOCD-080**CASRN :** 94421-68-8**Name :** Arachidonylethanolamide; Anandamide**Mol. formula :** C<sub>22</sub>H<sub>37</sub>NO<sub>2</sub>**FW :** 347.54**DEA schedule :** 0**Notes :** Cannabinoid CB1 and CB2 receptor agonist.**References :** Devane, WA; et al. *Science* 1992, 258, 1946–9.**Catalog number :** NOCD-007**Name :** Arachidonyl[1-<sup>14</sup>C]ethanolamide**Mol. formula :** C<sub>23</sub>H<sub>37</sub>NO<sub>2</sub>**FW :** 361.56**DEA schedule :** 0**Catalog number :** NOCD-008**Name :** Arachidonyl[1,2-<sup>3</sup>H]ethanolamide; Tritiated Anandamide**Mol. formula :** C<sub>22</sub>H<sub>37</sub>NO<sub>2</sub>**FW :** 347.54**DEA schedule :** 0**Catalog number :** NOCD-078**Name :** Tritium-labeled Arachidonylethanolamide; Tritiated Anandamide**Mol. formula :** C<sub>22</sub>H<sub>37</sub>NO<sub>2</sub>**FW :** 347.54**DEA schedule :** 0**Notes :** Cannabinoid CB1 and CB2 receptor radioligand.**Cannabinoids: Fatty Acid Derivatives (Arachidonyl amides)****Catalog number :** NOCD-097**CASRN :** 401941-73-9**Name :** N-Arachidonyl-L-alanine**Mol. formula :** C<sub>23</sub>H<sub>37</sub>NO<sub>3</sub>**FW :** 375**DEA schedule :** 0**Catalog number :** NOCD-096**CASRN :** 179113-91-8**Name :** N-Arachidonylglycine; NAGly**Mol. formula :** C<sub>22</sub>H<sub>35</sub>NO<sub>3</sub>**FW :** 361**DEA schedule :** 0**Notes :** Endogenous anandamide-like compound with analgesic properties (although it lacks CB1 receptor and anandamide transporter affinity).**References :** Sheskin, T; et al. *J Med Chem* 1997, 40, 659–67.  
Huang, SM; et al. *J Biol Chem* 2001, 276, 42639–44.

**Cannabinoids: Fatty Acid Derivatives (Arachidonyl esters)****Catalog number :** NOCD-089**CASRN :** 53847-30-6**Name :** 2-Arachidonylglycerol; 2-AG**Mol. formula :** C<sub>23</sub>H<sub>38</sub>O<sub>4</sub>**FW :** 378.5**DEA schedule :** 0**Notes :** Cannabinoid CB1 receptor agonist.**References :** Stella, N; Schweitzer P; Piomelli D *Nature* 1997, 388, 773–8.**Catalog number :** NOCD-018**Name :** [<sup>3</sup>H]-2-Arachidonylglycerol; [<sup>3</sup>H]-2-AG**Mol. formula :** C<sub>23</sub>H<sub>38</sub>O<sub>4</sub>**FW :** 378.55**DEA schedule :** 0**Notes :** Cannabinoid CB1 receptor agonist (tritium-labeled).**References :** Stella, N; Schweitzer, P; Piomelli, D *Nature* 1997, 388, 773–8.**Catalog number :** NOCD-035**Name :** Tritium-labeled 1-Arachidonylglycerol; [<sup>3</sup>H]-1-AG**Mol. formula :** C<sub>23</sub>H<sub>38</sub>O<sub>4</sub>**FW :** 378.55**DEA schedule :** 0**Notes :** Cannabinoid CB1 receptor agonist (tritium-labeled).**References :** Stella, N; Schweitzer, P; Piomelli D *Nature* 1997, 388, 773–8.**Catalog number :** NOCD-095**CASRN :** 222723-55-9**Name :** Noladin**Mol. formula :** C<sub>23</sub>H<sub>40</sub>O<sub>3</sub>**FW :** 364.57**DEA schedule :** 0**Notes :** Cannabinoid CB1 receptor agonist**References :** Hanus, L; et al. *Proc Natl Acad Sci USA* 2001, 98, 3662–5.**Cannabinoids: Fatty Acid Derivatives (Palmitoyl amides)****Catalog number :** NOCD-002**CASRN :** 544-31-0**Name :** Palmitoyl ethanolamide; Palmidrol**Mol. formula :** C<sub>18</sub>H<sub>37</sub>NO<sub>2</sub>**FW :** 299.49**DEA schedule :** 0**Notes :** Cannabinoid CB2 receptor agonist.**References :** Hanus, L; et al. *J Med Chem* 1993, 36, 3032–4.**Catalog number :** NOCD-005**Name :** Palmitoyl[1-<sup>14</sup>C]ethanolamide**Mol. formula :** C<sub>18</sub>H<sub>37</sub>NO<sub>2</sub>**FW :** 299.49**DEA schedule :** 0**Notes :** Cannabinoid CB2 receptor agonist (carbon-labeled).

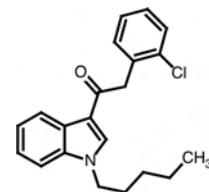
**Cannabinoids: Indole Analogs & Related Compounds****Catalog number :** 7694-001**CASRN :** 335161-03-0**Name :** AM-694**Mol. formula :** C<sub>20</sub>H<sub>19</sub>FINO**FW :** 435.27    **DEA schedule :** 1

**References :** Logan BK, Reinhold LE, Xu A, Diamond FX, *J Forensic Sci*, **2012**, *57*(5), 1168–1180.

**Catalog number :** 7203-001**CASRN :** 864445-54-5**Name :** JWH-203**Mol. formula :** C<sub>21</sub>H<sub>22</sub>CINO**FW :** 339.86    **DEA schedule :** 1

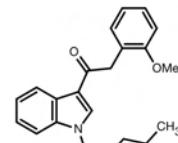
**Notes :** Non-selective CB<sub>1</sub>/CB<sub>2</sub> cannabinoid receptor agonist.

**References :** Huffman JW, Szklennik PV, Almond A, Bushell K, Selley DE, He H, Cassidy MP, Wiley JL, et al., *Bioorg Med Chem Letters*, **2005**, *15*(18), 4110–4113.

**Catalog number :** 6250-001**new****CASRN :** 864445-43-2**Name :** JWH-250**Mol. formula :** C<sub>22</sub>H<sub>25</sub>NO<sub>2</sub>**FW :** 335.44    **DEA schedule :** 1

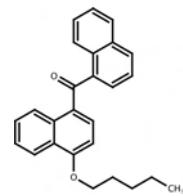
**Notes :** Non-selective CB<sub>1</sub>/CB<sub>2</sub> cannabinoid receptor agonist.

**References :** Huffman JW, Szklennik PV, Almond A, Bushell K, Selley DE, He H, Cassidy MP, Wiley JL, et al., *Bioorg Med Chem Letters*, **2005**, *15*(18), 4110–4113.

**Catalog number :** NOCD-036**CASRN :** 432047-72-8**Name :** Naphthalen-1-yl-(4-pentyloxynaphthalen-1-yl)methanone**Mol. formula :** C<sub>26</sub>H<sub>24</sub>O<sub>2</sub>**FW :** 368.47    **DEA schedule :** 0

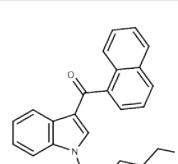
**Notes :** Orally bioavailable human CB<sub>1</sub>/CB<sub>2</sub> dual agonist with antihyperalgesic properties and limited CNS penetration.

**References :** Dziadulewicz, EK; et al. *J Med Chem* **2007**, *50*, 3851–6.

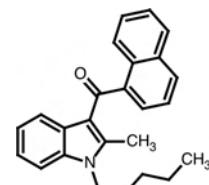
**Cannabinoids: Indole, Alkylnaphthoyl Class****Catalog number :** 7201-001**CASRN :** 335161-24-5**Name :** AM-2201**Mol. formula :** C<sub>24</sub>H<sub>22</sub>FNO**FW :** 359.44    **DEA schedule :** 1

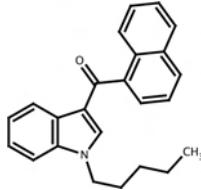
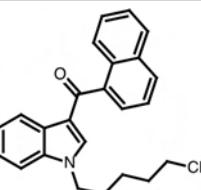
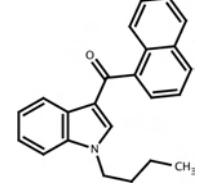
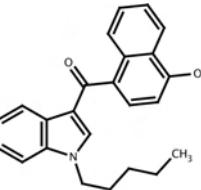
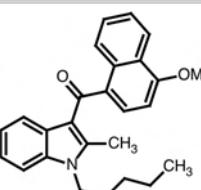
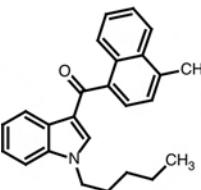
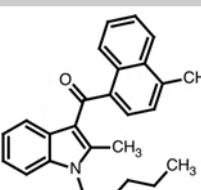
**Notes :** Non-selective CB<sub>1</sub>/CB<sub>2</sub> cannabinoid receptor agonist.

**References :** Makriyannis, A; Deng H, Cannabimimetic Indole Derivatives, US Patent 7,241,799 B2 (2007).

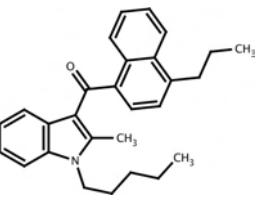
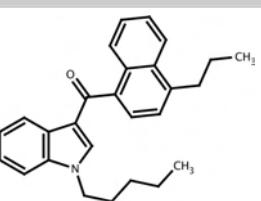
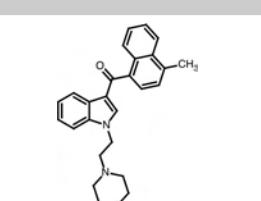
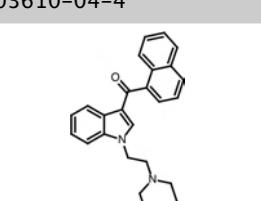
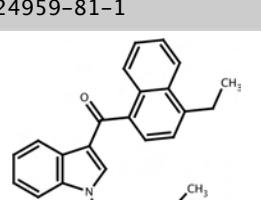
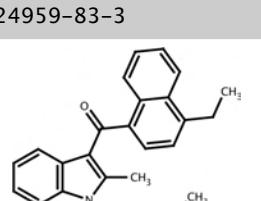
**Catalog number :** 7007-001**CASRN :** 155471-10-6**Name :** JWH-007**Mol. formula :** C<sub>25</sub>H<sub>25</sub>NO**FW :** 355.47    **DEA schedule :** 1

**References :** Huffman JW, Dong D, *Bioorg Med Chem Letters*, **1994**, *4*(4), 563–566.



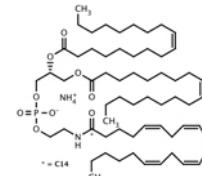
Catalog number : 7118-001	CASRN : 209414-07-3	
Name : JWH-018		
Mol. formula : C <sub>24</sub> H <sub>23</sub> NO	FW : 341.45    DEA schedule : 1	
Notes : Non-selective CB <sub>1</sub> /CB <sub>2</sub> cannabinoid receptor agonist.		
References : Huffman J, Zengin G, Wu M, Lu J, Hynd G, Bushell K, Thompson A, Bushell S, et al., <i>Bioorg Med Chem</i> , 2005, 13(1), 89–112.		
Catalog number : 7019-001	CASRN : 209414-08-4	
Name : JWH-019		
Mol. formula : C <sub>25</sub> H <sub>25</sub> NO	FW : 355.47    DEA schedule : 1	
References : Poso A, Huffman JW, <i>Br J Pharm</i> , 2008, 153(2), 335–346.		
Catalog number : 7173-001	CASRN : 208987-48-8	
Name : JWH-073		
Mol. formula : C <sub>23</sub> H <sub>21</sub> NO	FW : 327.42    DEA schedule : 1	
Notes : Non-selective CB <sub>1</sub> /CB <sub>2</sub> cannabinoid receptor agonist.		
References : Wiley, JL; et al., <i>J Pharmacol Exp Ther</i> 1998, 285, 995–1004.		
Catalog number : 7081-001	CASRN : 210179-46-7	
Name : JWH-081		
Mol. formula : C <sub>25</sub> H <sub>25</sub> NO <sub>2</sub>	FW : 371.47    DEA schedule : 1	
Notes : Non-selective CB <sub>1</sub> /CB <sub>2</sub> cannabinoid receptor agonist.		
References : Huffman J, Zengin G, Wu M, Lu J, Hynd G, Bushell K, Thompson A, Bushell S, et al., <i>Bioorg Med Chem</i> , 2005, 13(1), 89–112.		
Catalog number : 7098-001	CASRN : 316189-74-9	
Name : JWH-098		
Mol. formula : C <sub>26</sub> H <sub>27</sub> NO <sub>2</sub>	FW : 385.50    DEA schedule : 1	
References : Huffman JW, Zengin G, Wu MJ, Lu J, Hynd G, Bushell K, Thompson ALS, Bushell S, Tartal C, Hurst DP, Reggio PH, Selley DE, Cassidy MP, Wiley JL, Martin BR, <i>Bioorg Med Chem</i> , 2005, 13, 89–112.		
Catalog number : 7122-001	CASRN : 619294-47-2	
Name : JWH-122		
Mol. formula : C <sub>25</sub> H <sub>25</sub> NO	FW : 355.47    DEA schedule : 1	
References : Huffman J, Zengin G, Wu M, Lu J, Hynd G, Bushell K, Thompson A, Bushell S, et al., <i>Bioorg Med Chem</i> , 2005, 13(1), 89–112.		
Catalog number : 7149-001	CASRN : 548461-82-1	
Name : JWH-149		
Mol. formula : C <sub>26</sub> H <sub>27</sub> NO	FW : 369.50    DEA schedule : 1	
References : Huffman J, Zengin G, Wu M, Lu J, Hynd G, Bushell K, Thompson A, Bushell S, et al., <i>Bioorg Med Chem</i> , 2005, 13(1), 89–112.		

## 2 – Cannabinoids and Cannabinoid-related

Catalog number : 7181-001	CASRN : 824960-03-4	
Name : JWH-181		
Mol. formula : C <sub>28</sub> H <sub>31</sub> NO	FW : 397.55    DEA schedule : 1	
Notes : Non-selective CB <sub>1</sub> /CB <sub>2</sub> cannabinoid receptor agonist.		
References : Huffman J, Zengin G, Wu M, Lu J, Hynd G, Bushell K, Thompson A, Bushell S, et al., <i>Bioorg Med Chem</i> , 2005, 13(1), 89–112.		
Catalog number : 7182-001	CASRN : 824960-02-3	
Name : JWH-182		
Mol. formula : C <sub>27</sub> H <sub>29</sub> NO	FW : 383.53    DEA schedule : 1	
Notes : Non-selective CB <sub>1</sub> /CB <sub>2</sub> cannabinoid receptor agonist.		
References : Huffman J, Zengin G, Wu M, Lu J, Hynd G, Bushell K, Thompson A, Bushell S, et al., <i>Bioorg Med Chem</i> , 2005, 13(1), 89–112.		
Catalog number : 7193-001	CASRN : 133438-58-1	
Name : JWH-193		
Mol. formula : C <sub>26</sub> H <sub>26</sub> N <sub>2</sub> O <sub>2</sub>	FW : 398.50    DEA schedule : 1	
References : Huffman JW, Padgett LW, <i>Curr Med Chem</i> , 2005, 12, 1395–1411.		
Catalog number : 7200-001	CASRN : 103610-04-4	
Name : JWH-200; WIN 55,225		
Mol. formula : C <sub>24</sub> H <sub>25</sub> N <sub>2</sub> O <sub>2</sub>	FW : 384.47    DEA schedule : 1	
References : Dutta AK, Ryan W, Thomas BF, Singer M, Compton DR, Martin BR, Razdan RK, <i>Bioorg Med Chem</i> , 1997, 5(8), 1591–1600.		
Catalog number : 7210-001	CASRN : 824959-81-1	
Name : JWH-210		
Mol. formula : C <sub>26</sub> H <sub>27</sub> NO	FW : 369.51    DEA schedule : 1	
Notes : Non-selective CB <sub>1</sub> /CB <sub>2</sub> cannabinoid receptor agonist.		
References : Huffman J, Zengin G, Wu M, Lu J, Hynd G, Bushell K, Thompson A, Bushell S, et al., <i>Bioorg Med Chem</i> , 2005, 13(1), 89–112.		
Catalog number : 7213-001	CASRN : 824959-83-3	
Name : JWH-213		
Mol. formula : C <sub>27</sub> H <sub>29</sub> NO	FW : 383.53    DEA schedule : 1	
Notes : Non-selective CB <sub>1</sub> /CB <sub>2</sub> cannabinoid receptor agonist.		
References : Huffman J, Zengin G, Wu M, Lu J, Hynd G, Bushell K, Thompson A, Bushell S, et al., <i>Bioorg Med Chem</i> , 2005, 13(1), 89–112.		

**Cannabinoids: Precursors, Biosynthetic****Catalog number :** NOCD-009

**Name :** N-[1-<sup>14</sup>C]-Arachidonyl-1,2-dioleoyl-sn-glycero-3-phosphoethanolamine ammonium salt

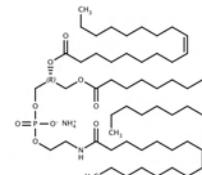
**Mol. formula :** C<sub>61</sub>H<sub>111</sub>N<sub>2</sub>O<sub>9</sub>P**FW :** 1047.52 **DEA schedule :** 0

**Notes :** Putative biosynthetic precursor of endogenous cannabinoids (carbon-labeled).

**References :** Morishita, J; et al. *J Neurochem* 2005, 94, 753–62.

**Catalog number :** NOCD-066

**Name :** N-Palmitoyl-1,2-dioleoyl-sn-glycero-3-phosphoethanolamine ammonium salt

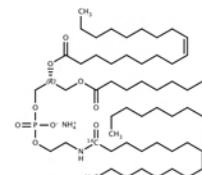
**Mol. formula :** C<sub>57</sub>H<sub>111</sub>N<sub>2</sub>O<sub>9</sub>P**FW :** 999.47 **DEA schedule :** 0

**Notes :** Putative biosynthetic precursor of endogenous cannabinoids.

**References :** Morishita, J; et al. *J Neurochem* 2005, 94, 753–62.

**Catalog number :** NOCD-000

**Name :** N-[1-<sup>14</sup>C]-Palmitoyl-1,2-dioleoyl-sn-glycero-3-phosphoethanolamine ammonium salt

**Mol. formula :** C<sub>57</sub>H<sub>111</sub>N<sub>2</sub>O<sub>9</sub>P**FW :** 999.47 **DEA schedule :** 0

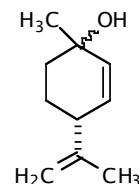
**Notes :** Putative biosynthetic precursor of endogenous cannabinoids (carbon-labeled).

**References :** Morishita J; et al. *J Neurochem* 2005, 94, 753–62.

**Cannabinoids: Precursors, Synthetic****Catalog number :** NOCD-093**CASRN :** 52154-82-2**Name :** *p*-Menta-2,8-dien-1-ol**Mol. formula :** C<sub>10</sub>H<sub>16</sub>O**FW :** 152.2 **DEA schedule :** 0

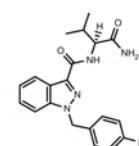
**Notes :** Cannabinoid synthetic precursor

**References :** Razdan RK; Dalzell HC; Handrick GR *J Am Chem Soc* 1974, 96, 5860–5865.

**Cannabinoids: Pyrazole Class****Catalog number :** 7012-001**new****CASRN :** 1185282-01-2**Name :** AB-FUBINACA**Mol. formula :** C<sub>20</sub>H<sub>21</sub>N<sub>4</sub>O<sub>2</sub>**FW :** 368.41 **DEA schedule :** 1

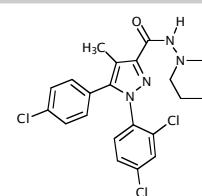
**Notes :** CB<sub>1</sub> receptor agonist.

**References :** Uchiyama, N., Matsuda, S., Wakana, D., et al., *Forensic Toxicol.*, 2012, 31(1), 93–100.

**Catalog number :** NOCD-082**Name :** SR141716**Mol. formula :** C<sub>22</sub>H<sub>21</sub>Cl<sub>3</sub>N<sub>4</sub>O**FW :** 463.78 **DEA schedule :** 0

**Notes :** Cannabinoid CB<sub>1</sub> receptor ligand

**References :** Seltzman, H; et al. *J Chem Soc, Chem Commun* 1995, 1549–1550.



## 2 – Cannabinoids and Cannabinoid-related

**Catalog number :** NOCD-083

**CASRN :** 170937-38-9

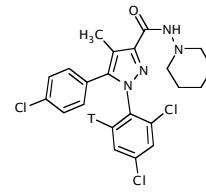
**Name :** [2,4-Dichlorophenyl-6-<sup>3</sup>H]SR141716

**Mol. formula :** C<sub>22</sub>H<sub>21</sub>Cl<sub>3</sub>N<sub>4</sub>O

**FW :** 465.80    **DEA schedule :** 0

**Notes :** Cannabinoid CB1 receptor radioligand (tritium-labeled).

**References :** Seltzman, H; et al. *J Chem Soc, Chem Commun* 1995, 1549–1550.



**Catalog number :** NOCD-085

**CASRN :** 192703-06-3

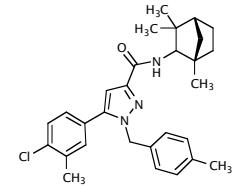
**Name :** SR144528

**Mol. formula :** C<sub>29</sub>H<sub>34</sub>ClN<sub>3</sub>O

**FW :** 476.05    **DEA schedule :** 0

**Notes :** Cannabinoid CB2 receptor antagonist

**References :** Portier, M; et al. *J Pharmacol Exp Ther* 1999, 288, 582–9.  
Rinaldi-Carmona, M; et al. *J Pharmacol Exp Ther* 1998, 284, 644–50.



**Catalog number :** NOCD-086

**CASRN :** 475471-24-0

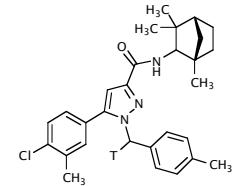
**Name :** Tritium-labeled SR144528

**Mol. formula :** C<sub>29</sub>H<sub>34</sub>N<sub>3</sub>OCl

**FW :** 478.05    **DEA schedule :** 0

**Notes :** Cannabinoid CB2 receptor radioligand (tritium-labeled).

**References :** Portier, M; et al. *J Pharmacol Exp Ther* 1999, 288, 582–9.  
Rinaldi-Carmona, M; et al. *J Pharmacol Exp Ther* 1998, 284, 644–50.



### Cannabinoids: Tetrahydrocannabinol Class

**Catalog number :** 7370-042

**CASRN :** 137945-48-3

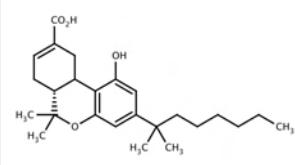
**Name :** Ajulemic acid; IP-751

**Mol. formula :** C<sub>25</sub>H<sub>36</sub>O<sub>4</sub>

**FW :** 400.55    **DEA schedule :** 1

**Notes :** Non-psychoactive cannabinoid.

**References :** Burstein, S *AAPS J* 2005, 7, E143–8.  
Wiley, JL *IDrugs* 2005, 8, 1002–11.



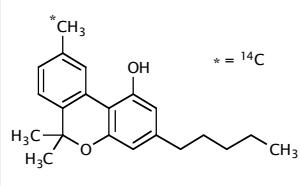
**Catalog number :** 7360-015

**Name :** [11-<sup>14</sup>C]Cannabinol

**Mol. formula :** C<sub>20</sub>I<sub>4</sub>CH<sub>26</sub>O<sub>2</sub>

**FW :** 310.43    **DEA schedule :** 1

**Notes :** Inactive constituent of cannabis (carbon-labeled).



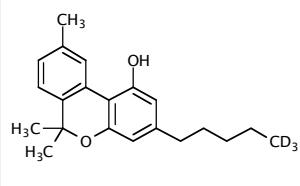
**Catalog number :** 7360-014

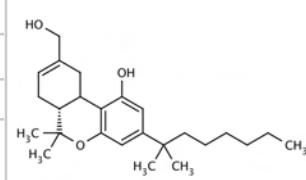
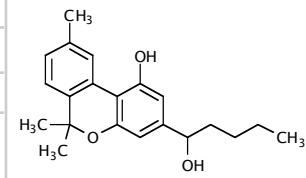
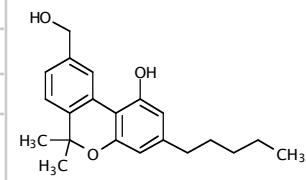
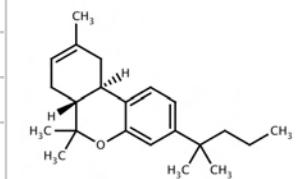
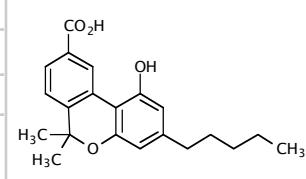
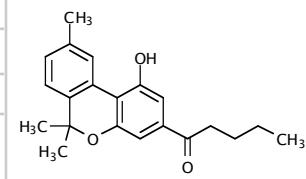
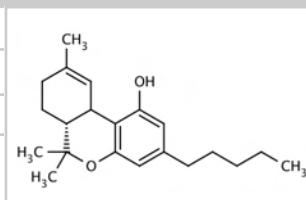
**Name :** [5'-<sup>2</sup>H<sub>3</sub>]Cannabinol

**Mol. formula :** C<sub>21</sub>H<sub>26</sub>O<sub>2</sub>

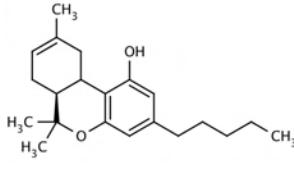
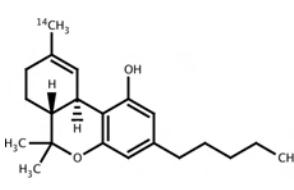
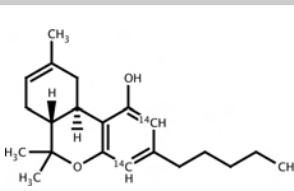
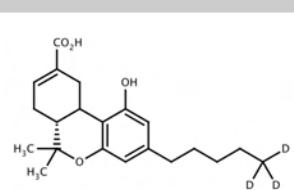
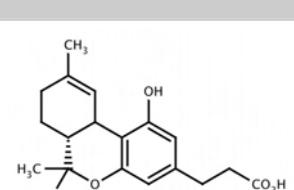
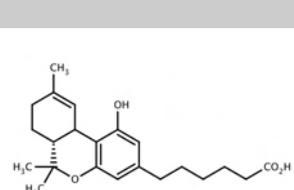
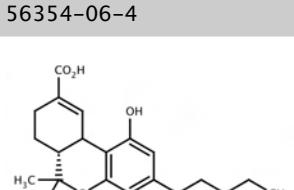
**FW :** 310.43    **DEA schedule :** 1

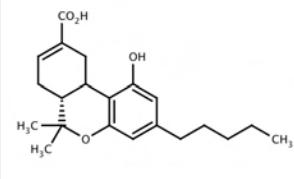
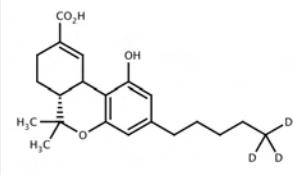
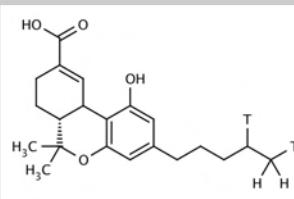
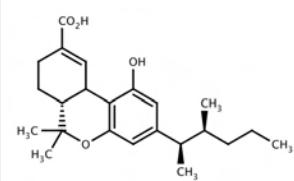
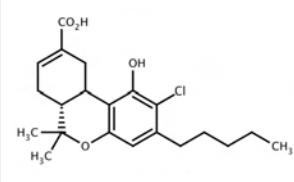
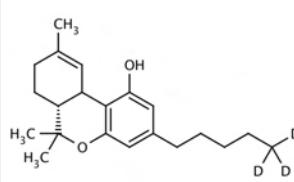
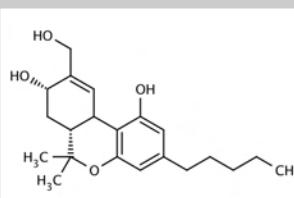
**Notes :** Inactive constituent of cannabis (deuterium-labeled).



**Catalog number :** 7370-057**CASRN :** 112830-95-2**Name :** HU 210**Mol. formula :** C<sub>25</sub>H<sub>38</sub>O<sub>3</sub>**FW :** 386.57    **DEA schedule :** 1**References :** Ottani, A; Giuliani, D *CNS Drug Rev* 2001, 7, 131–45.**Catalog number :** 7360-017**Name :** 1'-Hydroxycannabinol**Mol. formula :** C<sub>21</sub>H<sub>26</sub>O<sub>3</sub>**FW :** 326.43    **DEA schedule :** 1**Catalog number :** 7360-016**Name :** 11-Hydroxycannabinol**Mol. formula :** C<sub>21</sub>H<sub>26</sub>O<sub>3</sub>**FW :** 326.43    **DEA schedule :** 1**Catalog number :** 7133-001**CASRN :** 259869-55-1**Name :** JWH-133**Mol. formula :** C<sub>22</sub>H<sub>32</sub>O**FW :** 312.49    **DEA schedule :** 1**Notes :** Selective CB<sub>2</sub> receptor agonist.**References :** Huffman, JW; et al., *Bioorganic & Medicinal Chemistry* 1999, 7, 2905–2914.**Catalog number :** 7360-019**CASRN :** 53989-32-5**Name :** 9-Carboxy-11-norcannabinol**Mol. formula :** C<sub>21</sub>H<sub>24</sub>O<sub>4</sub>**FW :** 340.41    **DEA schedule :** 1**Catalog number :** 7360-018**Name :** 1'-Oxocannabinol**Mol. formula :** C<sub>21</sub>H<sub>24</sub>O<sub>3</sub>**FW :** 324.41    **DEA schedule :** 1**Catalog number :** 7370-023**CASRN :** 1972-08-3**Name :** (–)-Δ<sup>9</sup>-Tetrahydrocannabinol; THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>**FW :** 314.46    **DEA schedule :** 1**References :** Merck Index, 14th ed., Monograph 9209.

## 2 – Cannabinoids and Cannabinoid-related

Catalog number : 7370-053	CASRN : 81586-39-2
Name : (+)- $\Delta^8$ -THC	
Mol. formula : C <sub>21</sub> H <sub>30</sub> O <sub>2</sub>	FW : 314.46    DEA schedule : 1
	
Catalog number : 7370-033	
Name : [11- <sup>14</sup> C] $\Delta^9$ -THC	
Mol. formula : C <sub>21</sub> H <sub>30</sub> O <sub>2</sub>	FW : 316.45    DEA schedule : 1
Notes : Hallucinogen; psychotropic; analgesic (carbon-labeled).	
Catalog number : 7370-032	
Name : [2,4- <sup>14</sup> C] $\Delta^8$ -THC	
Mol. formula : C <sub>21</sub> H <sub>30</sub> O <sub>2</sub>	FW : 318.45    DEA schedule : 1
Notes : Hallucinogen; psychotropic; analgesic (carbon-labeled).	
Catalog number : 7370-038	
Name : [5'- <sup>2</sup> H <sub>3</sub> ]-11-nor- $\Delta^8$ -THC-9-carboxylic acid	
Mol. formula : C <sub>21</sub> H <sub>28</sub> O <sub>4</sub>	FW : 347.46    DEA schedule : 1
	
Catalog number : 7370-028	
Name : 2'-Carboxy-3',4',5'-trinor- $\Delta^9$ -THC	
Mol. formula : C <sub>19</sub> H <sub>24</sub> O <sub>4</sub>	FW : 316.39    DEA schedule : 1
	
Catalog number : 7370-055	
Name : 5'-Carboxy- $\Delta^9$ -THC	
Mol. formula : C <sub>22</sub> H <sub>30</sub> O <sub>4</sub>	FW : 358.47    DEA schedule : 1
	
Catalog number : 7370-020	CASRN : 56354-06-4
Name : 9-Carboxy-11-nor- $\Delta^9$ -THC	
Mol. formula : C <sub>21</sub> H <sub>28</sub> O <sub>4</sub>	FW : 344    DEA schedule : 1
Notes : Urinary metabolite of THC	

**Catalog number :** 7370-037**CASRN :** 39690-06-7**Name :** 9-Carboxy-11-nor- $\Delta^8$ -THC**Mol. formula :** C<sub>21</sub>H<sub>28</sub>O<sub>4</sub>**FW :** 344**DEA schedule :** 1**Catalog number :** 7370-003**CASRN :** 113269-48-0**Name :** [5'-<sup>2</sup>H<sub>3</sub>]9-Carboxy-11-nor- $\Delta^9$ -THC**Mol. formula :** C<sub>21</sub>H<sub>28</sub>O<sub>4</sub>**FW :** 347.46**DEA schedule :** 1**Notes :** Urinary metabolite of THC (deuterium-labeled).**Catalog number :** 7370-017**Name :** [4',5'-<sup>3</sup>H<sub>2</sub>]9-Carboxy-11-nor- $\Delta^9$ -THC**Mol. formula :** C<sub>21</sub>H<sub>28</sub>O<sub>4</sub>**FW :** 348.46**DEA schedule :** 1**Notes :** Urinary metabolite of THC (tritium-labeled).**Catalog number :** 7370-040**CASRN :** 199388-13-1**Name :** (6aR,10aR)-3-[(1S,2R)-1,2-Dimethylheptyl]-6a,7,10,10a-tetrahydro-6,6,9-trimethyl-6H-dibenzo[b,d]pyran-1-ol**Mol. formula :** C<sub>23</sub>H<sub>32</sub>O<sub>4</sub>**FW :** 372.50**DEA schedule :** 1**Catalog number :** 7370-048**Name :** 9-Carboxy-11-nor-(2 or 4)-chloro- $\Delta^8$ -THC**Mol. formula :** C<sub>21</sub>H<sub>27</sub>ClO<sub>4</sub>**FW :** 378.89**DEA schedule :** 1**Catalog number :** 7370-005**CASRN :** 81586-39-2**Name :** Deuterium-labeled  $\Delta^9$ -THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>**FW :** 317**DEA schedule :** 1**Notes :** Hallucinogen; psychotropic; analgesic (deuterium-labeled).**Catalog number :** 7370-018**CASRN :** 36913-21-0**Name :** 8 $\alpha$ ,11-Dihydroxy- $\Delta^9$ -THC**Mol. formula :** C<sub>21</sub>O<sub>30</sub>O<sub>4</sub>**FW :** 346.47**DEA schedule :** 1

## 2 – Cannabinoids and Cannabinoid-related

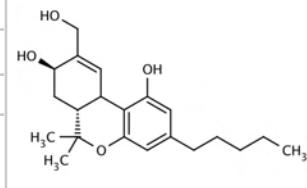
**Catalog number :** 7370-022

**CASRN :** 57030-51-0

**Name :**  $8\beta,11$ -Dihydroxy- $\Delta^9$ -THC

**Mol. formula :**  $C_{21}H_{30}O_4$

**FW :** 346.47    **DEA schedule :** 1

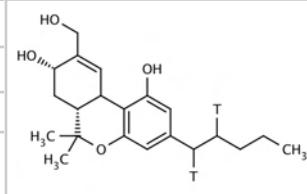


**Catalog number :** 7370-026

**Name :** [ $1',2'$ - $^3$ H<sub>2</sub>]- $8\alpha,11$ -Dihydroxy- $\Delta^9$ -THC

**Mol. formula :**  $C_{21}H_{30}O_4$

**FW :** 350.48    **DEA schedule :** 1

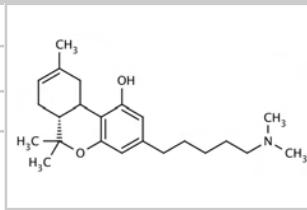


**Catalog number :** 7370-050

**Name :** 5'-Dimethylamino- $\Delta^8$ -THC

**Mol. formula :**  $C_{23}H_{35}NO_2$

**FW :** 357.53    **DEA schedule :** 1



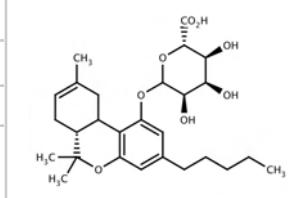
**Catalog number :** 7370-049

**CASRN :** 62667-60-1

**Name :**  $\Delta^8$ -THC-O-glucuronide

**Mol. formula :**  $C_{27}H_{38}O_8$

**FW :** 490.6    **DEA schedule :** 1



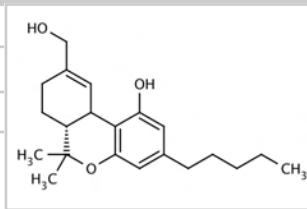
**Catalog number :** 7370-008

**CASRN :** 36557-05-08

**Name :** 11-Hydroxy- $\Delta^9$ -THC

**Mol. formula :**  $C_{21}H_{30}O_3$

**FW :** 330.47    **DEA schedule :** 1

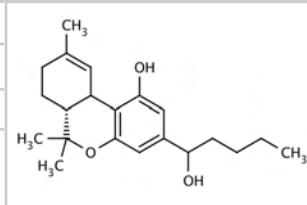


**Catalog number :** 7370-011

**Name :** 1'-Hydroxy- $\Delta^9$ -THC (Isomer B)

**Mol. formula :**  $C_{21}H_{30}O_3$

**FW :** 330.46    **DEA schedule :** 1

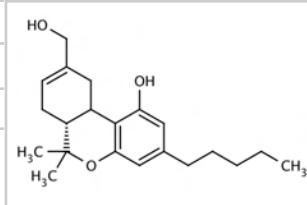


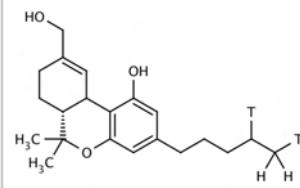
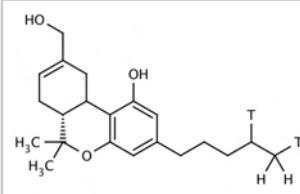
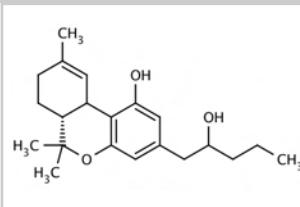
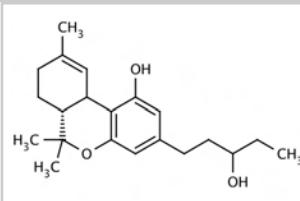
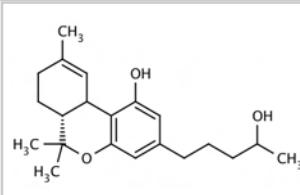
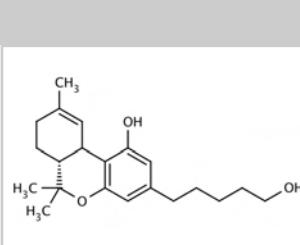
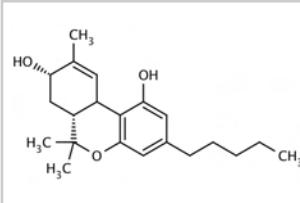
**Catalog number :** 7370-034

**Name :** 11-Hydroxy- $\Delta^8$ -THC

**Mol. formula :**  $C_{21}H_{30}O_3$

**FW :** 330.46    **DEA schedule :** 1



**Catalog number :** 7370-024**Name :** [4',5'-<sup>3</sup>H<sub>2</sub>]-11-Hydroxy-Δ<sup>9</sup>-THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>**FW :** 318.48    **DEA schedule :** 1**Catalog number :** 7370-035**Name :** [4',5'-<sup>3</sup>H<sub>2</sub>]-11-Hydroxy-Δ<sup>8</sup>-THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>**FW :** 318.48    **DEA schedule :** 1**Catalog number :** 7370-012**Name :** 2'-Hydroxy-Δ<sup>9</sup>-THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>3</sub>**FW :** 330.46    **DEA schedule :** 1**Catalog number :** 7370-013**Name :** 3'-Hydroxy-Δ<sup>9</sup>-THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>3</sub>**FW :** 330.46    **DEA schedule :** 1**Catalog number :** 7370-014**Name :** 4'-Hydroxy-Δ<sup>9</sup>-THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>3</sub>**FW :** 330.46    **DEA schedule :** 1**Catalog number :** 7370-015**Name :** 5'-Hydroxy-Δ<sup>9</sup>-THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>3</sub>**FW :** 330.46    **DEA schedule :** 1**Catalog number :** 7370-016**Name :** 8α-Hydroxy-Δ<sup>9</sup>-THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>3</sub>**FW :** 330.46    **DEA schedule :** 1

## 2 – Cannabinoids and Cannabinoid-related

**Catalog number :** 7370-019

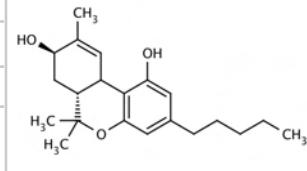
**CASRN :** 34984-78-6

**Name :**  $8\beta$ -Hydroxy- $\Delta^9$ -THC

**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>3</sub>

**FW :** 330

**DEA schedule :** 1



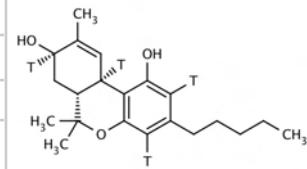
**Catalog number :** 7370-021

**Name :** [2,4,8,10a-<sup>3</sup>H<sub>4</sub>]-8β-Hydroxy- $\Delta^9$ -THC

**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>3</sub>

**FW :** 338.49

**DEA schedule :** 1



**Catalog number :** 7370-010

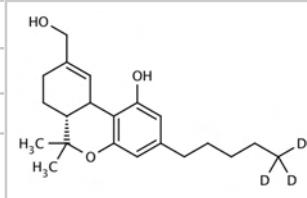
**CASRN :** 130410-26-3

**Name :** [5'-<sup>2</sup>H<sub>3</sub>]-11-Hydroxy- $\Delta^9$ -THC

**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>3</sub>

**FW :** 333

**DEA schedule :** 1



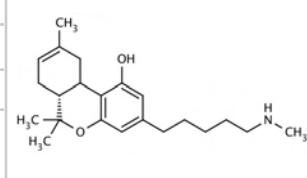
**Catalog number :** 7370-054

**Name :** 5'-Methylamino- $\Delta^8$ -THC

**Mol. formula :** C<sub>22</sub>H<sub>32</sub>NO<sub>2</sub>

**FW :** 342.49

**DEA schedule :** 1



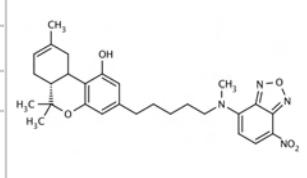
**Catalog number :** 7370-036

**Name :** 5'-N-Methyl-N-4-(7-nitrobenzofurazano)amino- $\Delta^8$ -THC

**Mol. formula :** C<sub>28</sub>H<sub>34</sub>N<sub>4</sub>O<sub>5</sub>

**FW :** 506.59

**DEA schedule :** 1



**Catalog number :** 7370-025

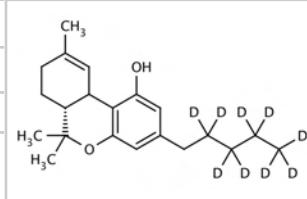
**Name :** [2',2',3',3',4',4',5',5',5'-<sup>2</sup>H<sub>9</sub>] $\Delta^9$ -THC

**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>

**FW :** 323.52

**DEA schedule :** 1

**Notes :** Hallucinogen; psychotropic; analgesic (deuterium-labeled).



**Catalog number :** 7370-004

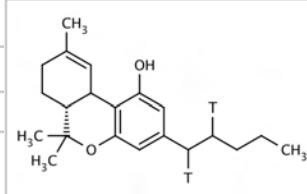
**Name :** [1',2'-<sup>3</sup>H<sub>2</sub>] $\Delta^9$ -THC

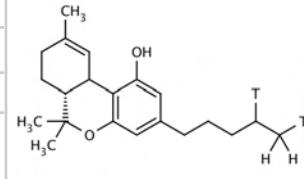
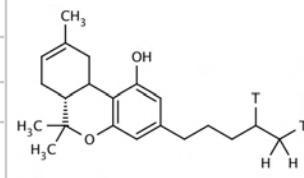
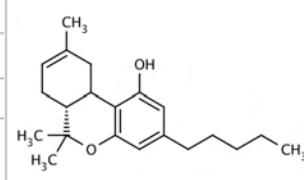
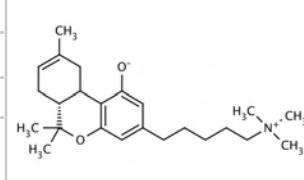
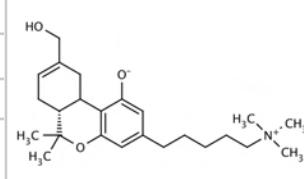
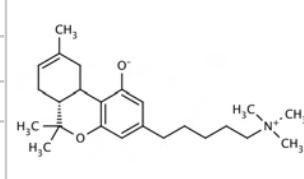
**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>

**FW :** 318.48

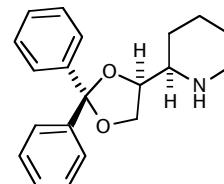
**DEA schedule :** 1

**Notes :** Hallucinogen; psychotropic; analgesic (tritium-labeled).

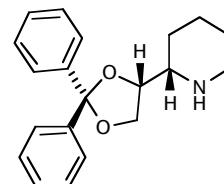


**Catalog number :** 7370-009**Name :** [4',5'-<sup>3</sup>H] $\Delta^9$ -THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>**FW :** 318.48    **DEA schedule :** 1**Catalog number :** 7370-027**Name :** [4',5'-<sup>3</sup>H<sub>2</sub>] $\Delta^8$ -THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>**FW :** 318.48    **DEA schedule :** 1**Notes :** Hallucinogen; psychotropic; analgesic (tritium-labeled).**Catalog number :** 7370-030**CASRN :** 5957-75-5**Name :** (-)-*trans*- $\Delta^8$ -THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>**FW :** 314.46    **DEA schedule :** 1**Catalog number :** 7370-051**Name :** 5'-Trimethylammonium- $\Delta^8$ -THC phenolate**Mol. formula :** C<sub>24</sub>H<sub>37</sub>NO<sub>2</sub>**FW :** 371.56    **DEA schedule :** 1**Catalog number :** 7370-056**Name :** 5'-Trimethylammonium-11-hydroxy- $\Delta^8$ -THC phenolate**Mol. formula :** C<sub>24</sub>H<sub>37</sub>NO<sub>3</sub>**FW :** 388.56    **DEA schedule :** 1**Catalog number :** 7370-052**Name :** [<sup>3</sup>H<sub>3</sub>]-5'-Trimethylammonium- $\Delta^8$ -THC phenolate**Mol. formula :** C<sub>24</sub>H<sub>37</sub>NO<sub>2</sub>**FW :** 371.56    **DEA schedule :** 1

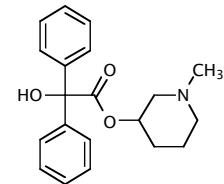
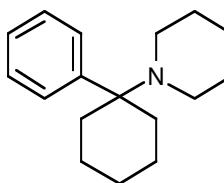
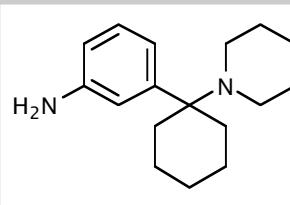
**Cannabinoids (dosage form): Stock Solutions****Catalog number :** 7360-009**CASRN :** 21366-63-2**Name :** Cannabicyclol ampuls (1.0 mg/mL in absolute ethanol)**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>**FW :** 314.46    **DEA schedule :** 1**Notes :** Non-psychoactive constituent of cannabis. Photodegradation product of cannabichromene.**References :** Burstein, S; Hunter, SA; Renzulli, LJ *Pharmacol Exp Ther* 1985, 235, 87-91.Dosage  
Form**Catalog number :** 7370-001**Name :** Δ<sup>9</sup>-THC ampuls (various concentrations in 95% ethanol)**DEA schedule :** 1Dosage  
Form

**Dissociatives: Dexoxadrol Class****Catalog number :** NOCD-068**CASRN :** 631-06-1**Name :**  $\alpha$ -(+)-Dexoxadrol hydrochloride**Mol. formula :** C<sub>20</sub>H<sub>24</sub>CINO<sub>2</sub>**FW :** 345.87    **DEA schedule :** 0

**References :** Thurkauf, A; et al. *J Med Chem* 1988, 31, 2257-63.  
Sax, M; Wunsch, B *Curr Top Med Chem* 2006, 6, 723-32.

**Catalog number :** NOCD-069**CASRN :** 4792-18-1**Name :**  $\alpha$ -(-)-Levoxadrol hydrochloride**Mol. formula :** C<sub>20</sub>H<sub>24</sub>CINO<sub>2</sub>**FW :** 345.87    **DEA schedule :** 0

**References :** Thurkauf, A; et al. *J Med Chem* 1988, 31, 2257-63.  
Sax, M; Wunsch, B *Curr Top Med Chem* 2006, 6, 723-32.

**Catalog number :** 7484-001**Name :** N-Methyl-3-piperidylbenzilate hydrochloride**Mol. formula :** C<sub>20</sub>H<sub>24</sub>CINO<sub>3</sub>**FW :** 361.86    **DEA schedule :** 1**Dissociatives: Phencyclidine Class****Catalog number :** 7471-004**CASRN :** 956-90-1**Name :** Phencyclidine hydrochloride; PCP HCl**Mol. formula :** C<sub>17</sub>H<sub>26</sub>CIN**FW :** 284.36    **DEA schedule :** 2**Notes :** CNS depressant; anesthetic, psychostimulant**References :** Merck Index, 14th ed., Monograph 7219.**Catalog number :** 7471-041**Name :** 1-[*m*-(*m*-Aminophenyl)cyclohexyl]piperidine lactate**Mol. formula :** C<sub>20</sub>H<sub>32</sub>N<sub>2</sub>O<sub>3</sub>**FW :** 348.48    **DEA schedule :** 1

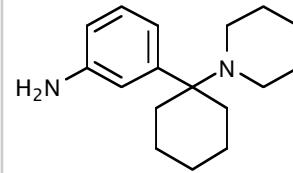
### 3 – Dissociatives

Catalog number : 7471-042

Name : 1-[1-(*m*-Aminophenyl)cyclohexyl]piperidine

Mol. formula : C<sub>17</sub>H<sub>26</sub>N<sub>2</sub>

FW : 258.39    DEA schedule : 1

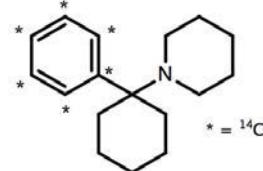


Catalog number : 7471-002

Name : [<sup>14</sup>C]Phencyclidine HBr; [<sup>14</sup>C]PCP

Mol. formula : C<sub>18</sub>H<sub>28</sub>BrN

FW : 523.53    DEA schedule : 2

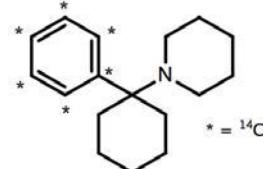


Catalog number : 7471-007

Name : [Phenyl-U-<sup>14</sup>C]-1-(1-Phenylcyclohexyl)Piperidine; [Phenyl-U-<sup>14</sup>C]PCP

Mol. formula : C<sub>17</sub>H<sub>25</sub>N

FW : 245.39    DEA schedule : 2

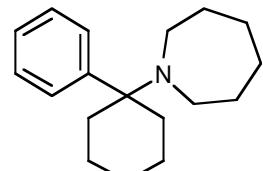


Catalog number : 7471-023

Name : 1-(1-Phenylcyclohexyl)hexamethyleneimine hydrochloride

Mol. formula : C<sub>18</sub>H<sub>28</sub>CIN

FW : 293.88    DEA schedule : 1

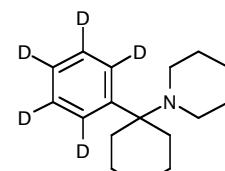


Catalog number : 7471-003

Name : [Phenyl-2,3,4,5,6-<sup>2</sup>H<sub>5</sub>]Phencyclidine; [Phenyl-2,3,4,5,6-<sup>2</sup>H<sub>5</sub>]PCP

Mol. formula : C<sub>17</sub>H<sub>25</sub>N

FW : 248.42    DEA schedule : 2

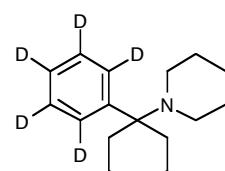


Catalog number : 7471-006

Name : [Phenyl-<sup>2</sup>H<sub>5</sub>]Phencyclidine hydrochloride; [Phenyl-<sup>2</sup>H<sub>5</sub>]PCP HCl

Mol. formula : C<sub>17</sub>H<sub>26</sub>CIN

FW : 284.89    DEA schedule : 2

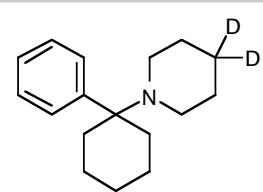


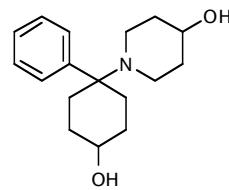
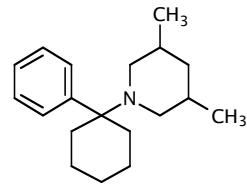
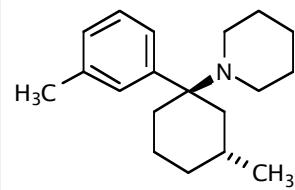
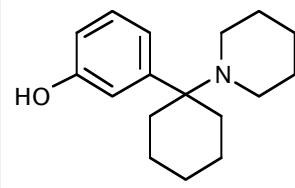
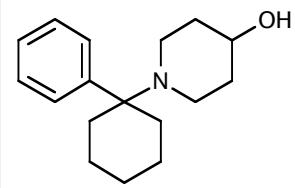
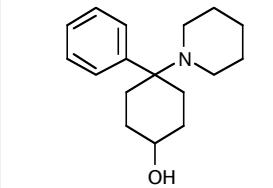
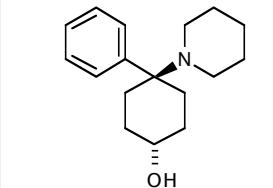
Catalog number : 7471-008

Name : [Piperidino-4,4-<sup>2</sup>H<sub>2</sub>]Phencyclidine hydrochloride;  
[Piperidino-4,4-<sup>2</sup>H<sub>2</sub>]PCP

Mol. formula : C<sub>17</sub>H<sub>26</sub>CIN

FW : 281.86    DEA schedule : 2



**Catalog number :** 7471-087**Name :** 4-(4'-Hydroxypiperidino)-4-phenylcyclohexanol (*cis/trans*)**Mol. formula :** C<sub>17</sub>H<sub>25</sub>NO<sub>2</sub>**FW :** 275.40    **DEA schedule :** 1**Catalog number :** 7471-019**Name :** 1-(1-Phenylcyclohexyl)-3,5-dimethylpiperidine hydrochloride**Mol. formula :** C<sub>19</sub>H<sub>30</sub>CIN**FW :** 307.91    **DEA schedule :** 1**Catalog number :** 7471-034**Name :** (±)-*cis*-1-[1-(*m*-Tolyl)-3-methylcyclohexyl]piperidine hydrochloride**Mol. formula :** C<sub>19</sub>H<sub>30</sub>CIN**FW :** 307.91    **DEA schedule :** 1**Catalog number :** 7471-033**CASRN :** 79787-43-2**Name :** 1-[1-(*m*-Hydroxyphenyl)cyclohexyl]piperidine hydrochloride**Mol. formula :** C<sub>17</sub>H<sub>26</sub>CINO**FW :** 295.85    **DEA schedule :** 1**References :** Itzhak, Y; Kalir A; Sarne Y *Eur J Pharmacol* 1981, 73, 229–33.**Catalog number :** 7471-081**Name :** 1-(1-Phenylcyclohexyl)-4-hydroxypiperidine**Mol. formula :** C<sub>17</sub>H<sub>25</sub>NO**FW :** 259.40    **DEA schedule :** 1**Catalog number :** 7471-083**CASRN :** 60756-83-4**Name :** 1-(1-Phenyl-4-hydroxycyclohexyl)piperidine (*cis/trans*)**Mol. formula :** C<sub>17</sub>H<sub>25</sub>NO**FW :** 259.35    **DEA schedule :** 1**References :** Carroll, FI; et al. *J Med Chem* 1981, 24, 1047–51.**References :** Martin, BR; Vincek WC; Balster RL *Subst Alcohol Actions Misuse* 1981, 2, 143–7.**Catalog number :** 7471-085**Name :** *cis*-1-(1-Phenyl-4-hydroxycyclohexyl)piperidine hydrochloride**Mol. formula :** C<sub>17</sub>H<sub>26</sub>CINO**FW :** 295.87    **DEA schedule :** 1**References :** Carroll, FI; et al. *J Med Chem* 1981, 24, 1047–51.

### 3 – Dissociatives

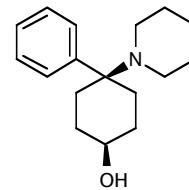
**Catalog number :** 7471-086

**Name :** *trans*-1-(1-Phenyl-4-hydroxycyclohexyl)piperidine hydrochloride

**Mol. formula :** C<sub>17</sub>H<sub>26</sub>CINO

**FW :** 295.87    **DEA schedule :** 1

**References :** Carroll, FI; et al. *J Med Chem* 1981, 24, 1047-51.

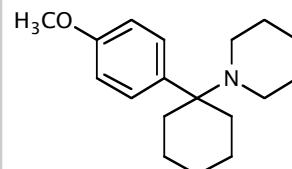


**Catalog number :** 7471-028

**Name :** 1-[1-(*p*-Methoxyphenyl)cyclohexyl]piperidine hydrochloride

**Mol. formula :** C<sub>18</sub>H<sub>28</sub>CINO

**FW :** 309.88    **DEA schedule :** 1

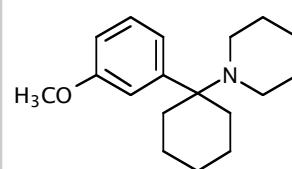


**Catalog number :** 7471-039

**Name :** 1-[1-(*m*-Methoxyphenyl)cyclohexyl]piperidine hydrochloride

**Mol. formula :** C<sub>18</sub>H<sub>28</sub>CINO

**FW :** 309.88    **DEA schedule :** 1

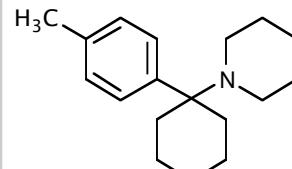


**Catalog number :** 7471-022

**Name :** 1-[1-(*p*-Tolyl)cyclohexyl]piperidine hydrochloride

**Mol. formula :** C<sub>18</sub>H<sub>28</sub>CIN

**FW :** 293.88    **DEA schedule :** 1



**Catalog number :** 7471-024

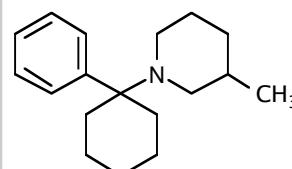
**CASRN :** 2201-41-4

**Name :** ( $\pm$ )-1-(1-Phenylcyclohexyl)-3-methylpiperidine hydrochloride

**Mol. formula :** C<sub>18</sub>H<sub>28</sub>CIN

**FW :** 293.88    **DEA schedule :** 1

**References :** Berry, SC; et al. *Eur J Pharmacol* 1983, 96, 261-7.



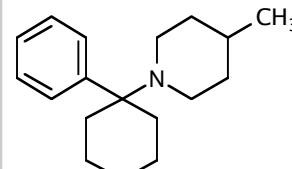
**Catalog number :** 7471-025

**CASRN :** 1934-50-5

**Name :** 1-(1-Phenylcyclohexyl)-4-methylpiperidine hydrochloride

**Mol. formula :** C<sub>18</sub>H<sub>28</sub>CIN

**FW :** 293.88    **DEA schedule :** 1

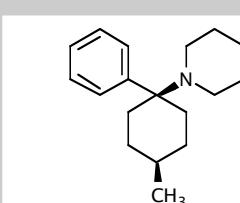


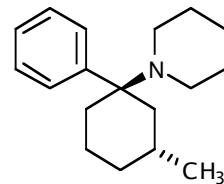
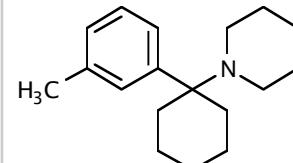
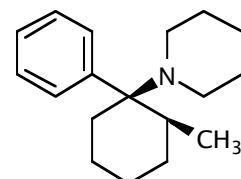
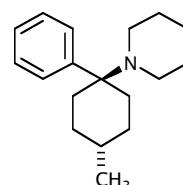
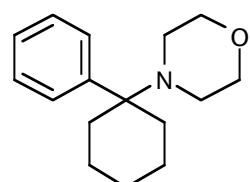
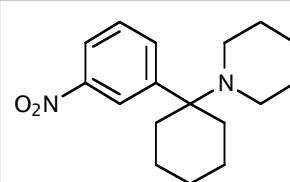
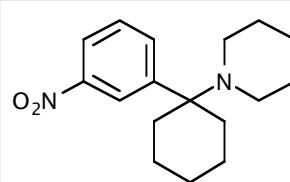
**Catalog number :** 7471-029

**Name :** *trans*-1-(1-Phenyl-4-methylcyclohexyl)piperidine hydrochloride

**Mol. formula :** C<sub>18</sub>H<sub>28</sub>CIN

**FW :** 293.88    **DEA schedule :** 1



**Catalog number :** 7471-030**Name :** ( $\pm$ )-*cis*-(1-Phenyl-3-methylcyclohexyl)piperidine hydrochloride**Mol. formula :** C<sub>18</sub>H<sub>28</sub>CIN**FW :** 293.88    **DEA schedule :** 1**Catalog number :** 7471-035**Name :** 1-[1-(*m*-Tolyl)cyclohexyl]piperidine hydrochloride**Mol. formula :** C<sub>18</sub>H<sub>28</sub>CIN**FW :** 293.88    **DEA schedule :** 1**Catalog number :** 7471-036**CASRN :** 59397-29-4**Name :** ( $\pm$ )-*trans*-1-(1-Phenyl-2-methylcyclohexyl)piperidine hydrochloride; 1-PMCPP**Mol. formula :** C<sub>18</sub>H<sub>28</sub>CIN**FW :** 293.88    **DEA schedule :** 1**References :** Iorio, MA; et al. *J Med Chem* 1991, 34, 2615–23.**Catalog number :** 7471-040**CASRN :** 21602-54-0**Name :** *cis*-1-(1-Phenyl-4-methylcyclohexyl)piperidine hydrochloride**Mol. formula :** C<sub>18</sub>H<sub>28</sub>CIN**FW :** 293.88    **DEA schedule :** 1**Catalog number :** 7471-010**CASRN :** 2201-40-3**Name :** 1-(1-Phenylcyclohexyl)morpholine hydrochloride; PCM hydrochloride**Mol. formula :** C<sub>16</sub>H<sub>24</sub>CINO**FW :** 281.83    **DEA schedule :** 1**References :** Brine, GA; et al. *J Heterocyclic Chem* 1979, 16, 1425.**Catalog number :** 7471-026**CASRN :** 70227-29-1**Name :** 1-[1-(*m*-Nitrophenyl)cyclohexyl]piperidine**Mol. formula :** C<sub>17</sub>H<sub>24</sub>N<sub>2</sub>O<sub>2</sub>**FW :** 288.38    **DEA schedule :** 1**References :** Ramoa, AS; Albuquerque EX *FEBS Lett* 1988, 235, 156–62.**Catalog number :** 7471-027**Name :** 1-[1-(*m*-Nitrophenyl)cyclohexyl]piperidine hydrochloride**Mol. formula :** C<sub>17</sub>H<sub>25</sub>CIN<sub>2</sub>O<sub>2</sub>**FW :** 324.85    **DEA schedule :** 1**References :** Ramoa, AS; Albuquerque EX *FEBS Lett* 1988, 235, 156–62.

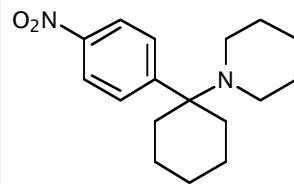
### 3 – Dissociatives

Catalog number : 7471-031

Name : 1-[1-(*p*-Nitrophenyl)cyclohexyl]piperidine

Mol. formula : C<sub>17</sub>H<sub>24</sub>N<sub>2</sub>O<sub>2</sub>

FW : 288.38    DEA schedule : 1

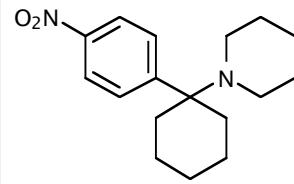


Catalog number : 7471-032

Name : 1-[1-(*p*-Nitrophenyl)cyclohexyl]piperidine hydrochloride

Mol. formula : C<sub>17</sub>H<sub>25</sub>ClN<sub>2</sub>O<sub>2</sub>

FW : 324.85    DEA schedule : 1

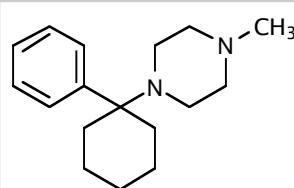


Catalog number : 7471-021

Name : 1-(1-Phenylcyclohexyl)-N'-methylpiperazine

Mol. formula : C<sub>17</sub>H<sub>26</sub>N<sub>2</sub>

FW : 258.41    DEA schedule : 1

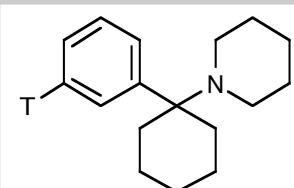


Catalog number : 7471-001

Name : [Phenyl-3-<sup>3</sup>H(n)]Phencyclidine; [Phenyl-3-<sup>3</sup>H(n)]PCP

Mol. formula : C<sub>17</sub>H<sub>25</sub>N

FW : 245.40    DEA schedule : 2

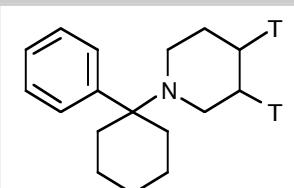


Catalog number : 7471-043

Name : [3',4'-<sup>3</sup>H]Phencyclidine; [3,4-<sup>3</sup>H]PCP

Mol. formula : C<sub>17</sub>H<sub>25</sub>N

FW : 247.4    DEA schedule : 2

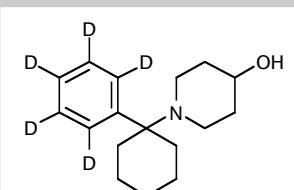


Catalog number : 7471-082

Name : [Phenyl-<sup>2</sup>H<sub>5</sub>]-1-(1-Phenylcyclohexyl)-4-hydroxypiperidine

Mol. formula : C<sub>17</sub>H<sub>25</sub>NO

FW : 264.43    DEA schedule : 1

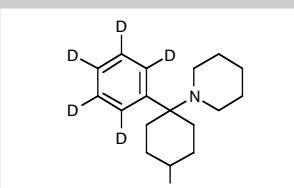


Catalog number : 7471-084

Name : [Phenyl-<sup>2</sup>H<sub>5</sub>]-1-(1-Phenyl-4-hydroxycyclohexyl)piperidine (*cis/trans*)

Mol. formula : C<sub>17</sub>H<sub>25</sub>NO

FW : 264.43    DEA schedule : 1



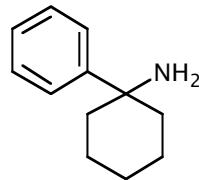
Catalog number : 7460-001

CASRN : 1934-71-0

Name : 1-Phenylcyclohexylamine hydrochloride; PCA hydrochloride

Mol. formula : C<sub>12</sub>H<sub>18</sub>CIN

FW : 211.74 DEA schedule : 1

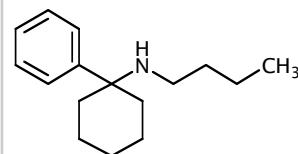
References : Brine, GA; et al. *J Heterocyclic Chem* 1979, 16, 1425.Blake, PA; Yamaguchi, S; Thurkauf, A; Rogawski, MA *Epilepsia* 1992, 33, 188-94.

Catalog number : 7460-005

Name : N-Butyl-1-phenylcyclohexylamine hydrochloride

Mol. formula : C<sub>16</sub>H<sub>26</sub>CIN

FW : 267.85 DEA schedule : 1

References : Brine, GA; et al. *J Heterocyclic Chem* 1979, 16, 1425.

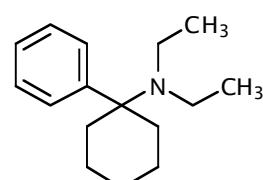
Catalog number : 7455-003

CASRN : 2201-19-6

Name : N,N-Diethyl-1-phenylcyclohexylamine hydrochloride; PCDE hydrochloride

Mol. formula : C<sub>16</sub>H<sub>26</sub>CIN

FW : 267.84 DEA schedule : 1

References : Brine, GA; et al. *J Heterocyclic Chem* 1979, 16, 1425.

Catalog number : 7455-002

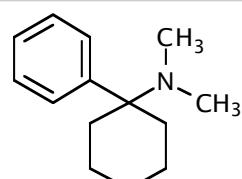
CASRN : 2201-17-4

Name : N,N-Dimethyl-1-phenylcyclohexylamine hydrochloride

Mol. formula : C<sub>14</sub>H<sub>22</sub>CIN

FW : 239.82 DEA schedule : 1

Notes : Current designer drug?

References : Brine, GA; et al. *J Heterocyclic Chem* 1979, 16, 1425.

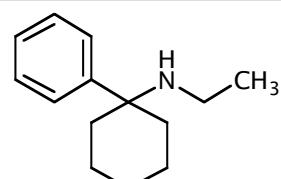
Catalog number : 7455-001

CASRN : 2201-15-2

Name : N-Ethyl-1-phenylcyclohexylamine hydrochloride; PCD hydrochloride

Mol. formula : C<sub>14</sub>H<sub>22</sub>CIN

FW : 239.79 DEA schedule : 1

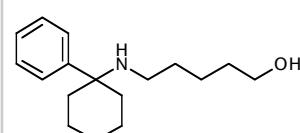
References : Brine, GA; et al. *J Heterocyclic Chem* 1979, 16, 1425.Brady, KT; Balster, RL; Meltzer, LT; Schwertz, D *Pharmacol Biochem Behav* 1980, 12, 67-71.

Catalog number : 7471-089

Name : N-(5-Hydroxypentyl)-1-phenylcyclohexylamine hydrochloride

Mol. formula : C<sub>17</sub>H<sub>28</sub>CINO

FW : 297.87 DEA schedule : 0



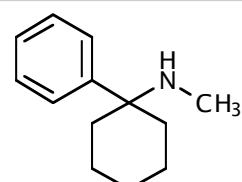
Catalog number : 7460-002

CASRN : 2201-16-3

Name : N-Methyl-1-phenylcyclohexylamine hydrochloride

Mol. formula : C<sub>13</sub>H<sub>20</sub>CIN

FW : 225.76 DEA schedule : 1

References : Brine, GA; et al. *J Heterocyclic Chem* 1979, 16, 1425.

### 3 – Dissociatives

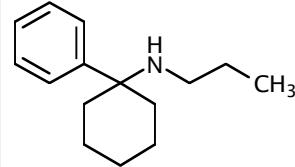
**Catalog number :** 7460-003

**CASRN :** 18949-81-0

**Name :** N-Propyl-1-phenylcyclohexylamine hydrochloride

**Mol. formula :** C<sub>15</sub>H<sub>24</sub>ClN

**FW :** 253.82    **DEA schedule :** 1



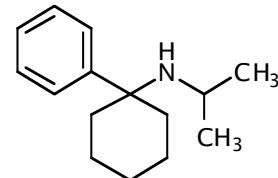
**References :** Brine, GA; et al. *J Heterocyclic Chem* 1979, 16, 1425.

**Catalog number :** 7460-004

**Name :** N-(*i*-Propyl)-1-phenylcyclohexylamine hydrochloride

**Mol. formula :** C<sub>15</sub>H<sub>24</sub>ClN

**FW :** 253.82    **DEA schedule :** 1



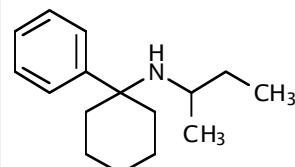
**References :** Brine, GA; et al. *J Heterocyclic Chem* 1979, 16, 1425.

**Catalog number :** 7460-006

**Name :** N-(*s*-Butyl)-1-phenylcyclohexylamine hydrochloride

**Mol. formula :** C<sub>16</sub>H<sub>26</sub>ClN

**FW :** 267.85    **DEA schedule :** 1



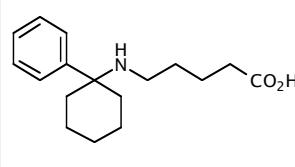
**References :** Brine, GA; et al. *J Heterocyclic Chem* 1979, 16, 1425.

**Catalog number :** 7471-088

**Name :** 5-[N-(1'-Phenylcyclohexyl)amino]pentanoic acid hydrochloride

**Mol. formula :** C<sub>17</sub>H<sub>26</sub>ClNO<sub>2</sub>

**FW :** 311.86    **DEA schedule :** 0



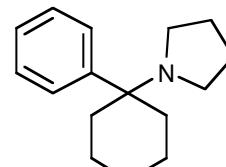
**Catalog number :** 7458-001

**CASRN :** 2201-39-0

**Name :** 1-(1-Phenylcyclohexyl)pyrrolidine hydrochloride; PCPy; Rolicyclidine

**Mol. formula :** C<sub>16</sub>H<sub>24</sub>ClN

**FW :** 265.83    **DEA schedule :** 1



**References :** Brine, GA; et al. *J Heterocyclic Chem* 1979, 16, 1425.  
Budd, RD *N Engl J Med* 1980, 303, 588.

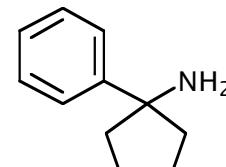
**Catalog number :** 7460-012

**CASRN :** 17380-74-4

**Name :** 1-Phenylcyclopentylamine hydrochloride; PPA hydrochloride

**Mol. formula :** C<sub>11</sub>H<sub>16</sub>ClN

**FW :** 197.71    **DEA schedule :** 1



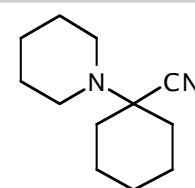
**References :** Blake, PA; Yamaguchi, S; Thurkauf, A; Rogawski, MA *Epilepsia* 1992, 33, 188-94.

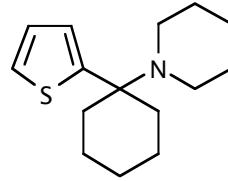
**Catalog number :** 8603-001

**Name :** 1-Piperidinocyclohexanecarbonitrile

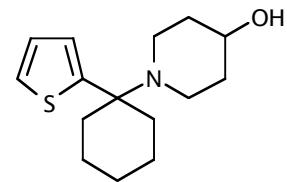
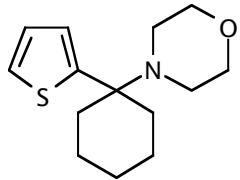
**Mol. formula :** C<sub>12</sub>H<sub>20</sub>N<sub>2</sub>

**FW :** 192.31    **DEA schedule :** 1

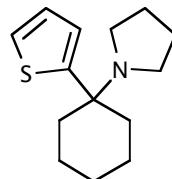
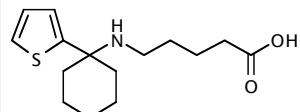


**Catalog number :** 7470-001**CASRN :** 1867-65-8**Name :** 1-[1-(2-Thienyl)cyclohexyl]piperidine hydrochloride; TCP hydrochloride**Mol. formula :** C<sub>15</sub>H<sub>24</sub>CINS**FW :** 285.88    **DEA schedule :** 1

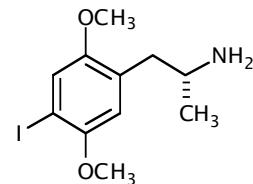
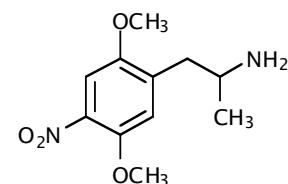
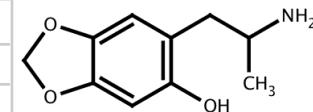
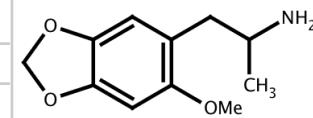
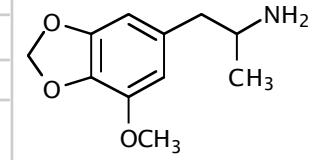
**References :** Brine, GA; et al. *J Heterocyclic Chem* 1979, 16, 1425.  
Vignon, J; et al. *Brain Res* 1983, 280, 194-7.

**Catalog number :** 7470-002**Name :** 1-[1-(2-Thienyl)cyclohexyl]-4-hydroxypiperidine**Mol. formula :** C<sub>15</sub>H<sub>23</sub>NOS**FW :** 265.42    **DEA schedule :** 1**Catalog number :** 7471-013**Name :** 1-[1-(2-Thienyl)cyclohexyl]morpholine hydrochloride**Mol. formula :** C<sub>14</sub>H<sub>22</sub>CINOS**FW :** 287.85    **DEA schedule :** 1

**References :** Brine, GA; et al. *J Heterocyclic Chem* 1979, 16, 1425.

**Catalog number :** 7473-015**Name :** 1-[1-(2-Thienyl)cyclohexyl]pyrrolidine hydrochloride**Mol. formula :** C<sub>14</sub>H<sub>22</sub>CINS**FW :** 271.86    **DEA schedule :** 1**Catalog number :** 7470-003**Name :** 5-[N-[1'-(2-Thienyl)cyclohexyl]amino]pentanoic acid hydrochloride**Mol. formula :** C<sub>15</sub>H<sub>24</sub>CINO<sub>2</sub>S**FW :** 317.88    **DEA schedule :** 0



**Hallucinogens: Amphetamine Class****Catalog number :** 7396-011**CASRN :** 82864-06-0**Name :** (-)-2,5-Dimethoxy-4-iodoamphetamine hydrochloride**Mol. formula :** C<sub>11</sub>H<sub>17</sub>ClINO<sub>2</sub>**FW :** 357.62    **DEA schedule :** 0**Catalog number :** 7396-009**Name :** (±)-2,5-Dimethoxy-4-nitroamphetamine hydrochloride**Mol. formula :** C<sub>11</sub>H<sub>17</sub>CIN<sub>2</sub>O<sub>4</sub>**FW :** 276.75    **DEA schedule :** 0**Catalog number :** 7402-002**CASRN :** 145284-65-7**Name :** (±)-6-Hydroxy-3,4-methylenedioxymethylamphetamine hydrochloride**Mol. formula :** C<sub>10</sub>H<sub>14</sub>CINO<sub>3</sub>**FW :** 238.89    **DEA schedule :** 1**Notes :** CNS stimulant**Catalog number :** 7401-001**Name :** (±)-2-Methoxy-4,5-methylenedioxymethylamphetamine hydrochloride**Mol. formula :** C<sub>11</sub>H<sub>16</sub>CINO<sub>3</sub>**FW :** 245.71    **DEA schedule :** 1**Catalog number :** 7401-003**Name :** (±)-3-Methoxy-4,5-methylenedioxymethylamphetamine hydrochloride**Mol. formula :** C<sub>11</sub>H<sub>16</sub>CINO<sub>3</sub>**FW :** 245.71    **DEA schedule :** 1

## 4 – Hallucinogens

**Catalog number :** 7402-001

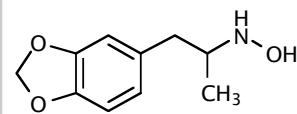
**CASRN :** 4764-17-4

**Name :** ( $\pm$ )-N-Hydroxy-3,4-methylenedioxymphetamine hydrochloride

**Mol. formula :** C<sub>10</sub>H<sub>14</sub>ClNO<sub>3</sub>

**FW :** 231.68    **DEA schedule :** 1

**Notes :** CNS stimulant

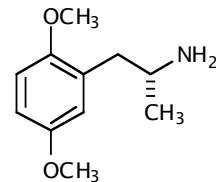


**Catalog number :** 7396-002

**Name :** (-)-2,5-Dimethoxyamphetamine hydrochloride; (-)-DMA

**Mol. formula :** C<sub>11</sub>H<sub>18</sub>ClNO<sub>2</sub>

**FW :** 231.72    **DEA schedule :** 1

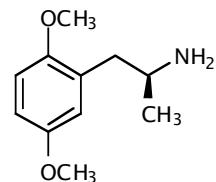


**Catalog number :** 7396-003

**Name :** (+)-2,5-Dimethoxyamphetamine hydrochloride; (+)-DMA

**Mol. formula :** C<sub>11</sub>H<sub>18</sub>ClNO<sub>2</sub>

**FW :** 231.72    **DEA schedule :** 1

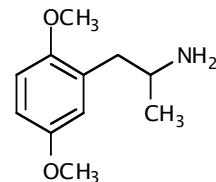


**Catalog number :** 7396-001

**Name :** ( $\pm$ )-2,5-Dimethoxyamphetamine hydrochloride; ( $\pm$ )-DMA

**Mol. formula :** C<sub>11</sub>H<sub>18</sub>ClNO<sub>2</sub>

**FW :** 231.72    **DEA schedule :** 1

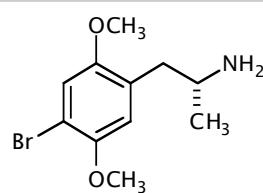


**Catalog number :** 7391-003

**Name :** (-)-4-Bromo-2,5-dimethoxyamphetamine hydrochloride; (-)-DOB

**Mol. formula :** C<sub>11</sub>H<sub>17</sub>BrClNO<sub>2</sub>

**FW :** 310.62    **DEA schedule :** 1

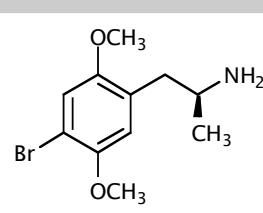


**Catalog number :** 7391-002

**Name :** (+)-4-Bromo-2,5-dimethoxyamphetamine hydrochloride; (+)-DOB

**Mol. formula :** C<sub>11</sub>H<sub>17</sub>BrClNO<sub>2</sub>

**FW :** 310.62    **DEA schedule :** 1

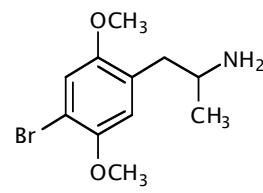


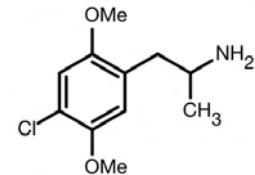
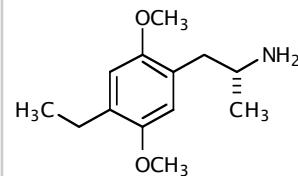
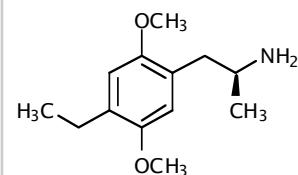
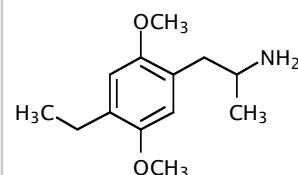
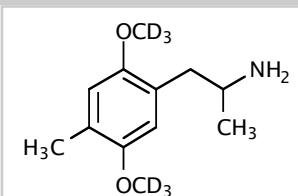
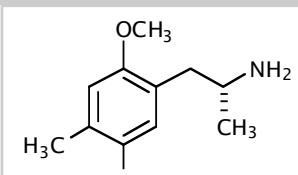
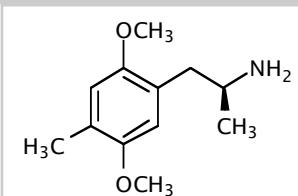
**Catalog number :** 7391-001

**Name :** ( $\pm$ )-4-Bromo-2,5-dimethoxyamphetamine hydrochloride; ( $\pm$ )-DOB

**Mol. formula :** C<sub>11</sub>H<sub>17</sub>BrClNO<sub>2</sub>

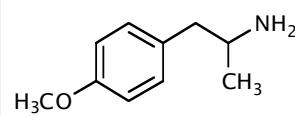
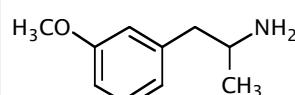
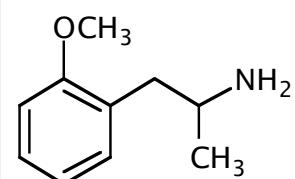
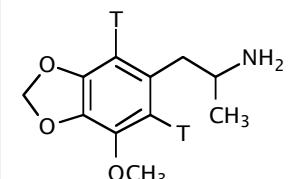
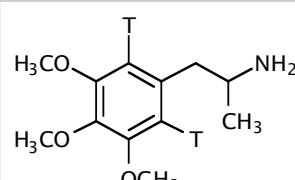
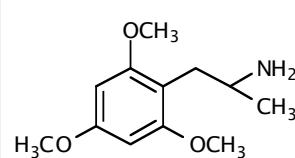
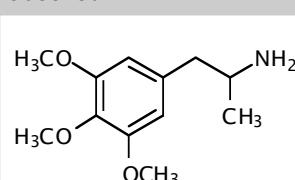
**FW :** 310.62    **DEA schedule :** 1

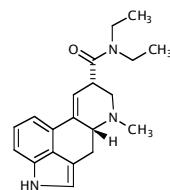
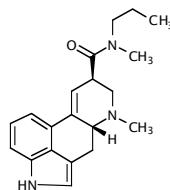
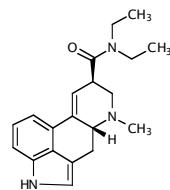
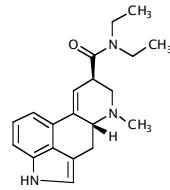
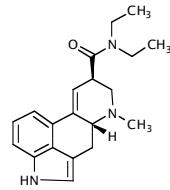
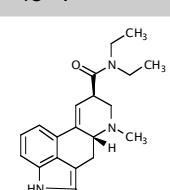


**Catalog number :** 7391-004**CASRN :** 123431-31-2**Name :** ( $\pm$ )-4-Chloro-2,5-dimethoxyamphetamine hydrochloride; ( $\pm$ )-DOC**Mol. formula :** C<sub>11</sub>H<sub>16</sub>ClNO<sub>2</sub> • HCl**FW :** 266.166 **DEA schedule :** 1**Catalog number :** 7399-007**Name :** (-)-2,5-Dimethoxy-4-ethylamphetamine hydrochloride; (-)-DOET**Mol. formula :** C<sub>13</sub>H<sub>22</sub>ClNO<sub>2</sub>**FW :** 259.78 **DEA schedule :** 1**Catalog number :** 7399-005**Name :** (+)-2,5-Dimethoxy-4-ethylamphetamine hydrochloride; (+)-DOET**Mol. formula :** C<sub>13</sub>H<sub>22</sub>ClNO<sub>2</sub>**FW :** 259.78 **DEA schedule :** 1**Catalog number :** 7399-004**Name :** ( $\pm$ )-2,5-Dimethoxy-4-ethylamphetamine hydrochloride; ( $\pm$ )-DOET**Mol. formula :** C<sub>13</sub>H<sub>22</sub>ClNO<sub>2</sub>**FW :** 259.78 **DEA schedule :** 1**Catalog number :** 7395-004**Name :** [OC<sup>2</sup>H<sub>3</sub>]-2,5-Dimethoxy-4-methylamphetamine HCl; [OC<sup>2</sup>H<sub>3</sub>]DOM**Mol. formula :** C<sub>12</sub>H<sub>20</sub>ClNO<sub>2</sub>**FW :** 251.78 **DEA schedule :** 1**Catalog number :** 7395-002**CASRN :** 15588-95-1**Name :** (-)-2,5-Dimethoxy-4-methylamphetamine hydrochloride; (-)-DOM**Mol. formula :** C<sub>12</sub>H<sub>20</sub>ClNO<sub>2</sub>**FW :** 245.75 **DEA schedule :** 1**Catalog number :** 7395-003**Name :** (+)-2,5-Dimethoxy-4-methylamphetamine hydrochloride; (+)-DOM**Mol. formula :** C<sub>12</sub>H<sub>20</sub>ClNO<sub>2</sub>**FW :** 245.75 **DEA schedule :** 1

## 4 – Hallucinogens

Catalog number : 7395-001	CASRN : 15588-95-1
Name : ( $\pm$ )-2,5-Dimethoxy-4-methylamphetamine hydrochloride; ( $\pm$ )-DOM	
Mol. formula : C <sub>12</sub> H <sub>20</sub> CINO <sub>2</sub>	FW : 245.75    DEA schedule : 1
Catalog number : 7400-003	CASRN : 61614-60-6
Name : (-)-3,4-Methylenedioxymphetamine hydrochloride; (-)-MDA HCl	
Mol. formula : C <sub>10</sub> H <sub>14</sub> CINO <sub>2</sub>	FW : 215.68    DEA schedule : 1
Catalog number : 7400-006	CASRN : 6292-91-7
Name : (-)-[6'- <sup>3</sup> H <sub>2</sub> (n)]-3',4'-Methylenedioxymamphetamine hydrochloride; (-)-[6'- <sup>3</sup> H <sub>2</sub> (n)]MDA	
Mol. formula : C <sub>10</sub> H <sub>14</sub> CINO <sub>2</sub>	FW : 217.68    DEA schedule : 1
Catalog number : 7400-002	CASRN : 64057-70-1
Name : (+)-3,4-Methylenedioxymamphetamine hydrochloride; (+)-MDA HCl	
Mol. formula : C <sub>10</sub> H <sub>14</sub> CINO <sub>2</sub>	FW : 215.68    DEA schedule : 1
Catalog number : 7400-004	
Name : (+)-[6'- <sup>3</sup> H <sub>2</sub> (n)-3',4'-Methylenedioxymamphetamine hydrochloride; (+)-[6'- <sup>3</sup> H <sub>2</sub> (n)]MDA	
Mol. formula : C <sub>10</sub> H <sub>14</sub> CINO <sub>2</sub>	FW : 215.68    DEA schedule : 1
Notes : Hallucinogen (tritium-labeled).	
Catalog number : 7400-001	CASRN : 6292-91-7
Name : ( $\pm$ )-3,4-Methylenedioxymamphetamine hydrochloride; MDA HCl	
Mol. formula : C <sub>10</sub> H <sub>14</sub> CINO <sub>2</sub>	FW : 215.68    DEA schedule : 1
References : Merck Index, 14th ed., Monograph 5765.	
Catalog number : 7400-005	
Name : [6- <sup>3</sup> H <sub>2</sub> (n)]-3,4-Methylenedioxymamphetamine hydrochloride; [6- <sup>3</sup> H <sub>2</sub> (n)]MDA	
Mol. formula : C <sub>10</sub> H <sub>14</sub> CINO <sub>2</sub>	FW : 217.68    DEA schedule : 1

**Catalog number :** 7411-001**CASRN :** 3706-26-1**Name :** ( $\pm$ )-4-Methoxyamphetamine hydrochloride**Mol. formula :** C<sub>10</sub>H<sub>16</sub>CINO**FW :** 201.70    **DEA schedule :** 1**Catalog number :** 7411-010**CASRN :** 17862-85-0**Name :** ( $\pm$ )-3-Methoxyamphetamine hydrochloride**Mol. formula :** C<sub>10</sub>H<sub>16</sub>CINO**FW :** 201.70    **DEA schedule :** 1**Catalog number :** 7411-011**CASRN :** 15402-84-3**Name :** ( $\pm$ )-2-Methoxyamphetamine hydrochloride; NDMP**Mol. formula :** C<sub>10</sub>H<sub>16</sub>CINO**FW :** 201.70    **DEA schedule :** 1**Catalog number :** 7401-002**Name :** [2',6'-<sup>3</sup>H(n)]-3-Methoxy-4,5-methylenedioxyamphetamine hydrochloride; [2,6-<sup>3</sup>H(n)]MMDA**Mol. formula :** C<sub>11</sub>H<sub>16</sub>CINO<sub>3</sub>**FW :** 249.72    **DEA schedule :** 1**Catalog number :** 7390-002**Name :** ( $\pm$ )-[2,6-<sup>3</sup>H<sub>2</sub>(n)]-3,4,5-Trimethoxyamphetamine hydrochloride**Mol. formula :** C<sub>12</sub>H<sub>20</sub>CINO<sub>3</sub>**FW :** 265.76    **DEA schedule :** 1**Catalog number :** 7390-003**Name :** ( $\pm$ )-2,4,6-Trimethoxyamphetamine hydrochloride**Mol. formula :** C<sub>12</sub>H<sub>20</sub>CINO<sub>3</sub>**FW :** 261.47    **DEA schedule :** 1**Catalog number :** 7390-001**CASRN :** 5688-80-2**Name :** ( $\pm$ )-3,4,5-Trimethoxyamphetamine hydrochloride; TMA**Mol. formula :** C<sub>12</sub>H<sub>20</sub>CINO<sub>3</sub>**FW :** 261.47    **DEA schedule :** 1

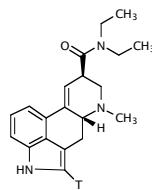
**Hallucinogens: Ergot alkaloids****Catalog number :** 7315-014**CASRN :** 2126-78-5**Name :** (+)-Isolysergic acid diethylamide**Mol. formula :** C<sub>20</sub>H<sub>25</sub>N<sub>3</sub>O**FW :** 323.20**DEA schedule :** 1**Catalog number :** 7315-013**CASRN :** 101692-69-7**Name :** (+)-Lysergic acid methyl-n-propylamide tartrate; LAMPA**Mol. formula :** (C<sub>20</sub>H<sub>25</sub>N<sub>3</sub>O)<sub>2</sub>**FW :** 796.33**DEA schedule :** 1**Catalog number :** 7315-004**CASRN :** 17676-08-3**Name :** (+)-Lysergic acid diethylamide (+)-tartrate (2:1); (+)-LSD (+)-tartrate**Mol. formula :** (C<sub>20</sub>H<sub>25</sub>N<sub>3</sub>O)<sub>2</sub>**FW :** 796.93**DEA schedule :** 1**References :** *Merck Index*, 14th ed., Monograph 5634.**Catalog number :** 7315-008**CASRN :** 50-37-3**Name :** (+)-Lysergic acid diethylamide; (+)-LSD**Mol. formula :** C<sub>20</sub>H<sub>25</sub>N<sub>3</sub>O**FW :** 323.42**DEA schedule :** 1**References :** *Merck Index*, 14th ed., Monograph 5634.**Catalog number :** 7315-009**CASRN :** 24656-41-5**Name :** (+)-Lysergic acid diethylamide hydrogen maleate**Mol. formula :** C<sub>20</sub>H<sub>25</sub>N<sub>3</sub>O<sub>2</sub>**FW :** 439.49**DEA schedule :** 1**Catalog number :** 7315-010**CASRN :** 4004-43-7**Name :** (+)-2-Bromo-LSD (+)-hydrogen tartrate; BOL-148**Mol. formula :** C<sub>20</sub>H<sub>24</sub>BrN<sub>3</sub>O**FW :** 552.44**DEA schedule :** 1**Notes :** Serotonin antagonist without the hallucinogenic activity of LSD**References :** *Merck Index*, 14th ed., Monograph 1423.

Catalog number : 7315-007

CASRN : 377756-22-4

Name : [2-<sup>3</sup>H]-(+)-Lysergic acid diethylamide; (+)-[3H]-LSDMol. formula : C<sub>20</sub>H<sub>25</sub>N<sub>3</sub>O

FW : 323.42    DEA schedule : 1



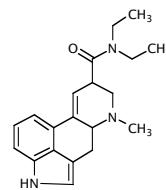
Catalog number : 7315-006

CASRN : 51064-36-9

Name : (±)-Lysergic acid diethylamide; (±)-LSD

Mol. formula : C<sub>20</sub>H<sub>25</sub>N<sub>3</sub>O

FW : 323.42    DEA schedule : 1

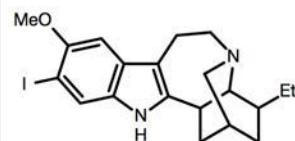
References : *Merck Index*, 14th ed., Monograph 5634.***Hallucinogens:* Ibogaine Class**

Catalog number : 7260-003

Name : 11-Iodoibogaine

Mol. formula : C<sub>20</sub>H<sub>25</sub>IN<sub>2</sub>O

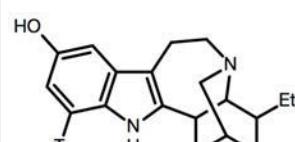
FW : 436.33    DEA schedule : 1



Catalog number : 7260-005

Name : [12-<sup>3</sup>H]-NoribogaineMol. formula : C<sub>19</sub>H<sub>24</sub>N<sub>2</sub>O

FW : 296.41    DEA schedule : 0

Notes : *Ibogaine-like effect without tremors (tritium-labeled).*

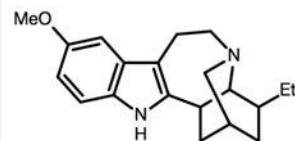
Catalog number : 7260-001

CASRN : 36415-61-9

Name : Ibogaine hydrochloride

Mol. formula : C<sub>20</sub>H<sub>27</sub>ClN<sub>2</sub>O

FW : 346.89    DEA schedule : 1

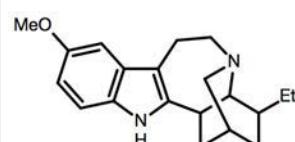
References : *Merck Index*, 14th ed., Monograph 4875.

Catalog number : 7260-002

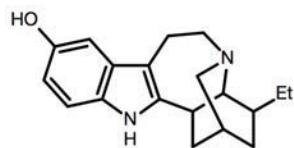
CASRN : 146560-35-2

Name : Tritium-labeled Ibogaine; [12-<sup>3</sup>H]IbogaineMol. formula : C<sub>20</sub>H<sub>26</sub>N<sub>2</sub>O

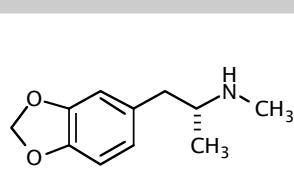
FW : 312.44    DEA schedule : 1

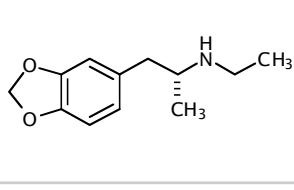
Notes : *Hallucinogen (tritium-labeled).*

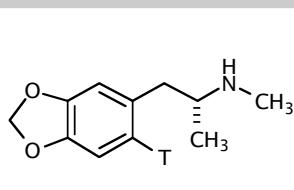
## 4 – Hallucinogens

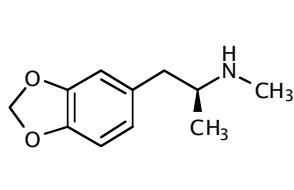
Catalog number : 7260-006	CASRN : 481-88-9	
Name : Noribogaine		
Mol. formula : C <sub>19</sub> H <sub>24</sub> N <sub>2</sub> O	FW : 292.42	DEA schedule : 0
Notes : <i>Ibogaine-like effect without tremors</i>		
References : Glick, SD; Pearl, SM; Cai, J; Maisonneuve, IM <i>Brain Res</i> 1996, 713, 294-7.		

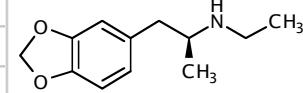
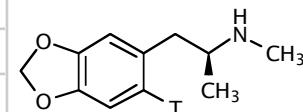
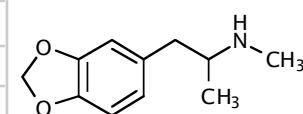
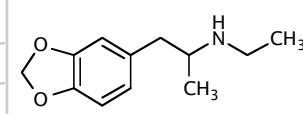
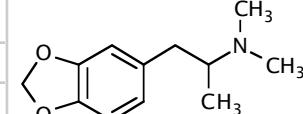
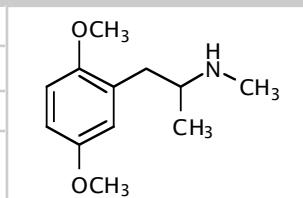
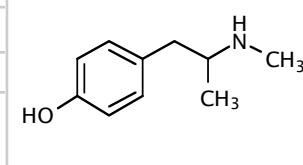
<b>Hallucinogens: Methamphetamine Class</b>
Catalog number : 7401-004
Name : (±)-6-Hydroxy-3,4-methylenedioxymethamphetamine fumarate
Mol. formula : C <sub>26</sub> H <sub>34</sub> N <sub>2</sub> O <sub>10</sub>
FW : 534.56
DEA schedule : 1

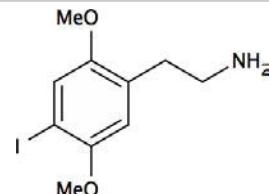
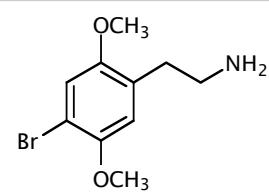
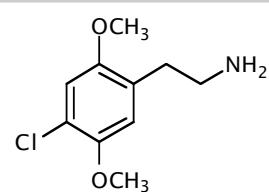
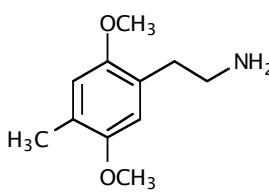
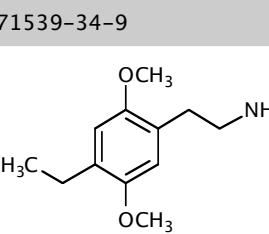
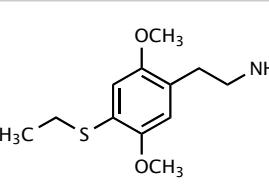

Catalog number : 7405-003	CASRN : 69558-31-2
Name : (–)-3,4-Methylenedioxymethamphetamine hydrochloride; (–)-MDMA	
Mol. formula : C <sub>11</sub> H <sub>16</sub> CINO <sub>2</sub>	
FW : 229.71	
DEA schedule : 1	
	

Catalog number : 7404-003	CASRN : 82801-81-8
Name : (–)-N-Ethyl-3,4-methylenedioxymethamphetamine hydrochloride	
Mol. formula : C <sub>12</sub> H <sub>18</sub> CINO <sub>2</sub>	
FW : 243.73	
DEA schedule : 1	
Notes : CNS stimulant	
	

Catalog number : 7405-005	CASRN : 4764-17-4
Name : (–)-[6'- <sup>3</sup> H(n)]-3',4'-Methylenedioxymethamphetamine hydrochloride; (–)-[ <sup>3</sup> H]MDMA	
Mol. formula : C <sub>11</sub> H <sub>16</sub> CINO <sub>2</sub>	
FW : 231.71	
DEA schedule : 1	
Notes : CNS stimulant; hallucinogen (tritium-labeled).	
	

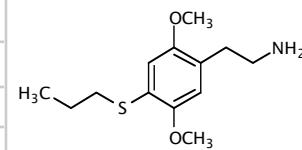
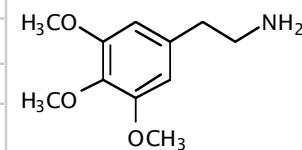
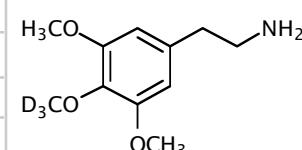
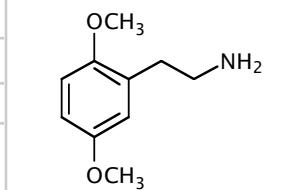
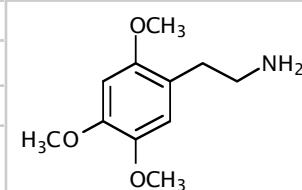
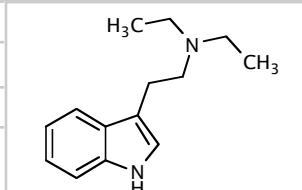
Catalog number : 7405-002	CASRN : 69558-32-3
Name : (+)-3,4-Methylenedioxymethamphetamine hydrochloride; (+)-MDMA	
Mol. formula : C <sub>11</sub> H <sub>16</sub> CINO <sub>2</sub>	
FW : 229.71	
DEA schedule : 1	
	

**Catalog number :** 7404-002**CASRN :** 82801-81-8**Name :** (+)-N-Ethyl-3,4-methylenedioxymphetamine hydrochloride**Mol. formula :** C<sub>12</sub>H<sub>18</sub>CINO<sub>2</sub>**FW :** 243.73    **DEA schedule :** 1**Notes :** CNS stimulant**Catalog number :** 7405-006**Name :** (+)-[6'-<sup>3</sup>H(n)]-3',4'-Methylenedioxymethamphetamine hydrochloride; (+)-[<sup>3</sup>H]MDMA**Mol. formula :** C<sub>11</sub>H<sub>16</sub>CINO<sub>2</sub>**FW :** 231.71    **DEA schedule :** 1**Notes :** CNS stimulant; hallucinogen (tritium-labeled).**Catalog number :** 7405-001**CASRN :** 64057-70-1**Name :** (±)-3,4-Methylenedioxymethamphetamine hydrochloride; MDMA**Mol. formula :** C<sub>11</sub>H<sub>16</sub>CINO<sub>2</sub>**FW :** 229.71    **DEA schedule :** 1**References :** Merck Index, 14th ed., Monograph 5767.**Catalog number :** 7404-001**CASRN :** 82801-81-8**Name :** (±)-N-Ethyl-3,4-methylenedioxymamphetamine hydrochloride**Mol. formula :** C<sub>12</sub>H<sub>18</sub>CINO<sub>2</sub>**FW :** 243.73    **DEA schedule :** 1**Notes :** CNS stimulant**Catalog number :** 7404-004**Name :** (±)-N,N-Dimethyl-3,4-methylenedioxymamphetamine hydrochloride**Mol. formula :** C<sub>12</sub>H<sub>18</sub>CINO<sub>2</sub>**FW :** 243.73    **DEA schedule :** 1**Notes :** CNS stimulant**Catalog number :** 7395-005**Name :** (±)-2,5-Dimethoxymethamphetamine hydrochloride**Mol. formula :** C<sub>12</sub>H<sub>20</sub>CINO<sub>2</sub>**FW :** 245.75    **DEA schedule :** 1**Catalog number :** 7411-012**CASRN :** 370-14-9**Name :** (±)-4-Hydroxymethamphetamine hydrochloride; Pholedrine**Mol. formula :** C<sub>10</sub>H<sub>16</sub>CINO**FW :** 201.70    **DEA schedule :** 2**References :** Merck Index, 14th ed., Monograph 4810.

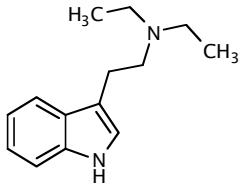
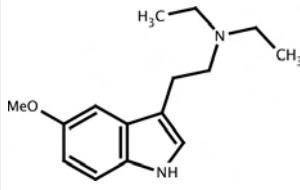
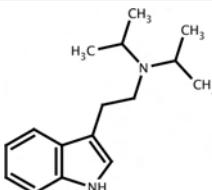
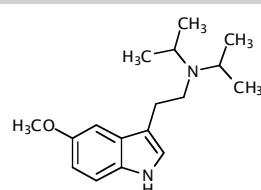
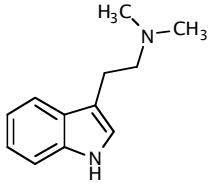
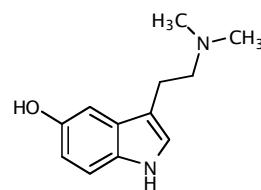
**Hallucinogens: Phenethylamine Class****Catalog number :** 7518-001**CASRN :** 69587-11-7 (base)**Name :** 2,5-Dimethoxy-4-iodo-β-phenethylamine hydrochloride; 2C-I**Mol. formula :** C<sub>10</sub>H<sub>15</sub>ClINO<sub>2</sub>**FW :** 343.59    **DEA schedule :** 1**Catalog number :** 7392-012**CASRN :** 56281-37-9**Name :** 4-Bromo-2,5-dimethoxy-β-phenethylamine hydrochloride; 2C-B**Mol. formula :** C<sub>10</sub>H<sub>15</sub>BrClNO<sub>2</sub>**FW :** 296.59    **DEA schedule :** 1**References :** *Merck Index*, 14th ed., Monograph 1908.**Catalog number :** 7519-001**CASRN :** 88441-14-9**Name :** 4-Chloro-2,5-dimethoxy-β-phenethylamine hydrochloride; 2C-C**Mol. formula :** C<sub>10</sub>H<sub>15</sub>Cl<sub>2</sub>NO<sub>2</sub>**FW :** 252.14    **DEA schedule :** 0**References :** Jacob, P., 3rd; Shulgin AT *NIDA Res Monogr* 1994, 146, 74-91.**Catalog number :** 7508-001**CASRN :** 25505-65-1**Name :** 2,5-Dimethoxy-4-methyl-β-phenethylamine hydrochloride; 2C-D**Mol. formula :** C<sub>11</sub>H<sub>18</sub>ClNO<sub>2</sub>**FW :** 231.72    **DEA schedule :** 0**References :** Jacob, P., 3rd; Shulgin AT *NIDA Res Monogr* 1994, 146, 74-91.**Catalog number :** 7509-001**CASRN :** 71539-34-9**Name :** 2,5-Dimethoxy-4-ethyl-β-phenethylamine hydrochloride; 2C-E**Mol. formula :** C<sub>12</sub>H<sub>20</sub>ClNO<sub>2</sub>**FW :** 245.75    **DEA schedule :** 0**References :** Jacob, P., 3rd; Shulgin AT *NIDA Res Monogr* 1994, 146, 74-91.**Catalog number :** 7385-001**CASRN :** 207740-24-7 (base)**Name :** 2,5-Dimethoxy-4-ethylthio-β-phenethylamine hydrochloride; 2C-T-2**Mol. formula :** C<sub>12</sub>H<sub>20</sub>ClNO<sub>2</sub>S**FW :** 277.81    **DEA schedule :** 0**References :** Fantegrossi, WE; et al. *Psychopharmacology (Berl)* 2005, 181, 496-503.

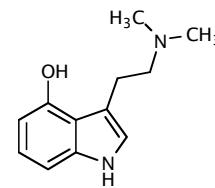
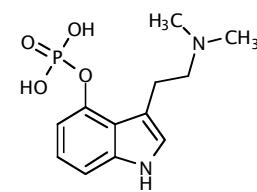
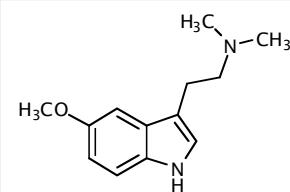
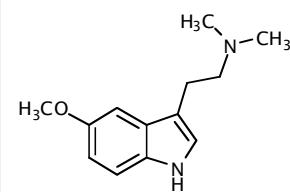
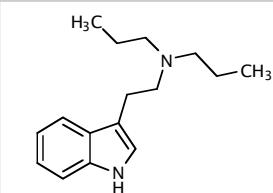
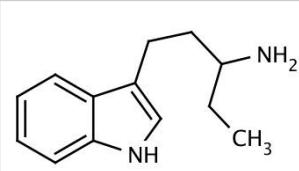
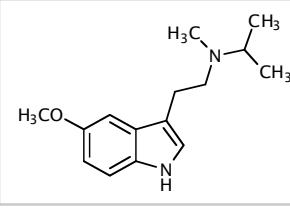
**Catalog number :** 7348-001**CASRN :** 207740-26-9

**Name :** 2,5-Dimethoxy-4-n-propylthio- $\beta$ -phenethylamine hydrochloride;  
2C-T-7

**Mol. formula :** C<sub>13</sub>H<sub>22</sub>ClNO<sub>2</sub>S**FW :** 291.84    **DEA schedule :** 1**References :** Fantegrossi, WE; et al. *Psychopharmacology (Berl)* 2005, 181, 496–503.**Catalog number :** 7381-001**CASRN :** 832-92-8**Name :** Mescaline hydrochloride**Mol. formula :** C<sub>11</sub>H<sub>18</sub>ClNO<sub>3</sub>**FW :** 247.72    **DEA schedule :** 1**References :** Merck Index, 14th ed., Monograph 5905.**Catalog number :** 7381-002**Name :** [4'-OC<sup>2</sup>H<sub>3</sub>]Mescaline hydrochloride**Mol. formula :** C<sub>11</sub>H<sub>18</sub>ClNO<sub>3</sub>**FW :** 247.72    **DEA schedule :** 1**Catalog number :** 7381-011**CASRN :** 3166-74-3**Name :** 2,5-Dimethoxy- $\beta$ -phenethylamine hydrochloride**Mol. formula :** C<sub>10</sub>H<sub>16</sub>ClNO<sub>2</sub>**FW :** 217.70    **DEA schedule :** 0**Catalog number :** 7381-010**CASRN :** 15394-83-9**Name :** 2,4,5-Trimethoxy- $\beta$ -phenethylamine hydrochloride**Mol. formula :** C<sub>11</sub>H<sub>18</sub>ClNO<sub>3</sub>**FW :** 247.72    **DEA schedule :** 1**Hallucinogens: Tryptamine Class****Catalog number :** 7434-001**CASRN :** 20671-78-7**Name :** N,N-Diethyltryptamine fumarate; DET fumarate**Mol. formula :** C<sub>18</sub>H<sub>24</sub>N<sub>2</sub>O<sub>4</sub>**FW :** 332.40    **DEA schedule :** 1**References :** Heinze, WJ; Schlemmer, RF; Tyler, CB; Davis, JM *Biol Psychiatry* 1983, 18, 829–36.

## 4 – Hallucinogens

Catalog number : 7434-002	CASRN : 61-51-8	
Name : N,N-Diethyltryptamine (base); DET		
Mol. formula : C <sub>14</sub> H <sub>20</sub> N <sub>2</sub>	FW : 216.33	DEA schedule : 1
References : Heinze, WJ; Schlemmer, RF, Jr; Tyler, CB; Davis JM <i>JM Biol Psychiatry</i> 1983, 18, 829–36.		
Catalog number : 7525-000	CASRN : 14780-24-6	
Name : 5-Methoxy-N,N-diethyltryptamine, 5-MeO-DET		
Mol. formula : C <sub>15</sub> H <sub>22</sub> N <sub>2</sub> O	FW : 246.35	DEA schedule : 1
References : Fumiko N, Ryouchi N, Kanak S, Hisashi K, <i>Eur J Pharmacol</i> , 2007, 559 (2-3), 132–137.		
Catalog number : 7522-000	CASRN : 63065-90-7	
Name : N,N-Diisopropyltryptamine hydrochloride, DiPT		
Mol. formula : C <sub>16</sub> H <sub>24</sub> N <sub>2</sub>	FW : 244.38	DEA schedule : 1
Notes : <i>Psilocin</i> analog.		
References : Pichini, S; et al., <i>J Pharm Biomed Analysis</i> 2008, 47, 335–342.		
Catalog number : 7439-001	CASRN : 4021-34-5	
Name : 5-Methoxy-N,N-diisopropyltryptamine hydrochloride; 5-MeO-DiPT; FOXY		
Mol. formula : C <sub>17</sub> H <sub>27</sub> CIN <sub>2</sub> O	FW : 310.87	DEA schedule : 1
References : Shulgin, AT; Carter MF <i>Commun Psychopharmacol</i> 1980, 4, 363–9.		
Catalog number : 7435-001	CASRN : 69321-46-6	
Name : N,N-Dimethyltryptamine fumarate; DMT fumarate		
Mol. formula : C <sub>16</sub> H <sub>20</sub> N <sub>2</sub> O <sub>4</sub>	FW : 304.35	DEA schedule : 1
References : Barker, SA; Monti, JA; Christian, ST <i>Int Rev Neurobiol</i> 1981, 22, 83–110.		
Catalog number : 7433-001	CASRN : 487-93-4	
Name : Bufotenine (base); 5-Hydroxy-N,N-dimethyltryptamine; 5-OH-DMT		
Mol. formula : C <sub>12</sub> H <sub>16</sub> N <sub>2</sub> O	FW : 204.26	DEA schedule : 1
References : Emanuele, E; et al., <i>Neuro Endocrinol Lett</i> 2010, 31, 117–21.		

**Catalog number :** 7438-001**CASRN :** 520-53-6**Name :** Psilocin**Mol. formula :** C<sub>12</sub>H<sub>16</sub>N<sub>2</sub>O**FW :** 204.27    **DEA schedule :** 1**References :** *Merck Index*, 14th ed., Monograph 7925.**Catalog number :** 7437-001**CASRN :** 520-52-5**Name :** Psilocybin**Mol. formula :** C<sub>12</sub>H<sub>17</sub>N<sub>2</sub>O<sub>4</sub>**FW :** 284.25    **DEA schedule :** 1**References :** *Merck Index*, 14th ed., Monograph 7926.**Catalog number :** 7431-001**CASRN :** 1019-45-0**Name :** 5-Methoxy-N,N-dimethyltryptamine (base); 5-MeO-DMT**Mol. formula :** C<sub>13</sub>H<sub>18</sub>N<sub>2</sub>O**FW :** 218.29    **DEA schedule :** 1**Catalog number :** 7431-002**CASRN :** 1019-45-0**Name :** 5-Methoxy-N,N-dimethyltryptamine fumarate; 5-MeO-DMT fumarate**Mol. formula :** C<sub>30</sub>H<sub>40</sub>N<sub>4</sub>O<sub>6</sub>**FW :** 552.67    **DEA schedule :** 1**Catalog number :** 7436-001**CASRN :** 7558-73-8**Name :** N,N-Dipropyltryptamine hydrochloride**Mol. formula :** C<sub>16</sub>H<sub>25</sub>ClN<sub>2</sub>**FW :** 280.84    **DEA schedule :** 0**Catalog number :** 7249-001**CASRN :** 2235-90-7**Name :** α-Ethyltryptamine acetate; AET**Mol. formula :** C<sub>14</sub>H<sub>20</sub>N<sub>2</sub>O<sub>2</sub>**FW :** 248.33    **DEA schedule :** 1**References :** *Merck Index*, 13th ed., Monograph 3924.**Catalog number :** NOCD-001**CASRN :** 96096-54-7**Name :** 5-Methoxy-N-isopropyl-N-methyltryptamine hydrochloride; 5-MeO-MiPT**Mol. formula :** C<sub>15</sub>H<sub>22</sub>N<sub>2</sub>O • HCl**FW :** 282.81    **DEA schedule :** 1**References :** Repke, DB; Grotjahn DB; Shulgin AT, *J Med Chem* 1985, 28, 892-6; Nagai, F; et al., *Eur J Pharmacol* 2007, 559(2-3), 132-137.

#### 4 – Hallucinogens

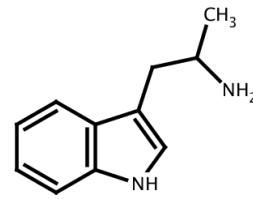
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CASRN : 299-26-3

Name :  $\alpha$ -Methyltryptamine; AMT

Mol. formula : C<sub>11</sub>H<sub>14</sub>N<sub>2</sub>

FW : 174.24    DEA schedule : 1



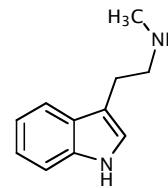
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CASRN : 61-49-4

Name : N-Methyltryptamine fumarate

Mol. formula : C<sub>15</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub>

FW : 290.31    DEA schedule : 0



Catalog number : 7506-001

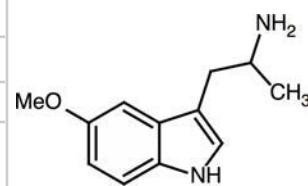
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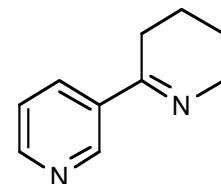
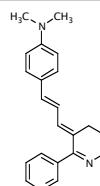
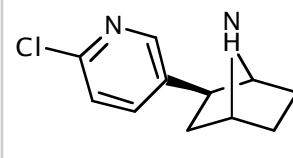
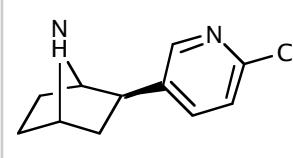
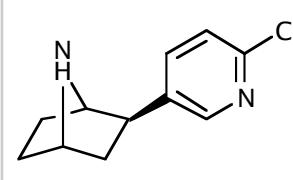
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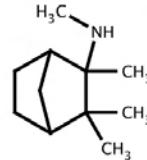
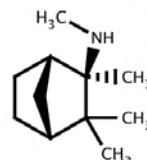
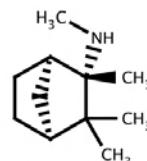
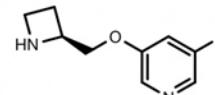
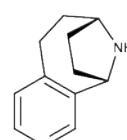
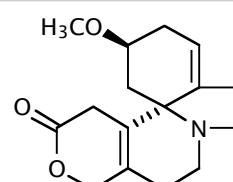
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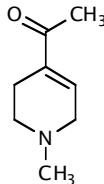
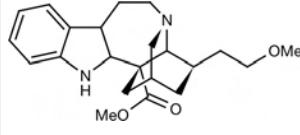
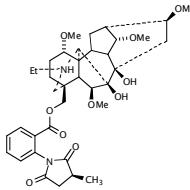
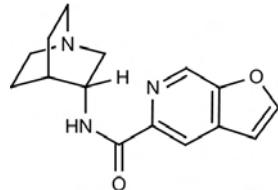
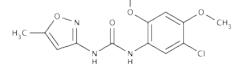
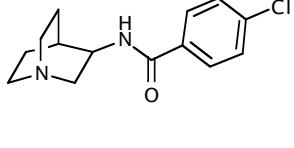
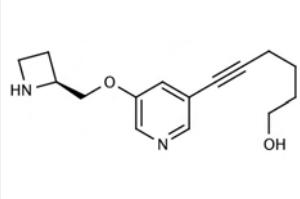
FW : 204.27    DEA schedule : 0

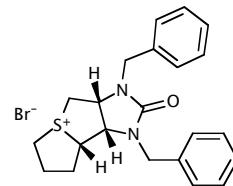
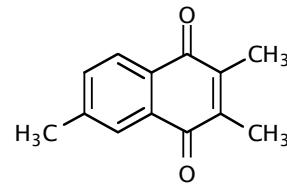
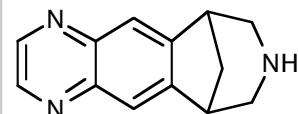
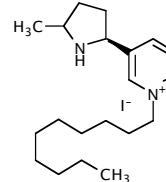
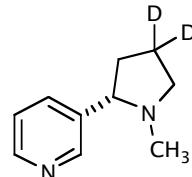
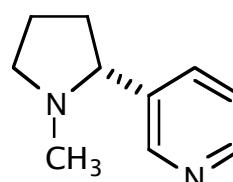
References : Jacob, P; Shulgin AT *NIDA Res Monogr* 1994, 146, 74-91.



**Nicotinic: Anabaseine Class****Catalog number :** NICT-011**CASRN :** 3471-05-4**Name :** Anabaseine dihydrochloride**Mol. formula :** C<sub>10</sub>H<sub>14</sub>Cl<sub>2</sub>N<sub>2</sub>**FW :** 233.14    **DEA schedule :** 0**Notes :** Nicotinic  $\alpha 7$  receptor agonist.**References :** Wheeler, JW; et al. *Science* 1981, 211, 1051–1052.Kem WR; Mahnir VM; Papke RL; Lingle CJ *J Pharmacol Exp Ther* 1997, 283, 979–92.**Catalog number :** NICT-012**Name :** (E,E)-3-(4'-Dimethylaminocinnamylidene)anabaseine dihydrochloride; DMAC**Mol. formula :** C<sub>21</sub>H<sub>25</sub>Cl<sub>2</sub>N<sub>3</sub>**FW :** 390.36    **DEA schedule :** 0**Notes :** Selective  $\alpha 7$  nicotinic acetylcholine receptor agonist.**References :** de Fiebre, C; et al. *Mol Pharmacol* 1995, 47, 164–171.**Nicotinic: Epibatidine Class****Catalog number :** NICT-002**CASRN :** 152378-30-8**Name :** (–)-Epibatidine hydrochloride**Mol. formula :** C<sub>11</sub>H<sub>14</sub>Cl<sub>2</sub>N<sub>2</sub>**FW :** 245.15    **DEA schedule :** 0**References :** Qian C; Li T; Shen TY; Libertine–Garahan L; Eckman J; Biftu T; Ip S *Eur J Pharmacol* 1993, 250, R13–4.  
Radio B; Daly JW *Mol Pharmacol* 1994, 45, 563–9.**Catalog number :** NICT-003**CASRN :** 140111-52-0**Name :** (+)-Epibatidine hydrochloride**Mol. formula :** C<sub>11</sub>H<sub>14</sub>Cl<sub>2</sub>N<sub>2</sub>**FW :** 245.15    **DEA schedule :** 0**Notes :** Epibatidine natural isomer.**References :** Qian C; Li T; Shen TY; Libertine–Garahan L; Eckman J; Biftu T; Ip S *Eur J Pharmacol* 1993, 250, R13–4.  
Radio B; Daly JW *Mol Pharmacol* 1994, 45, 563–9.**Catalog number :** NICT-001**Name :** (±)-Epibatidine hydrochloride**Mol. formula :** C<sub>11</sub>H<sub>14</sub>Cl<sub>2</sub>N<sub>2</sub>**FW :** 245.15    **DEA schedule :** 0**Notes :** Potent nicotinic receptor agonist and non-opioid analgesic.**References :** Sullivan, JP; et al. *J Pharmacol Exp Ther* 1994, 271, 624–31.

**Nicotinic: Mecamylamine Class****Catalog number :** NICT-004**CASRN :** 826-39-1**Name :** (±)-Mecamylamine HCl**Mol. formula :** C<sub>11</sub>H<sub>22</sub>CIN**FW :** 203.75    **DEA schedule :** 0**Notes :** Non-competitive nicotinic acetylcholine receptor antagonist.**References :** Sanberg, PR; et al. *Int J Neurosci* 2001, 109, 81-90.**Catalog number :** NOCD-123**CASRN :** 107596-31-6**Name :** (−)-(R)-Mecamylamine HCl**Mol. formula :** C<sub>11</sub>H<sub>22</sub>CIN**FW :** 203.75    **DEA schedule :** 0**Notes :** Non-competitive nicotinic acetylcholine receptor antagonist.**References :** Suchocki, JA, *Journal of Medicinal Chemistry* 1991, 34(3), 1003-10.  
Schoenenberger, B, *Helvetica Chimica Acta* 1986, 69(2), 283-7.**Catalog number :** NICT-018**CASRN :** 107596-30-5**Name :** (+)-(S)-Mecamylamine HCl**Mol. formula :** C<sub>11</sub>H<sub>22</sub>CIN**FW :** 203.75    **DEA schedule :** 0**Notes :** Non-competitive nicotinic acetylcholine receptor antagonist.**References :** Stone, CA; et al., *J. Med. Chem.*, 34, 1003 (1991).**Nicotinic: Miscellaneous****Catalog number :** NICT-019**new****CASRN :** 1217837-17-6**Name :** 5-I-A85380**Mol. formula :** C<sub>9</sub>H<sub>11</sub>IN<sub>2</sub>O • 2 HCl**FW :** 363.02    **DEA schedule :** 0**References :** Koren, et al., *J Med Chem* 1998, 41, 3690. Muhkin, et al., *Mol Pharmacol* 2000, 57, 642.**Catalog number :** NOCD-122**CASRN :** 895518-76-0**Name :** (−)-(1*S*, 6*S*)-Pyrido[3,4-*b*]homotropane dihydrochloride; (−)-PHT diHCl**Mol. formula :** C<sub>11</sub>H<sub>16</sub>Cl<sub>2</sub>N<sub>2</sub>**FW :** 247.17    **DEA schedule :** 0**Notes :** Conformationally rigid nicotine analog.**References :** Kanne, D. B.; Ashworth, D. J.; Cheng, M. T.; Mutter, L. C.; Abood, L. G. J. *Am. Chem. Soc.* 1986, 108, 7864.  
Carroll FI, Hu X, Navarro HA, Deschamps J, Abdurakhmanova GR, Damaj MI. *Mol Pharmacol* 2006, 69, 2244.**Catalog number :** NICT-006**CASRN :** 29734-68-7**Name :** Dihydro-β-erythroidine hydrobromide**Mol. formula :** C<sub>16</sub>H<sub>22</sub>BrNO<sub>3</sub>**FW :** 356.26    **DEA schedule :** 0**References :** *Merck Index*, 14th ed., Monograph 3175.

Catalog number : NICT-005	CASRN : 100752-88-3	
Name : Isoarecolone hydrochloride		
Mol. formula : C <sub>8</sub> H <sub>14</sub> ClNO	FW : 175.66	DEA schedule : 0
Notes : Nicotinic receptor agonist.		
References : Mirza, NR; et al. <i>Eur J Pharmacol</i> 1996, 295, 207–10. Shoaib, M <i>Psychopharmacology (Berl)</i> 2006, 188, 252–7.		
Catalog number : NOCD-012	CASRN : 308123-60-6	
Name : 18-Methoxycoronaridine; 18-MC		
Mol. formula : C <sub>22</sub> H <sub>30</sub> N <sub>2</sub> O <sub>3</sub>	FW : 370.49	DEA schedule : 0
Notes : Selective α3β4 nicotinic antagonist.		
References : Glick, SD; et al. <i>Brain Res</i> 1996, 719, 29–35.		
Catalog number : NICT-007	CASRN : 21019-30-7	
Name : Methyllycaconitine citrate; MLA		
Mol. formula : C <sub>43</sub> H <sub>58</sub> N <sub>2</sub> O <sub>17</sub>	FW : 928.98	DEA schedule : 0
Notes : Nicotinic receptor antagonist.		
References : Ward, JM; et al. <i>FEBS Lett</i> 1990, 270, 45–8. Alkondon, M; et al. <i>Mol Pharmacol</i> 1992, 41, 802–8.		
Catalog number : NOCD-013	CASRN : 478149-53-0	
Name : PHA-543613		
Mol. formula : C <sub>15</sub> H <sub>19</sub> Cl <sub>2</sub> N <sub>3</sub> O <sub>2</sub>	FW : 344.24	DEA schedule : 0
Notes : α7 nicotinic acetylcholine receptor agonist		
References : Wishka, DG; et al. <i>J Med Chem</i> 2006, 49, 4425–36.		
Catalog number : NICT-017	CASRN : 501925-31-1	
Name : PNU-120596		
Mol. formula : C <sub>13</sub> H <sub>14</sub> ClN <sub>3</sub> O <sub>4</sub>	FW : 311.72	
Notes : Positive allosteric modulator of the α <sub>7</sub> neuronal nicotinic acetylcholine receptor.		
References : Hurst, RS; et al. <i>J Neurosci</i> 2005, 25, 4396–405.		
Catalog number : NICT-016	CASRN : 123464-89-1	
Name : PNU-282987		
Mol. formula : C <sub>14</sub> H <sub>10</sub> Cl <sub>2</sub> N <sub>2</sub> O	FW : 310.21	DEA schedule : 0
Notes : Selective α7 nicotinic acetylcholine receptor agonist.		
References : Hajos, M; et al. <i>J Pharmacol Exp Ther</i> 2005, 312, 1213–22.		
Catalog number : MEDD-031	CASRN : 820231-95-6	
Name : Sazetidine hydrochloride		
Mol. formula : C <sub>15</sub> H <sub>22</sub> ClN <sub>2</sub> O <sub>2</sub>	FW : 333.26	DEA schedule : 0
Notes : Selective α <sub>4</sub> β <sub>2</sub> nicotinic receptor agonist.		
References : Xiao, et al., <i>Mol Pharmacol</i> , 2006, 70, 1454. Zwart, et al., <i>Mol Pharmacol</i> , 2008, 73 1843.		

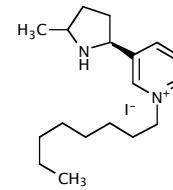
**Catalog number :** NICT-013**Name :** Trimethaphan bromide**Mol. formula :** C<sub>22</sub>H<sub>25</sub>BrN<sub>2</sub>OS**FW :** 445.43    **DEA schedule :** 0**Notes :** Nicotinic antagonist; antihypertensive.**References :** Merck Index, 14th ed., Monograph 9707.**Catalog number :** NICT-014**Name :** 2,3,6-Trimethyl-1,4-naphthoquinone**Mol. formula :** C<sub>13</sub>H<sub>12</sub>O<sub>2</sub>**FW :** 200.24    **DEA schedule :** 0**Catalog number :** NOCD-046**CASRN :** 249296-44-4**Name :** Varenicline dihydrochloride**Mol. formula :** C<sub>13</sub>H<sub>15</sub>Cl<sub>2</sub>N<sub>3</sub>**FW :** 288.685    **DEA schedule :** 0**Notes :** α4β2 nicotinic receptor partial agonist.**References :** Coe, JW; et al. *J Med Chem* 2005, 48, 3474–7.**Nicotinic: Nicotine Class****Catalog number :** NICT-009**Name :** (-)-N-Decynicotinium iodide (-)-di-p-toluoyl-L-tartrate; NDNI**Mol. formula :** C<sub>40</sub>H<sub>53</sub>IN<sub>2</sub>O<sub>8</sub>**FW :** 816.77    **DEA schedule :** 0**Catalog number :** NICT-015**CASRN :** 121949-85-7**Name :** (-)-Nicotine-4,4-d<sub>2</sub> (-)-di-p-toluoyl-L-tartrate**Mol. formula :** C<sub>30</sub>H<sub>32</sub>N<sub>2</sub>O<sub>8</sub>**FW :** 550.60    **DEA schedule :** 0**References :** Jacob, PJ *Labelled Comp Radiopharm* 1988, 25, 1117–28.**Catalog number :** NICT-008**CASRN :** 163804-20-4**Name :** (+)-Nicotine (+)-di-p-toluoyl-D-tartrate**Mol. formula :** C<sub>30</sub>H<sub>32</sub>N<sub>2</sub>O<sub>8</sub>**FW :** 548.58    **DEA schedule :** 0

Catalog number : NICT-010

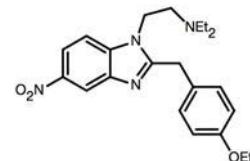
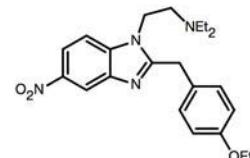
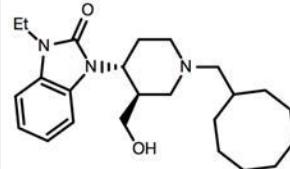
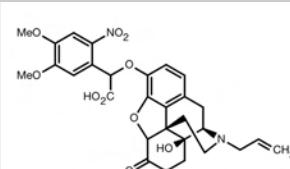
Name : (-)-N-Octylnicotinium iodide (-)-di-*p*-toluoyl-L-tartrate; NONI

Mol. formula : C<sub>38</sub>H<sub>49</sub>IN<sub>2</sub>O<sub>8</sub>

FW : 788.72    DEA schedule : 0

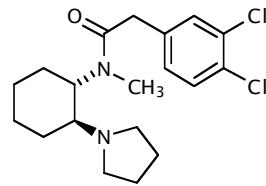




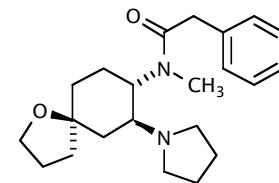
**Opioids: Benzodiazole Class****Catalog number :** 9624-002**Name :** Etonitazene**Mol. formula :** C<sub>22</sub>H<sub>28</sub>N<sub>4</sub>O<sub>3</sub>**FW :** 396.48    **DEA schedule :** 1**Notes :** Narcotic analgesic; potent  $\mu$  opiate receptor agonist**References :** Merck Index, 14th ed., Monograph 3883.**Catalog number :** 9624-001**CASRN :** 911-65-9**Name :** Etonitazene hydrochloride**Mol. formula :** C<sub>22</sub>H<sub>29</sub>ClN<sub>4</sub>O<sub>3</sub>**FW :** 432.95    **DEA schedule :** 1**Notes :** Narcotic analgesic; potent  $\mu$  opiate receptor agonist**References :** Merck Index, 14th ed., Monograph 3883.**Catalog number :** NOCD-057**CASRN :** 361343-48-8**Name :** (+)-J-113397**Mol. formula :** C<sub>24</sub>H<sub>38</sub>ClN<sub>3</sub>O<sub>2</sub>**FW :** 454.05    **DEA schedule :** 0**Notes :** Nociceptin/orphanin FQ (NOP) receptor antagonist.**References :** Kawamoto H; et al. *Tetrahedron* 2001, 57, 981-986.  
Kawamoto H; et al. *J Med Chem* 1999, 42, 5061-3.**Opioids: Caged****Catalog number :** MPSP-120**new****Name :** (Carboxynitroveratryl)naloxone; CNV-NLX**Mol. formula :** C<sub>29</sub>H<sub>30</sub>N<sub>2</sub>O<sub>10</sub>**FW :** 566.47    **DEA schedule :** 0**Notes :** Photoactivatable analog of naloxone.**References :** Banghart, MR; et al., *Mol Pharmacol* 2013, 84, 687-95.

**Opioids: Cyclohexyldiamine Class****Catalog number :** NOCD-064**CASRN :** 67198-13-4**Name :** U50,488H**Mol. formula :** C<sub>20</sub>H<sub>30</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>4</sub>S**FW :** 465.44    **DEA schedule :** 0**Notes :** Kappa-opioid receptor agonist.

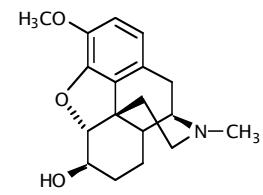
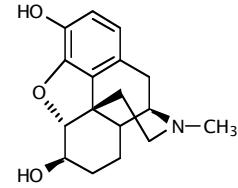
**References :** Vonvoigtlander, PF; et al. *J Pharmacol Exp Ther* 1983, 224, 7-12.  
 Negus, SS; et al. *J Pharmacol Exp Ther* 1997, 282, 44-55.  
 Taylor, CC; et al. *J Pharmacol Exp Ther* 1997, 280, 416-21.

**Catalog number :** NOCD-065**CASRN :** 96744-75-1**Name :** U69,593**Mol. formula :** C<sub>22</sub>H<sub>32</sub>N<sub>2</sub>O<sub>2</sub>**FW :** 356.51    **DEA schedule :** 0**Notes :** Selective κ-opioid agonist.

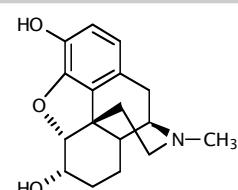
**References :** Lahti, RA; et al. *Eur J Pharmacol* 1985, 109, 281-4.  
 Puig-Ramos, A; et al. *Behav Neurosci* 2008, 122, 151-60.

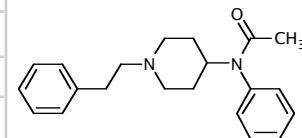
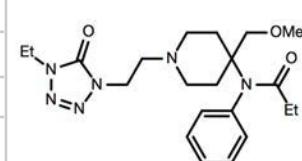
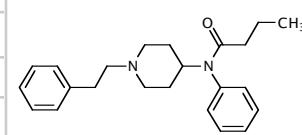
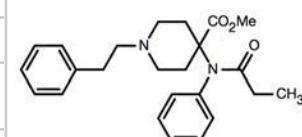
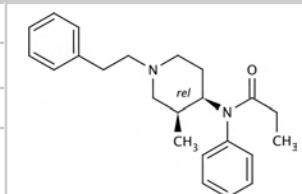
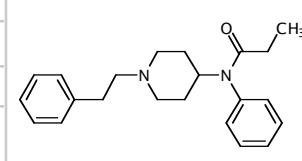
**Opioids: Dihydromorphine Class****Catalog number :** 9120-002**Name :** Dihydroisocodeine**Mol. formula :** C<sub>18</sub>H<sub>23</sub>NO<sub>3</sub>**FW :** 301.39    **DEA schedule :** 2

**References :** *Merck Index*, 14th ed., Monograph 3176.

**Catalog number :** 9145-002**Name :** Dihydroisomorphine**Mol. formula :** C<sub>17</sub>H<sub>21</sub>NO<sub>3</sub>**FW :** 287.36    **DEA schedule :** 1**Catalog number :** 9145-001**CASRN :** 509-60-4**Name :** Dihydromorphine**Mol. formula :** C<sub>17</sub>H<sub>21</sub>NO<sub>3</sub>**FW :** 287.36    **DEA schedule :** 1

**References :** *Merck Index*, 14th ed., Monograph 3177.



**Opioids: Fentanyl Class****Catalog number :** 9801-004**Name :** N-[1-(2-Phenylethyl)-4-piperidyl]-N-phenylacetamide hydrochloride**Mol. formula :** C<sub>21</sub>H<sub>27</sub>ClN<sub>2</sub>O**FW :** 358.91    **DEA schedule :** 0**References :** Brine, GA; et al. *J Heterocyclic Chem* 1989, 26, 677.**Catalog number :** 9737-001**CASRN :** 69049-06-5**Name :** Alfentanil hydrochloride**Mol. formula :** C<sub>21</sub>H<sub>33</sub>ClN<sub>6</sub>O<sub>3</sub>**FW :** 452.98    **DEA schedule :** 2**Notes :** Analgesic,  $\mu$ -Opioid agonist**References :** *Merck Index*, 14th ed., Monograph 236.**Catalog number :** 9801-005**Name :** N-[1-(2-Phenylethyl)-4-piperidyl]-N-phenylbutyramide hydrochloride**Mol. formula :** C<sub>23</sub>H<sub>31</sub>ClN<sub>2</sub>O**FW :** 386.97    **DEA schedule :** 0**References :** Brine, GA; et al. *J Heterocyclic Chem* 1989, 26, 677.**Catalog number :** 9743-001**Name :** Carfentanil hydrochloride**Mol. formula :** C<sub>24</sub>H<sub>31</sub>ClN<sub>2</sub>O<sub>3</sub>**FW :** 430.98    **DEA schedule :** 2**Notes :** Analgesic,  $\mu$ -Opioid agonist.  
(see footnotes 1 & 2 in Section C)**Catalog number :** 9813-001**CASRN :** 42045-86-3**Name :** ( $\pm$ )-*cis*-3-Methylfentanyl hydrochloride**Mol. formula :** C<sub>23</sub>H<sub>31</sub>ClN<sub>2</sub>O**FW :** 386.96    **DEA schedule :** 1**Notes :** Analgesic,  $\mu$ -Opioid agonist**References :** Brine, GA; et al. *J Heterocyclic Chem* 1989, 26, 677.**Catalog number :** 9801-001**CASRN :** 1443-54-5**Name :** Fentanyl hydrochloride**Mol. formula :** C<sub>22</sub>H<sub>29</sub>ClN<sub>2</sub>O**FW :** 372.92    **DEA schedule :** 2**Notes :** Analgesic,  $\mu$ -Opioid agonist**References :** *Merck Index*, 14th ed., Monograph 4001.  
Brine, GA; et al. *J Heterocyclic Chem* 1989, 26, 677.

## 6 – Opioids and Opioid-related

**Catalog number :** 9831-003

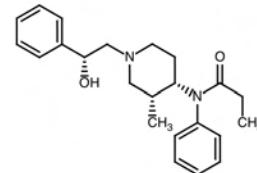
**Name :** ( $\beta R,3R,4S$ )-*cis*-(–)- $\beta$ -Hydroxy-3-methylfentanyl oxalate

**Mol. formula :** C<sub>25</sub>H<sub>32</sub>N<sub>2</sub>O<sub>6</sub>

**FW :** 456.55    **DEA schedule :** 1

**Notes :** Analgesic,  $\mu$ -Opioid agonist

**References :** Brine, GA; et al. *J Med Chem* 1995, 38, 1547–57.



**Catalog number :** 9814-001

**CASRN :** 79704-88-4

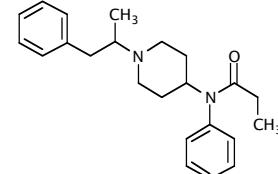
**Name :**  $\alpha$ -Methylfentanyl hydrochloride

**Mol. formula :** C<sub>23</sub>H<sub>31</sub>ClN<sub>2</sub>O

**FW :** 386.97    **DEA schedule :** 1

**Notes :** Analgesic,  $\mu$ -Opioid agonist

**References :** Ayres, WA; et al. *J Psychoactive Drugs* 1981, 13, 91–3.  
Kram, TC; et al. *Anal Chem* 1981, 53, 1379A–1386A.  
Brine, GA; et al. *J Heterocyclic Chem* 1989, 26, 677.



**Catalog number :** 9831-004

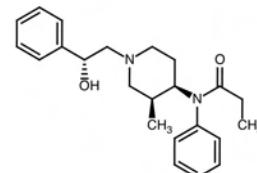
**Name :** ( $\beta R,3S,4R$ )-*cis*-(–)- $\beta$ -Hydroxy-3-methylfentanyl hydrochloride

**Mol. formula :** C<sub>23</sub>H<sub>31</sub>ClN<sub>2</sub>O<sub>2</sub>

**FW :** 402.97    **DEA schedule :** 1

**Notes :** Analgesic,  $\mu$ -Opioid agonist

**References :** Brine, GA; et al. *J Med Chem* 1995, 38, 1547–57.



**Catalog number :** 9831-005

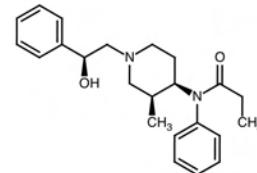
**Name :** ( $\beta S,3S,4R$ )-*cis*-(+)- $\beta$ -Hydroxy-3-methylfentanyl oxalate

**Mol. formula :** C<sub>25</sub>H<sub>32</sub>N<sub>2</sub>O<sub>6</sub>

**FW :** 456.55    **DEA schedule :** 1

**Notes :** Analgesic,  $\mu$ -Opioid agonist

**References :** Brine, GA; et al. *J Med Chem* 1995, 38, 1547–57.



**Catalog number :** 9813-002

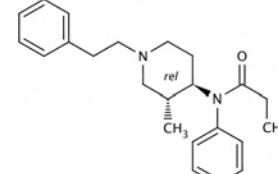
**CASRN :** 42045-87-4

**Name :** ( $\pm$ )-*trans*-3-Methylfentanyl hydrochloride

**Mol. formula :** C<sub>23</sub>H<sub>31</sub>ClN<sub>2</sub>O

**FW :** 386.96    **DEA schedule :** 1

**Notes :** Analgesic,  $\mu$ -Opioid agonist



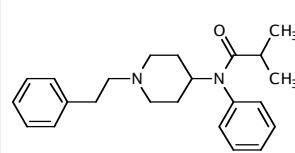
**Catalog number :** 9801-006

**Name :** N-[1-(2-Phenylethyl)-4-piperidyl]-N-phenylisobutyramide hydrochloride

**Mol. formula :** C<sub>23</sub>H<sub>31</sub>ClN<sub>2</sub>O

**FW :** 386.96    **DEA schedule :** 0

**References :** Brine, GA; et al. *J Heterocyclic Chem* 1989, 26, 677.



**Catalog number :** 9831-002

**CASRN :** 78995-14-9

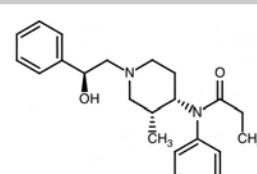
**Name :** ( $\beta S,3R,4S$ )-*cis*-(+)- $\beta$ -Hydroxy-3-methylfentanyl hydrochloride; Ohmefentanyl; F 7302

**Mol. formula :** C<sub>23</sub>H<sub>31</sub>ClN<sub>2</sub>O<sub>2</sub>

**FW :** 402.97    **DEA schedule :** 1

**Notes :** Analgesic,  $\mu$ -Opioid agonist

**References :** Xu, H; Chen J; Chi, ZQ *Sci Sin [B]* 1985, 28, 504–11.  
Brine, GA; et al. *J Med Chem* 1995, 38, 1547–57.



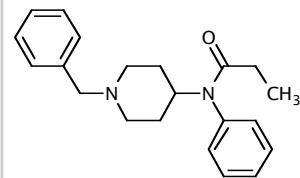
Catalog number : 9818-002

CASRN : 1474-02-8

Name : N-(1-Benzyl-4-piperidyl)-N-phenylpropanamide hydrochloride

Mol. formula : C<sub>21</sub>H<sub>27</sub>ClN<sub>2</sub>O

FW : 358.91 DEA schedule : 1

Notes :  $\mu$ -Opioid agonistReferences : Brine, GA; et al. *J Heterocyclic Chem* 1989, 26, 677.

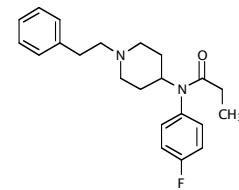
Catalog number : 9812-011

CASRN : 90736-23-5

Name : N-(4-Fluorophenyl)-N-[1-(2-phenylethyl)-4-piperidyl]propanamide hydrochloride

Mol. formula : C<sub>22</sub>H<sub>28</sub>ClFN<sub>2</sub>O

FW : 390.93 DEA schedule : 1

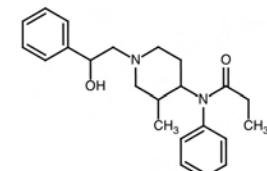


Catalog number : 9831-001

CASRN : 78995-14-9

Name : ( $\pm$ )-*cis*-N-[1-(2-Hydroxy-2-phenylethyl)-3-methyl-4-piperidyl]-N-phenylpropanamide hydrochlorideMol. formula : C<sub>23</sub>H<sub>31</sub>ClN<sub>2</sub>O<sub>2</sub>

FW : 402.97 DEA schedule : 1

Notes :  $\mu$ -Opioid agonistReferences : Brine, GA; et al. *J Med Chem* 1995, 38, 1547–57.

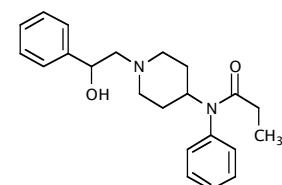
Catalog number : 9830-001

CASRN : 78995-10-5

Name : N-[1-(2-Hydroxy-2-phenylethyl)-4-piperidyl]-N-phenylpropanamide hydrochloride

Mol. formula : C<sub>22</sub>H<sub>29</sub>ClN<sub>2</sub>O<sub>2</sub>

FW : 388.93 DEA schedule : 1

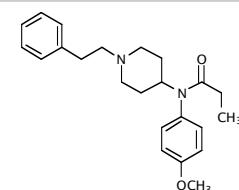
Notes :  $\mu$ -Opioid agonist

Catalog number : 9801-011

Name : N-(4-Methoxyphenyl)-N-[1-(2-phenylethyl)-4-piperidyl]propanamide hydrochloride

Mol. formula : C<sub>23</sub>H<sub>31</sub>ClN<sub>2</sub>O<sub>2</sub>

FW : 402.97 DEA schedule : 0

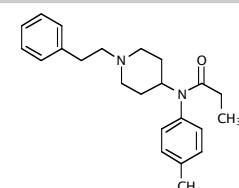
References : Brine, GA; et al. *J Heterocyclic Chem* 1989, 26, 677.

Catalog number : 9801-010

Name : N-(4-Methylphenyl)-N-[1-(2-phenylethyl)-4-piperidyl]propanamide hydrochloride

Mol. formula : C<sub>23</sub>H<sub>31</sub>ClN<sub>2</sub>O

FW : 386.97 DEA schedule : 0

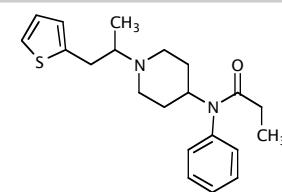


Catalog number : 9832-001

Name : N-[1-[1-Methyl-2-(2-thienyl)ethyl]-4-piperidyl]-N-phenylpropanamide hydrochloride

Mol. formula : C<sub>21</sub>H<sub>29</sub>ClN<sub>2</sub>OS

FW : 392.99 DEA schedule : 1

Notes :  $\mu$ -Opioid agonistReferences : Brine, GA; et al. *J Heterocyclic Chem* 1989, 26, 677.

## 6 – Opioids and Opioid-related

**Catalog number :** 9833-001

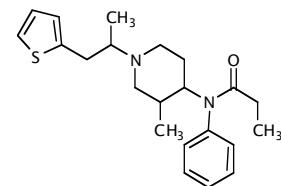
**Name :** ( $\pm$ )-*cis*-N-[3-Methyl-1-[2-(2-thienyl)ethyl]-4-piperidyl]-N-phenylpropanamide hydrochloride

**Mol. formula :** C<sub>21</sub>H<sub>29</sub>ClN<sub>2</sub>OS

**FW :** 392.99    **DEA schedule :** 1

**Notes :**  $\mu$ -Opioid agonist

**References :** Brine, GA; et al. *J Heterocyclic Chem* 1989, 26, 677.



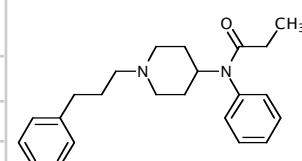
**Catalog number :** 9801-003

**Name :** N-[1-(3-Phenylpropyl)-4-piperidyl]-N-phenylpropanamide hydrochloride

**Mol. formula :** C<sub>23</sub>H<sub>31</sub>ClN<sub>2</sub>O

**FW :** 386.96    **DEA schedule :** 0

**References :** Brine, GA; et al. *J Heterocyclic Chem* 1989, 26, 677.



**Catalog number :** 9835-001

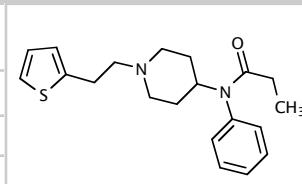
**Name :** N-Phenyl-N-[1-[2-(2-thienyl)ethyl]-4-piperidyl]propanamide hydrochloride

**Mol. formula :** C<sub>20</sub>H<sub>22</sub>ClN<sub>2</sub>OS

**FW :** 378.97    **DEA schedule :** 1

**Notes :**  $\mu$ -Opioid agonist

**References :** Brine, GA; et al. *J Heterocyclic Chem* 1989, 26, 677.



**Catalog number :** 9834-001

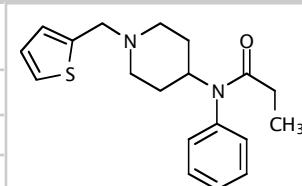
**Name :** N-Phenyl-N-[1-(2-thienyl)methyl-4-piperidyl]propanamide hydrochloride

**Mol. formula :** C<sub>19</sub>H<sub>25</sub>ClN<sub>2</sub>OS

**FW :** 364.94    **DEA schedule :** 1

**Notes :**  $\mu$ -Opioid agonist

**References :** Brine, GA; et al. *J Heterocyclic Chem* 1989, 26, 677.

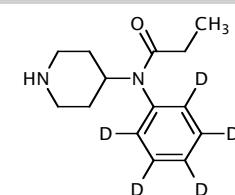


**Catalog number :** 9801-008

**Name :** [Phenyl-<sup>2</sup>H<sub>5</sub>]N-4-Piperidyl-N-phenylpropanamide

**Mol. formula :** C<sub>14</sub>H<sub>20</sub>N<sub>2</sub>O

**FW :** 237.36    **DEA schedule :** 0



**Catalog number :** 9740-001

**CASRN :** 60561-17-3

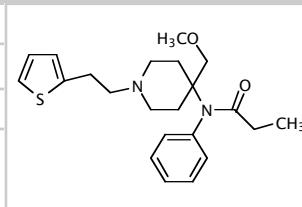
**Name :** Sufentanil citrate

**Mol. formula :** C<sub>28</sub>H<sub>38</sub>N<sub>2</sub>O<sub>9</sub>S

**FW :** 578.67    **DEA schedule :** 2

**Notes :** Analgesic,  $\mu$ -Opioid agonist

**References :** Merck Index, 14th ed., Monograph 8887.  
Brine, GA; et al. *J Heterocyclic Chem* 1989, 26, 677.



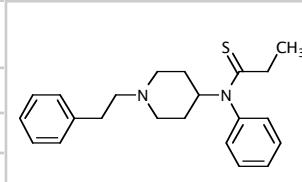
**Catalog number :** 9801-002

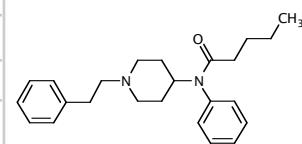
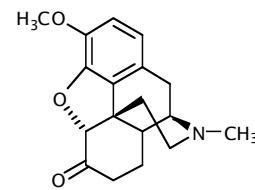
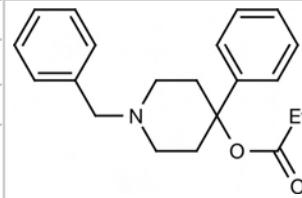
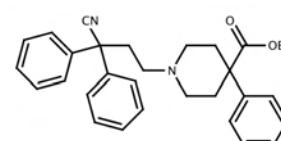
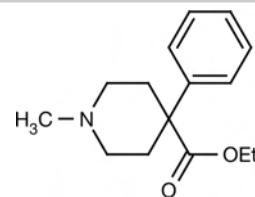
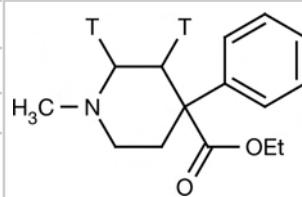
**Name :** N-[1-(2-Phenylethyl)-4-piperidyl]-N-phenylthiopropanamide hydrochloride

**Mol. formula :** C<sub>22</sub>H<sub>29</sub>ClN<sub>2</sub>S

**FW :** 389.01    **DEA schedule :** 0

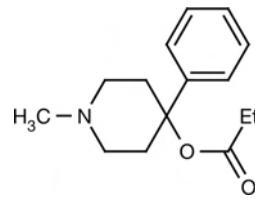
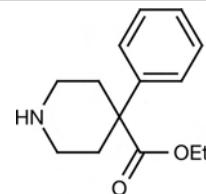
**References :** Brine, GA; et al. *J Heterocyclic Chem* 1989, 26, 677.



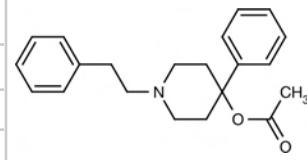
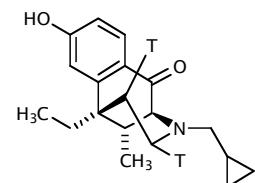
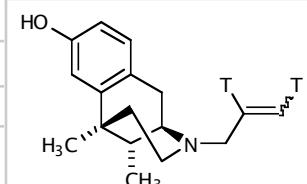
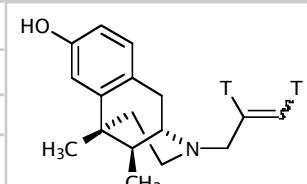
**Catalog number :** 9801-007**Name :** N-[1-(2-Phenylethyl)-4-piperidyl]-N-phenylvaleramide hydrochloride**Mol. formula :** C<sub>24</sub>H<sub>33</sub>ClN<sub>2</sub>O**FW :** 400.99    **DEA schedule :** 0**References :** Brine, GA; et al. *J Heterocyclic Chem* 1989, 26, 677.**Opioids: Hydrocodone Class****Catalog number :** 9193-002**CASRN :** 34195-34-1**Name :** Dihydrocodeinone tartrate; hydrocodone bitartrate**Mol. formula :** C<sub>22</sub>H<sub>27</sub>NO<sub>9</sub>**FW :** 449.46    **DEA schedule :** 2**Notes :** Narcotic analgesic; antitussive**References :** *Merck Index*, 14th ed., Monograph 4785.**Opioids: Meperidine Class****Catalog number :** 9661-002**CASRN :** 63916-24-5**Name :** 1-Benzyl-4-phenyl-4-propionoxypiperidine hydrochloride**Mol. formula :** C<sub>21</sub>H<sub>26</sub>ClNO<sub>2</sub>**FW :** 359.90    **DEA schedule :** 0**Catalog number :** 9170-001**CASRN :** 3810-80-8**Name :** Diphenoxylate hydrochloride**Mol. formula :** C<sub>30</sub>H<sub>33</sub>ClN<sub>2</sub>O<sub>2</sub>**FW :** 489.04    **DEA schedule :** 2**Notes :** Antiperistaltic; antidiarrheal**References :** *Merck Index*, 14th ed., Monograph 3313.**Catalog number :** 9230-002**CASRN :** 50-13-5**Name :** Meperidine hydrochloride; Demerol hydrochloride**Mol. formula :** C<sub>15</sub>H<sub>22</sub>ClNO<sub>2</sub>**FW :** 283.80    **DEA schedule :** 2**Notes :** Narcotic analgesic; sedative; anesthetic**References :** *Merck Index*, 14th ed., Monograph 5849.**Catalog number :** 9230-003**Name :** [2,3-<sup>3</sup>H]Meperidine hydrochloride**Mol. formula :** C<sub>15</sub>H<sub>22</sub>ClNO<sub>2</sub>**FW :** 287.81    **DEA schedule :** 2

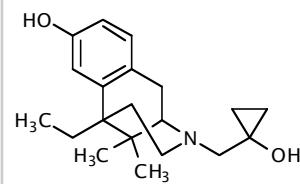
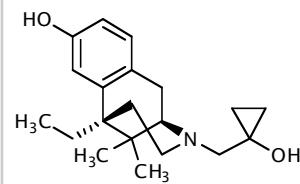
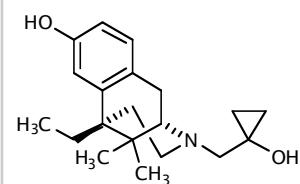
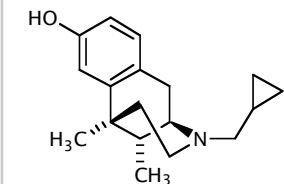
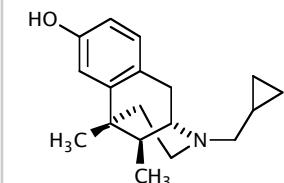
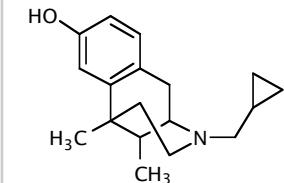
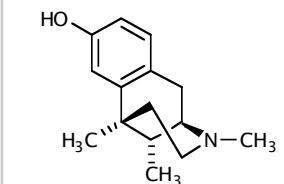
**Catalog number :** 9661-001**CASRN :** 13147-09-6

**Name :** 1-Methyl-4-phenyl-4-propionoxypiperidine hydrochloride;  
Desmethylprodine; MPPP HCl

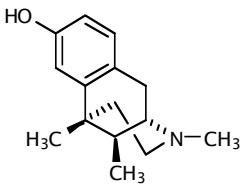
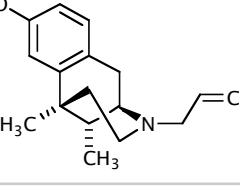
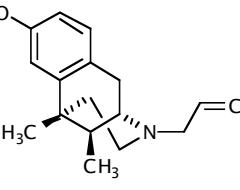
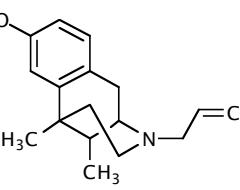
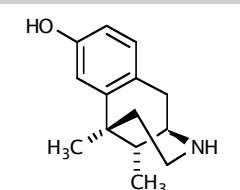
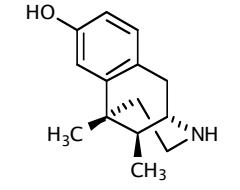
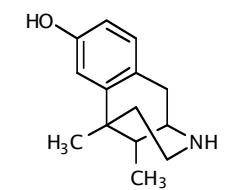
**Mol. formula :** C<sub>15</sub>H<sub>22</sub>ClNO<sub>2</sub>**FW :** 283.80    **DEA schedule :** 1**Notes :**  $\mu$ -Opioid agonist; narcotic analgesic**References :** Johannessen, JN; Markey SP *Drug Alcohol Depend* 1984, 13, 367-74.**Catalog number :** 9230-001**CASRN :** 24465-45-0**Name :** Normeperidine hydrochloride**Mol. formula :** C<sub>14</sub>H<sub>20</sub>ClNO<sub>2</sub>**FW :** 269.77    **DEA schedule :** 0**Catalog number :** 9663-001**CASRN :** 94-30-4

**Name :** 1-(2-Phenylethyl)-4-phenyl-4-acetoxytropine hydrochloride; PEPAP  
HCl

**Mol. formula :** C<sub>21</sub>H<sub>26</sub>ClNO<sub>2</sub>**FW :** 359.90    **DEA schedule :** 1**References :** Pritzker, D; et al. *J Clin Psychopharmacol* 2002, 22, 330-2.**Opioids: Metazocine Class****Catalog number :** 9240-003**Name :** [11,12-<sup>3</sup>H<sub>2</sub>](-)-Ethylketazocine**Mol. formula :** C<sub>19</sub>H<sub>25</sub>NO<sub>2</sub>**FW :** 303.42    **DEA schedule :** 1**Catalog number :** 9240-019**Name :** (-)-[17,18-<sup>3</sup>H<sub>2</sub>]N-Allylnormetazocine**Mol. formula :** C<sub>17</sub>H<sub>23</sub>NO**FW :** 261.39    **DEA schedule :** 0**Catalog number :** 9240-040**Name :** (+)-[17,18-<sup>3</sup>H<sub>2</sub>]N-Allylnormetazocine**Mol. formula :** C<sub>17</sub>H<sub>23</sub>NO**FW :** 261.39    **DEA schedule :** 0

**Catalog number :** 9240-029**CASRN :** 71990-00-6**Name :** (±)-Bremazocine hydrochloride**Mol. formula :** C<sub>20</sub>H<sub>30</sub>CINO<sub>2</sub>**FW :** 351.92    **DEA schedule :** 0**Notes :** Kappa-opioid receptor standard ligand.**References :** Dortch-Carnes, J; Potter, DE *CNS Drug Rev* 2005, 11, 195–212.**Catalog number :** 9240-031**CASRN :** 75684-07-0**Name :** (−)-Bremazocine hydrochloride**Mol. formula :** C<sub>20</sub>H<sub>30</sub>CINO<sub>2</sub>**FW :** 351.92    **DEA schedule :** 0**Notes :** Kappa-opioid receptor standard ligand.**References :** Dortch-Carnes, J; Potter, DE *CNS Drug Rev* 2005, 11, 195–212.**Catalog number :** 9240-030**Name :** (+)-Bremazocine hydrochloride**Mol. formula :** C<sub>20</sub>H<sub>30</sub>CINO<sub>2</sub>**FW :** 351.92    **DEA schedule :** 0**Notes :** Kappa-opioid receptor standard ligand.**References :** Dortch-Carnes, J; Potter, DE *CNS Drug Rev* 2005, 11, 195–212.**Catalog number :** 9240-011**Name :** (−)-Cyclazocine**Mol. formula :** C<sub>18</sub>H<sub>25</sub>NO**FW :** 271.39    **DEA schedule :** 0**Notes :** Narcotic antagonist**Catalog number :** 9240-012**Name :** (+)-Cyclazocine**Mol. formula :** C<sub>18</sub>H<sub>25</sub>NO**FW :** 271.39    **DEA schedule :** 0**Notes :** Narcotic antagonist**References :** Carroll, FI; et al. *J Med Chem* 1992, 35, 2812–8.**Catalog number :** 9240-010**CASRN :** 3572-80-3**Name :** (±)-Cyclazocine**Mol. formula :** C<sub>18</sub>H<sub>25</sub>NO**FW :** 271.39    **DEA schedule :** 0**Notes :** Narcotic antagonist**References :** Merck Index, 14th ed., Monograph 2705.  
Carroll, FI; et al. *J Med Chem* 1992, 35, 2812–8.**Catalog number :** 9240-008**CASRN :** 133005-39-7**Name :** (−)-Metazocine fumarate**Mol. formula :** C<sub>34</sub>H<sub>46</sub>N<sub>2</sub>O<sub>6</sub>**FW :** 578.75    **DEA schedule :** 2**References :** Carroll, FI; et al. *J Med Chem* 1992, 35, 2812–8.

## 6 – Opioids and Opioid-related

Catalog number : 9240-007	CASRN : 133005-40-0	
Name : (+)-Metazocine fumarate		
Mol. formula : C <sub>34</sub> H <sub>46</sub> N <sub>2</sub> O <sub>6</sub>	FW : 578.75	DEA schedule : 2
<b>References :</b> Carroll, FI; et al. <i>J Med Chem</i> 1992, 35, 2812-8.		
Catalog number : 9240-018	CASRN : 14198-28-8	
Name : (-)-N-Allylnormetazocine hydrochloride, (-)-NANM; (-)-SKF-10,047		
Mol. formula : C <sub>17</sub> H <sub>24</sub> CINO	FW : 293.85	DEA schedule : 0
Notes : Sigma receptor standard ligand.		
<b>References :</b> Carroll, FI; et al. <i>J Med Chem</i> 1992, 35, 2812-8.		
Catalog number : 9240-017	CASRN : 133005-41-1	
Name : (+)-N-Allylnormetazocine hydrochloride, (+)-NANM; (+)-SKF-10,047		
Mol. formula : C <sub>17</sub> H <sub>24</sub> CINO	FW : 293.85	DEA schedule : 0
Notes : Sigma receptor standard ligand.		
<b>References :</b> Carroll, FI; et al. <i>J Med Chem</i> 1992, 35, 2812-8.		
Catalog number : 9240-016	CASRN : 7619-35-4	
Name : (±)-N-Allylnormetazocine hydrochloride; (±)-NANM; (±)-SKF-10,047; Alazocine		
Mol. formula : C <sub>17</sub> H <sub>24</sub> CINO	FW : 293.85	DEA schedule : 0
Notes : Sigma receptor standard ligand.		
Catalog number : 9240-004	CASRN : 16603-67-1	
Name : (-)- <i>cis</i> -Normetazocine		
Mol. formula : C <sub>14</sub> H <sub>19</sub> NO	FW : 217.31	DEA schedule : 0
<b>References :</b> Carroll, FI; et al. <i>J Med Chem</i> 1992, 35, 2812-8.		
Catalog number : 9240-005	CASRN : 16670-83-0	
Name : (+)- <i>cis</i> -Normetazocine		
Mol. formula : C <sub>14</sub> H <sub>19</sub> NO	FW : 217.31	DEA schedule : 0
<b>References :</b> Carroll, FI; et al. <i>J Med Chem</i> 1992, 35, 2812-8.		
Catalog number : 9240-002	CASRN : 16808-63-2	
Name : (±)-Normetazocine		
Mol. formula : C <sub>14</sub> H <sub>19</sub> NO	FW : 217.31	DEA schedule : 0

Catalog number : 9709-003

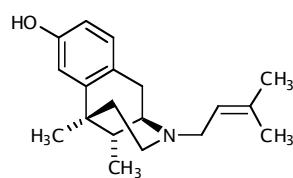
CASRN : 124819-25-6

Name : (-)-Pentazocine succinate

Mol. formula : C<sub>23</sub>H<sub>33</sub>NO<sub>5</sub>

FW : 403.52    DEA schedule : 4

Notes : Sigma receptor standard ligand.

References : *Merck Index*, 14th ed., Monograph 7121.Brogden, RN; Speight, TM; Avery, GS *Drugs* **1973**, *5*, 6–91.  
Carroll, FI; et al. *J Med Chem* **1992**, *35*, 2812–8.

Catalog number : 9709-002

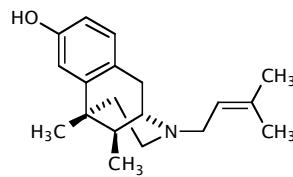
CASRN : 124819-26-7

Name : (+)-Pentazocine succinate

Mol. formula : C<sub>23</sub>H<sub>33</sub>NO<sub>5</sub>

FW : 403.52    DEA schedule : 4

Notes : Sigma receptor standard ligand.

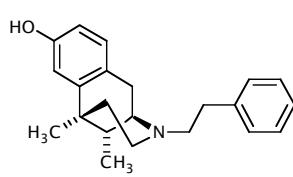
References : *Merck Index*, 14th ed., Monograph 7121.Brogden, RN; Speight, TM; Avery, GS *Drugs* **1973**, *5*, 6–91.  
Carroll, FI; et al. *J Med Chem* **1992**, *35*, 2812–8.

Catalog number : 9715-003

Name : (-)-Phenazocine hydrobromide

Mol. formula : C<sub>22</sub>H<sub>28</sub>BrNO

FW : 402.39    DEA schedule : 2

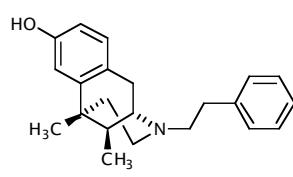


Catalog number : 9715-002

Name : (+)-Phenazocine hydrobromide

Mol. formula : C<sub>22</sub>H<sub>28</sub>BrNO

FW : 402.39    DEA schedule : 2



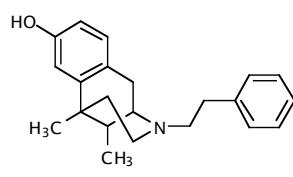
Catalog number : 9715-001

CASRN : 1239-04-9

Name : (±)-Phenazocine hydrobromide

Mol. formula : C<sub>22</sub>H<sub>28</sub>BrNO

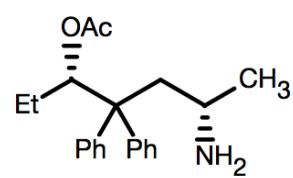
FW : 402.39    DEA schedule : 2

Notes : Narcotic analgesic,  $\sigma$  receptor ligandReferences : *Merck Index*, 14th ed., Monograph 7218.**Opioids: Methadone Class**

Catalog number : 9633-010

Name : (-)- $\alpha$ -Acetyl-N,N-dinormethadol hydrochlorideMol. formula : C<sub>21</sub>H<sub>28</sub>ClNO<sub>2</sub>

FW : 361.92    DEA schedule : 0

References : Carroll, FI; et al. *J Org Chem* **1976**, *41*, 3521–4.

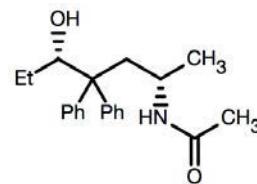
## 6 – Opioids and Opioid-related

**Catalog number :** 9633-050

**Name :** (-)- $\alpha$ -N-Acetyl-N,N-dinormethadol

**Mol. formula :** C<sub>21</sub>H<sub>27</sub>NO<sub>2</sub>

**FW :** 325.45    **DEA schedule :** 1



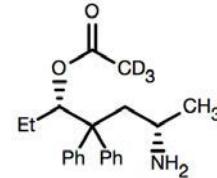
**References :** Carroll, FI; et al. *J Org Chem* 1976, 41, 3521-4.

**Catalog number :** 9633-012

**Name :** (-)-[Acetyl-<sup>2</sup>H<sub>3</sub>] $\alpha$ -Acetyl-N,N-dinormethadol hydrochloride

**Mol. formula :** C<sub>21</sub>H<sub>28</sub>ClNO<sub>2</sub>

**FW :** 361.92    **DEA schedule :** 0

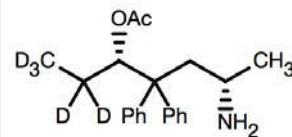


**Catalog number :** 9633-014

**Name :** (-)-[1,1,1,2,2,3-<sup>2</sup>H<sub>6</sub>] $\alpha$ -Acetyl-N,N-dinormethadol hydrochloride

**Mol. formula :** C<sub>21</sub>H<sub>28</sub>ClNO<sub>2</sub>

**FW :** 361.92    **DEA schedule :** 0

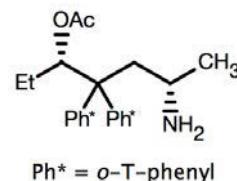


**Catalog number :** 9633-011

**Name :** (-)-[o,o'-<sup>3</sup>H<sub>2</sub>(n)] $\alpha$ -Acetyl-N,N-dinormethadol hydrochloride

**Mol. formula :** C<sub>21</sub>H<sub>28</sub>ClNO<sub>2</sub>

**FW :** 389.97    **DEA schedule :** 0



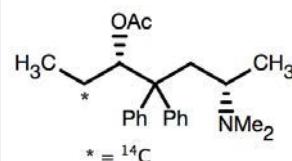
Ph\* = o-T-phenyl

**Catalog number :** 9648-013

**Name :** (-)-[2-<sup>14</sup>C]- $\alpha$ -Acetylmethadol hydrochloride

**Mol. formula :** C<sub>23</sub>H<sub>32</sub>ClNO<sub>2</sub>

**FW :** 353.50    **DEA schedule :** 2



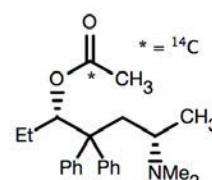
\* = <sup>14</sup>C

**Catalog number :** 9648-014

**Name :** (-)-[Acetyl-<sup>14</sup>C]- $\alpha$ -Acetylmethadol

**Mol. formula :** C<sub>23</sub>H<sub>32</sub>ClNO<sub>2</sub>

**FW :** 353.50    **DEA schedule :** 2

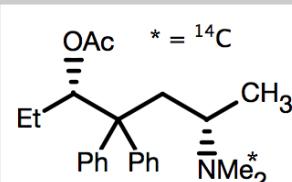


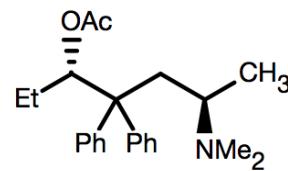
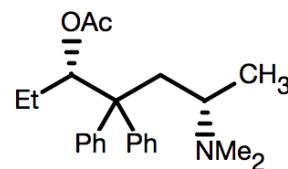
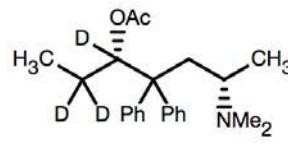
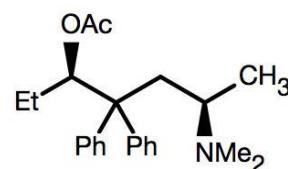
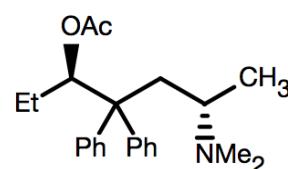
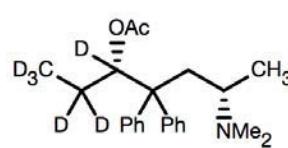
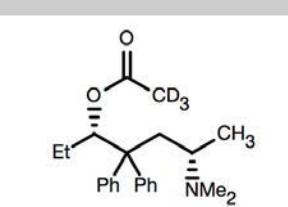
**Catalog number :** 9648-015

**Name :** (-)-[N-<sup>14</sup>CH<sub>3</sub>]- $\alpha$ -Acetylmethadol hydrochloride

**Mol. formula :** C<sub>23</sub>H<sub>31</sub>NO<sub>2</sub>

**FW :** 353.50    **DEA schedule :** 2



**Catalog number :** 9607-001**Name :** (–)- $\beta$ -Acetymethadol hydrochloride**Mol. formula :** C<sub>23</sub>H<sub>32</sub>CINO<sub>2</sub>**FW :** 389.97    **DEA schedule :** 1**Catalog number :** 9648-001**CASRN :** 43033-72-3**Name :** (–)- $\alpha$ -Acetymethadol hydrochloride; LAAM hydrochloride**Mol. formula :** C<sub>23</sub>H<sub>32</sub>CINO<sub>2</sub>**FW :** 389.97    **DEA schedule :** 2**Catalog number :** 9648-016**Name :** (–)-[2,2,3-<sup>2</sup>H<sub>3</sub>] $\alpha$ -Acetymethadol hydrochloride**Mol. formula :** C<sub>23</sub>H<sub>32</sub>CINO<sub>2</sub>**FW :** 353.50    **DEA schedule :** 2**Catalog number :** 9603-003**Name :** (+)- $\alpha$ -Acetymethadol hydrochloride**Mol. formula :** C<sub>23</sub>H<sub>32</sub>CINO<sub>2</sub>**FW :** 389.97    **DEA schedule :** 1**Catalog number :** 9607-002**Name :** (+)- $\beta$ -Acetymethadol hydrochloride**Mol. formula :** C<sub>23</sub>H<sub>32</sub>CINO<sub>2</sub>**FW :** 389.97    **DEA schedule :** 1**Catalog number :** 9648-010**Name :** (–)-[1,1,1,2,2,3-<sup>2</sup>H<sub>6</sub>] $\alpha$ -Acetymethadol hydrochloride**Mol. formula :** C<sub>24</sub>H<sub>34</sub>CINO**FW :** 389.97    **DEA schedule :** 2**Catalog number :** 9648-011**Name :** (–)-[Acetyl-<sup>2</sup>H<sub>3</sub>] $\alpha$ -acetymethadol hydrochloride**Mol. formula :** C<sub>21</sub>H<sub>28</sub>CINO<sub>2</sub>**FW :** 389.97    **DEA schedule :** 2

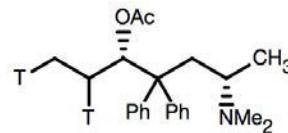
## 6 – Opioids and Opioid-related

**Catalog number :** 9648-012

**Name :**  $(-)[1,2-^3\text{H}]\alpha\text{-Acetyl}(\text{D}_2)$

**Mol. formula :**  $\text{C}_{23}\text{H}_{32}\text{ClNO}_2$

**FW :** 353.50    **DEA schedule :** 2



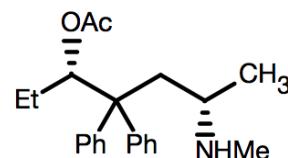
**Catalog number :** 9633-001

**Name :**  $(-)\alpha\text{-Acetyl}(\text{D}_1)$  normethadol hydrochloride

**Mol. formula :**  $\text{C}_{22}\text{H}_{30}\text{ClNO}_2$

**FW :** 375.94    **DEA schedule :** 1

**References :** Carroll, Fl; et al. *J Org Chem* 1976, 41, 3521-4.

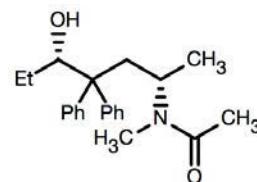


**Catalog number :** 9633-040

**Name :**  $(-)\alpha\text{-N-Acetyl}(\text{D}_1)$  normethadol

**Mol. formula :**  $\text{C}_{22}\text{H}_{29}\text{NO}_2$

**FW :** 339.48    **DEA schedule :** 1

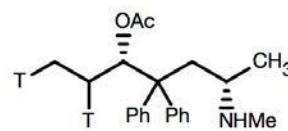


**Catalog number :** 9633-006

**Name :**  $(-)[1,2-^3\text{H}]\alpha\text{-Acetyl}(\text{D}_1)$  normethadol hydrochloride

**Mol. formula :**  $\text{C}_{23}\text{H}_{32}\text{ClNO}_2$

**FW :** 375.94    **DEA schedule :** 1

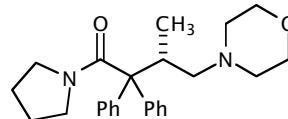


**Catalog number :** 9613-001

**Name :** Dextromoramide tartrate

**Mol. formula :**  $\text{C}_{25}\text{H}_{32}\text{N}_2\text{O}_2$

**FW :** 542.60    **DEA schedule :** 1

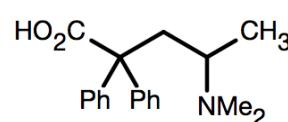


**Catalog number :** 9254-004

**Name :**  $(\pm)$ -4-Dimethylamino-2,2-diphenylvaleric acid

**Mol. formula :**  $\text{C}_{19}\text{H}_{23}\text{NO}_2$

**FW :** 297.40    **DEA schedule :** 0

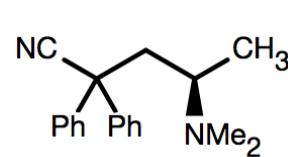


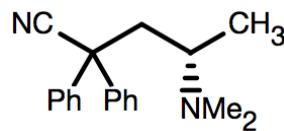
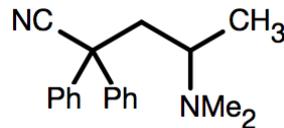
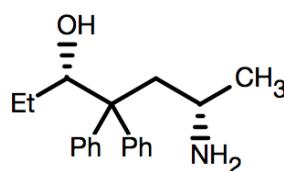
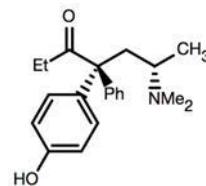
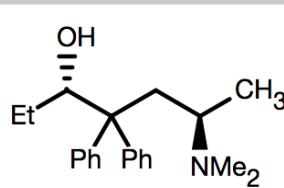
**Catalog number :** 9254-002

**Name :**  $(-)(R)$ -4-Dimethylamino-2,2-diphenylvaleronitrile

**Mol. formula :**  $\text{C}_{19}\text{H}_{22}\text{N}_2$

**FW :** 278.40    **DEA schedule :** 2



**Catalog number :** 9254-001**Name :** (+)-(S)-4-Dimethylamino-2,2-diphenylvaleronitrile**Mol. formula :** C<sub>19</sub>H<sub>22</sub>N<sub>2</sub>**FW :** 278.40    **DEA schedule :** 2**Catalog number :** 9254-003**Name :** (±)-4-Dimethylamino-2,2-diphenylvaleronitrile**Mol. formula :** C<sub>19</sub>H<sub>22</sub>N<sub>2</sub>**FW :** 278.40    **DEA schedule :** 2**Catalog number :** 9605-030**Name :** (-)-α-N,N-Dinormethadol maleate**Mol. formula :** C<sub>23</sub>H<sub>29</sub>NO<sub>5</sub>**FW :** 399.49    **DEA schedule :** 1**References :** Carroll, FI; et al. *J Org Chem* 1976, 41, 3521–4.**Catalog number :** 9250-061**Name :** (4R,6S)-p-Hydroxymethadone hydrochloride**Mol. formula :** C<sub>21</sub>H<sub>28</sub>ClNO<sub>2</sub>**FW :** 361.91    **DEA schedule :** 2**Catalog number :** 9250-062**Name :** (4S,6S)-p-Hydroxymethadone hydrochloride**Mol. formula :** C<sub>21</sub>H<sub>28</sub>ClNO<sub>2</sub>**FW :** 361.91    **DEA schedule :** 2**Catalog number :** 9250-060**Name :** (4RS,6RS)-p-Hydroxymethadone hydrochloride**Mol. formula :** C<sub>21</sub>H<sub>28</sub>ClNO<sub>2</sub>**FW :** 361.91    **DEA schedule :** 2**Catalog number :** 9609-001**CASRN :** 17199-55-2**Name :** (-)-β-Methadol**Mol. formula :** C<sub>21</sub>H<sub>29</sub>NO**FW :** 311.47    **DEA schedule :** 1**References :** Portoghese, PS; Williams DA *J Med Chem* 1969, 12, 839–44.

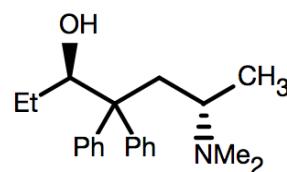
## 6 – Opioids and Opioid-related

**Catalog number :** 9609-002

**Name :** (+)- $\beta$ -Methadol

**Mol. formula :** C<sub>21</sub>H<sub>29</sub>NO

**FW :** 311.47    **DEA schedule :** 1



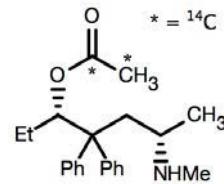
**References :** Portoghese, PS; Williams DA *J Med Chem* 1969, 12, 839–44.

**Catalog number :** 9633-005

**Name :** (–)-[Acetyl-<sup>14</sup>C]- $\alpha$ -Acetylnormethadol hydrochloride

**Mol. formula :** C<sub>22</sub>H<sub>30</sub>CINO<sub>2</sub>

**FW :** 375.94    **DEA schedule :** 1

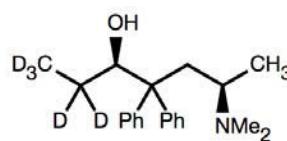


**Catalog number :** 9605-010

**Name :** [1,1,1,2,2-<sup>2</sup>H<sub>5</sub>] $\alpha$ -Methadol hydrochloride

**Mol. formula :** C<sub>21</sub>H<sub>30</sub>CINO

**FW :** 347.93    **DEA schedule :** 1



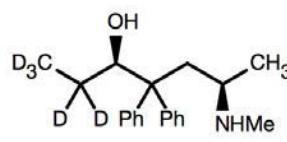
**References :** Portoghese, PS; Williams DA *J Med Chem* 1969, 12, 839–44.

**Catalog number :** 9605-021

**Name :** [1,1,1,2,2-<sup>2</sup>H<sub>5</sub>] $\alpha$ -Normethadol perchlorate

**Mol. formula :** C<sub>20</sub>H<sub>28</sub>CINO<sub>5</sub>

**FW :** 397.90    **DEA schedule :** 1

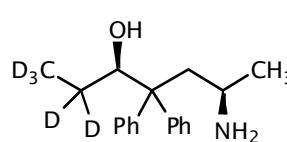


**Catalog number :** 9605-031

**Name :** [1,1,1,2,2-<sup>2</sup>H<sub>5</sub>] $\alpha$ -N,N-Dinormethadol maleate

**Mol. formula :** C<sub>19</sub>H<sub>25</sub>NO

**FW :** 399.49    **DEA schedule :** 1

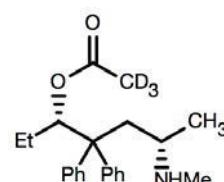


**Catalog number :** 9633-003

**Name :** (–)-[Acetyl-<sup>2</sup>H<sub>3</sub>] $\alpha$ -Acetylnormethadol hydrochloride

**Mol. formula :** C<sub>22</sub>H<sub>30</sub>CINO<sub>2</sub>

**FW :** 375.94    **DEA schedule :** 1

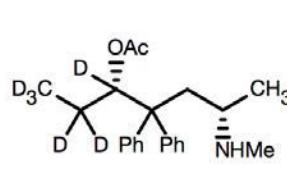


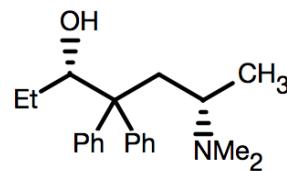
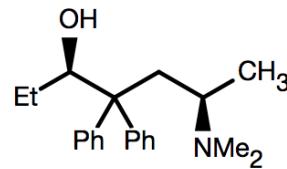
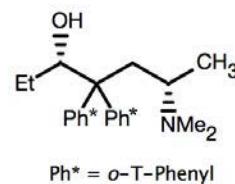
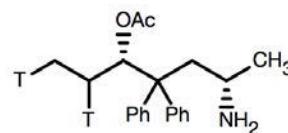
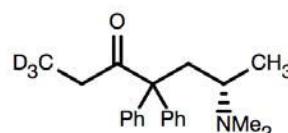
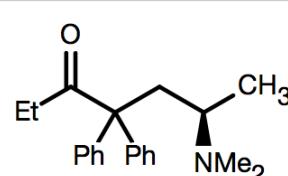
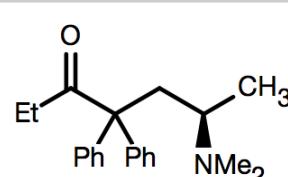
**Catalog number :** 9633-004

**Name :** (–)-[1,1,1,2,2,3-<sup>2</sup>H<sub>6</sub>] $\alpha$ -Acetylnormethadol hydrochloride

**Mol. formula :** C<sub>23</sub>H<sub>22</sub>CINO<sub>2</sub>

**FW :** 375.94    **DEA schedule :** 1



**Catalog number :** 9605-001**Name :** (–)- $\alpha$ -Methadol hydrochloride**Mol. formula :** C<sub>21</sub>H<sub>30</sub>CINO**FW :** 347.93    **DEA schedule :** 1**References :** Portoghese, PS; Williams DA *J Med Chem* 1969, 12, 839–44.**Catalog number :** 9605-002**CASRN :** 17199-54-1**Name :** (+)- $\alpha$ -Methadol hydrochloride**Mol. formula :** C<sub>21</sub>H<sub>30</sub>CINO**FW :** 347.93    **DEA schedule :** 1**References :** Portoghese, PS; Williams DA *J Med Chem* 1969, 12, 839–44.**Catalog number :** 9605-003**Name :** (–)-[o,o'–<sup>3</sup>H<sub>2</sub>(n)] $\alpha$ -Methadol hydrochloride**Mol. formula :** C<sub>21</sub>H<sub>29</sub>NO**FW :** 347.93    **DEA schedule :** 1**References :** Portoghese, PS; Williams DA *J Med Chem* 1969, 12, 839–44.**Catalog number :** 9633-015**Name :** (–)-[1,2–<sup>3</sup>H<sub>2</sub>] $\alpha$ -Acetyl-N,N-dinormethadol hydrochloride**Mol. formula :** C<sub>21</sub>H<sub>28</sub>CINO<sub>2</sub>**FW :** 361.9–2    **DEA schedule :** 0**Catalog number :** 9250-011**Name :** (+)-[1,1,1–<sup>2</sup>H<sub>3</sub>]Methadone hydrochloride**Mol. formula :** C<sub>21</sub>H<sub>28</sub>CINO**FW :** 348.92    **DEA schedule :** 2**Catalog number :** 9250-002**CASRN :** 125–58–6**Name :** (–)-(R)-Methadone**Mol. formula :** C<sub>21</sub>H<sub>27</sub>NO**FW :** 309.46    **DEA schedule :** 2**References :** Merck Index, 14th ed., Monograph 5944.**Catalog number :** 9250-005**CASRN :** 125–58–6**Name :** (–)-((R)-Methadone hydrochloride**Mol. formula :** C<sub>21</sub>H<sub>28</sub>CINO**FW :** 345.92    **DEA schedule :** 2

## 6 – Opioids and Opioid-related

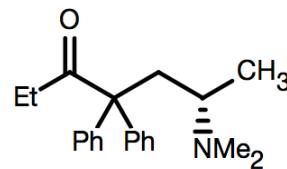
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**CASRN :** 5653-80-5

**Name :** (+)-(S)-Methadone

**Mol. formula :** C<sub>21</sub>H<sub>27</sub>NO

**FW :** 309.46    **DEA schedule :** 2



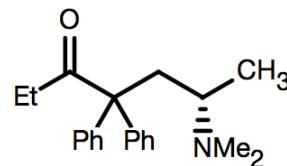
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**CASRN :** 5653-80-5

**Name :** (+)-(S)-Methadone hydrochloride

**Mol. formula :** C<sub>21</sub>H<sub>28</sub>CINO

**FW :** 345.92    **DEA schedule :** 2



**Catalog number :** 9250-003

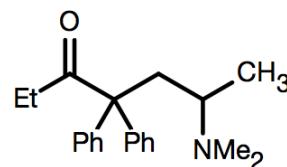
**CASRN :** 1095-90-5

**Name :** (±)-Methadone hydrochloride

**Mol. formula :** C<sub>21</sub>H<sub>28</sub>CINO

**FW :** 345.92    **DEA schedule :** 2

**References :** Merck Index, 14th ed., Monograph 5944.

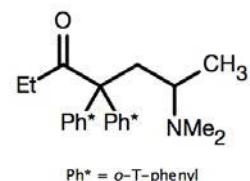


**Catalog number :** 9250-006

**Name :** (±)-[o,o'-<sup>3</sup>H<sub>2</sub>(n)]Methadone

**Mol. formula :** C<sub>21</sub>H<sub>27</sub>NO

**FW :** 313.46    **DEA schedule :** 2



Ph\* = o-T-phenyl

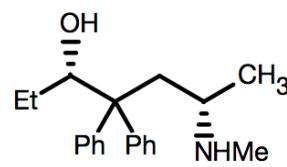
**Catalog number :** 9605-020

**Name :** (-)-α-Normethadol perchlorate

**Mol. formula :** C<sub>20</sub>H<sub>28</sub>CINO<sub>5</sub>

**FW :** 397.90    **DEA schedule :** 1

**References :** Carroll, FI; et al. *J Org Chem* 1976, 41, 3521-4.

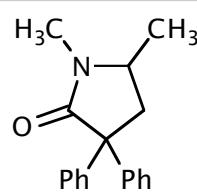


**Catalog number :** 9254-005

**Name :** (±)-1,5-Dimethyl-3,3-diphenyl-2-pyrrolidone

**Mol. formula :** C<sub>18</sub>H<sub>19</sub>NO

**FW :** 265.36    **DEA schedule :** 0

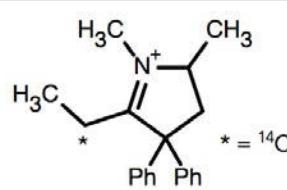


**Catalog number :** 9250-026

**Name :** [1'-<sup>14</sup>C]-2-Ethyl-1,5-dimethyl-3,3-diphenylpyrrolinium perchlorate

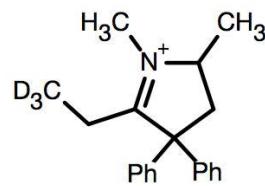
**Mol. formula :** C<sub>20</sub>H<sub>25</sub>CINO<sub>4</sub>

**FW :** 536.01    **DEA schedule :** 0

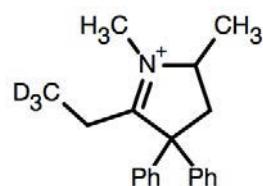


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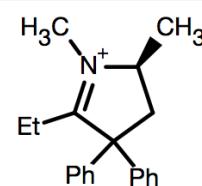
**Name :** [Ethyl-2',2',2'-<sup>2</sup>H<sub>3</sub>]-1,5-Dimethyl-3,3-diphenyl-2-ethylpyrrolinium perchlorate

**Mol. formula :** C<sub>20</sub>H<sub>25</sub>CINO<sub>4</sub>**FW :** 384.91    **DEA schedule :** 0**Catalog number :** 9250-032

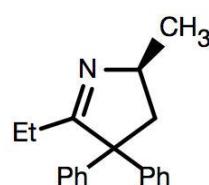
**Name :** [Ethyl-2',2',2'-<sup>2</sup>H<sub>3</sub>]-3,3-Diphenyl-2-ethyl-5-methyl-1-pyrroline hydrochloride

**Mol. formula :** C<sub>20</sub>H<sub>25</sub>CIN**FW :** 302.86    **DEA schedule :** 0**Catalog number :** 9250-024

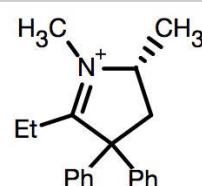
**Name :** (–)-(S)-2-Ethyl-1,5-dimethyl-3,3-diphenylpyrrolinium perchlorate

**Mol. formula :** C<sub>20</sub>H<sub>24</sub>CINO<sub>4</sub>**FW :** 377.88    **DEA schedule :** 0**Catalog number :** 9250-033

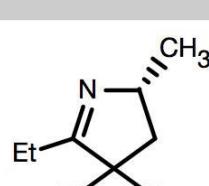
**Name :** (–)-(S)-2-Ethyl-5-methyl-3,3-diphenyl-1-pyrroline hydrochloride

**Mol. formula :** C<sub>19</sub>H<sub>22</sub>CIN**FW :** 299.85    **DEA schedule :** 0**Catalog number :** 9250-025

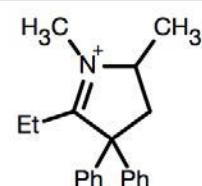
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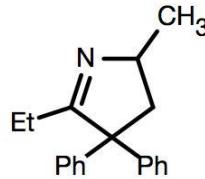
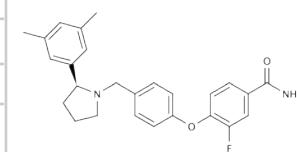
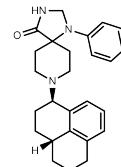
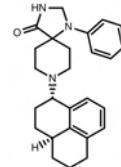
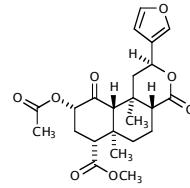
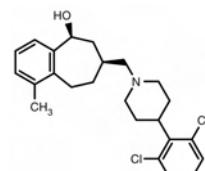
**Mol. formula :** C<sub>20</sub>H<sub>24</sub>CINO<sub>4</sub>**FW :** 377.88    **DEA schedule :** 0**Catalog number :** 9250-034

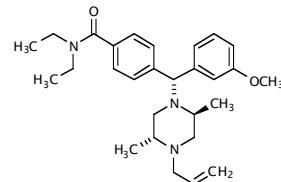
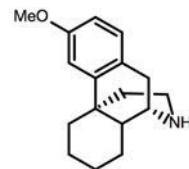
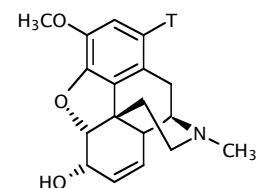
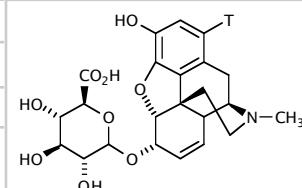
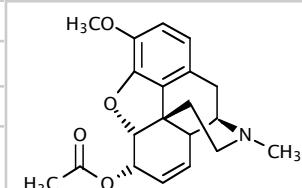
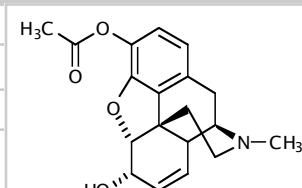
**Name :** (+)-(R)-2-Ethyl-5-methyl-3,3-diphenyl-1-pyrroline hydrochloride

**Mol. formula :** C<sub>19</sub>H<sub>22</sub>CIN**FW :** 299.85    **DEA schedule :** 0**Catalog number :** 9250-021

**Name :** (±)-2-Ethyl-1,5-dimethyl-3,3-diphenylpyrrolinium perchlorate

**Mol. formula :** C<sub>20</sub>H<sub>24</sub>CINO<sub>4</sub>**FW :** 377.86    **DEA schedule :** 0

**Catalog number :** 9250-031**Name :** (±)-2-Ethyl-5-methyl-3,3-diphenyl-1-pyrroline hydrochloride**Mol. formula :** C<sub>19</sub>H<sub>22</sub>ClN**FW :** 299.85    **DEA schedule :** 0**Opioids: Miscellaneous****Catalog number :** NOCD-107**CASRN :** 1174130-61-0**Name :** LY-2456302**Mol. formula :** C<sub>26</sub>H<sub>28</sub>ClFN<sub>2</sub>O<sub>2</sub>**FW :** 454.97    **DEA schedule :** 0**Notes :** *κ*-Opioid antagonist.**References :** Peters, MF; et al., *Eur J Pharmacol* 2011, 661, 27–34.**Catalog number :** NOCD-138**new****CASRN :** 309254-79-3**Name :** Ro 64-6198 hydrochloride**Mol. formula :** C<sub>26</sub>H<sub>31</sub>N<sub>3</sub>O • HCl**FW :** 438.02    **DEA schedule :** 0**Notes :** Potent nociceptin opioid receptor agonist.**References :** Wichmann, J; et al., *Eur. J. Med. Chem.* 2000, 35, 839–851.**Catalog number :** NOCD-139**new****Name :** Ro 64-6198 analog [ (+)-isomer of Ro 64-6198 ]**Mol. formula :** C<sub>26</sub>H<sub>31</sub>N<sub>3</sub>O • HCl**FW :** 438.02    **DEA schedule :** 0**Notes :** Nociceptin opioid receptor agonist. 32-fold less potent (+)-enantiomer of Ro 64-6198.**References :** Jenck, F; et al., *Proc Natl Acad Sci USA* 2000, 97, 4938–4943.**Catalog number :** NOCD-099**CASRN :** 83729-01-5**Name :** Salvinorin A**Mol. formula :** C<sub>23</sub>H<sub>28</sub>O<sub>8</sub>**FW :** 432.47    **DEA schedule :** 0**Notes :** Hallucinogen; *κ*-opioid agonist.**References :** Roth, BL; et al. *Proc Natl Acad Sci USA* 2002, 99, 11934–9.**Catalog number :** NOCD-134**new****CASRN :** 371980-98-2**Name :** SB-612111 hydrochloride**Mol. formula :** C<sub>24</sub>H<sub>29</sub>Cl<sub>2</sub>NO • HCl**FW :** 454.87    **DEA schedule :** 0**Notes :** Nociceptin/orphanin FQ (NOP) receptor antagonist.**References :** Zaratin, PF; et al., *J Pharmacol Exp Ther* 2004, 308, 454–61.

**Catalog number :** NOCD-055**CASRN :** 156727-74-1**Name :** SNC 80**Mol. formula :** C<sub>28</sub>H<sub>39</sub>N<sub>3</sub>O<sub>2</sub>**FW :** 449.64    **DEA schedule :** 0**Notes :** Highly-selective δ-opioid receptor agonist.**References :** Do Carmo, GP; et al. *Eur J Pharmacol* 2006, 547, 92–100.**Opioids: Morphinan Class****Catalog number :** 9732-001**CASRN :** 1087-69-0**Name :** (+)-3-Methoxymorphinan hydrochloride**Mol. formula :** C<sub>17</sub>H<sub>23</sub>ClNO**FW :** 293.84    **DEA schedule :** 0**Opioids: Morphine Class****Catalog number :** 9050-011**Name :** [1-<sup>3</sup>H]Codeine**Mol. formula :** C<sub>18</sub>H<sub>21</sub>NO<sub>3</sub>**FW :** 301.37    **DEA schedule :** 2**Catalog number :** 9300-014**Name :** [1-<sup>3</sup>H]Morphine-6-glucuronide**Mol. formula :** C<sub>23</sub>H<sub>27</sub>NO<sub>9</sub>**FW :** 463.47    **DEA schedule :** 2**Catalog number :** 9050-004**CASRN :** 6703-27-1**Name :** 6-Acetylcodeine**Mol. formula :** C<sub>20</sub>H<sub>23</sub>NO**FW :** 341.41    **DEA schedule :** 2**Catalog number :** 9300-010**Name :** 3-Acetylmorphine sulfamate**Mol. formula :** C<sub>19</sub>H<sub>24</sub>N<sub>2</sub>O<sub>7</sub>S**FW :** 424.47    **DEA schedule :** 2

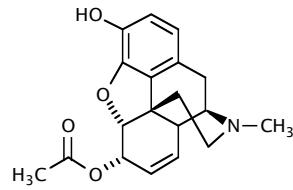
## 6 – Opioids and Opioid-related

**Catalog number :** 9300-004

**Name :** 6-Acetylmorphine

**Mol. formula :** C<sub>19</sub>H<sub>21</sub>NO<sub>4</sub>

**FW :** 327.38    **DEA schedule :** 2



**Catalog number :** 9050-001

**CASRN :** 1422-07-7

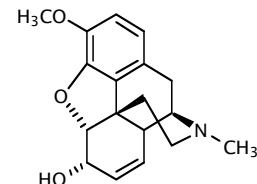
**Name :** Codeine hydrochloride

**Mol. formula :** C<sub>18</sub>H<sub>22</sub>CINO<sub>3</sub>

**FW :** 335.84    **DEA schedule :** 2

**Notes :** Narcotic analgesic; antitussive

**References :** Merck Index, 14th ed., Monograph 2455.



**Catalog number :** 9050-010

**CASRN :** 76-57-3

**Name :** (+)-Codeine base

**Mol. formula :** C<sub>18</sub>H<sub>21</sub>NO<sub>3</sub>

**FW :** 299.36    **DEA schedule :** 2

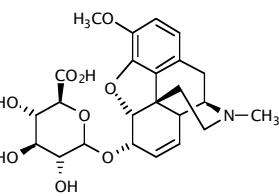


**Catalog number :** 9050-009

**Name :** Codeine-6-β-D-glucuronide

**Mol. formula :** C<sub>24</sub>H<sub>29</sub>NO<sub>9</sub>

**FW :** 475.50    **DEA schedule :** 2



**Catalog number :** 9200-001

**CASRN :** 1502-95-0

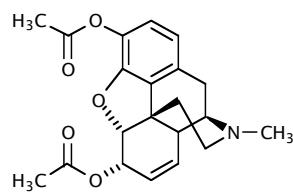
**Name :** 3,6-Diacetylmorphine hydrochloride; Diamorphine HCl

**Mol. formula :** C<sub>21</sub>H<sub>24</sub>CINO<sub>5</sub>

**FW :** 405.88    **DEA schedule :** 1

**Notes :** Narcotic analgesic

**References :** Merck Index, 14th ed., Monograph 2968.



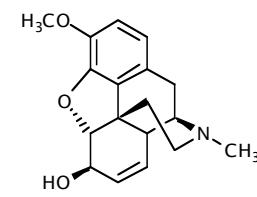
**Catalog number :** 9050-006

**CASRN :** 509-64-8

**Name :** Isocodeine

**Mol. formula :** C<sub>18</sub>H<sub>21</sub>NO<sub>3</sub>

**FW :** 299.35    **DEA schedule :** 2



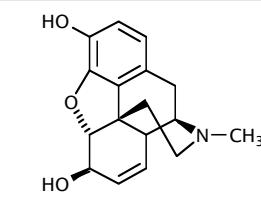
**Catalog number :** 9300-020

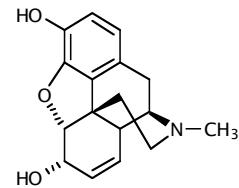
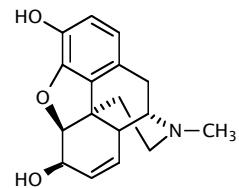
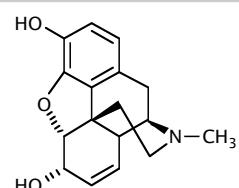
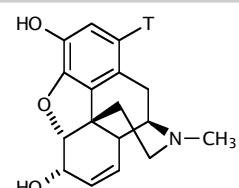
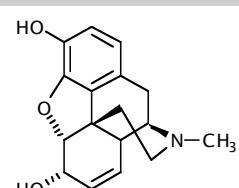
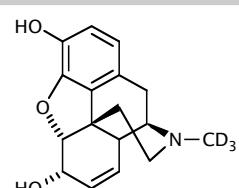
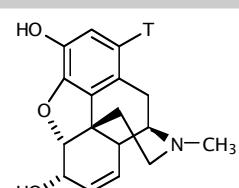
**CASRN :** 143-70-4

**Name :** α-Isomorphine

**Mol. formula :** C<sub>17</sub>H<sub>19</sub>NO<sub>3</sub>

**FW :** 285.35    **DEA schedule :** 2



**Catalog number :** 9300-007**CASRN :** 57-27-2**Name :** Morphine base**Mol. formula :** C<sub>17</sub>H<sub>19</sub>NO<sub>3</sub>**FW :** 285.33    **DEA schedule :** 2**Notes :** Narcotic analgesic; antitussive; antiperistaltic**References :** Merck Index, 14th ed., Monograph 6276.**Catalog number :** 9300-012**CASRN :** 65165-99-3**Name :** (+)-Morphine base**Mol. formula :** C<sub>17</sub>H<sub>19</sub>NO<sub>3</sub>**FW :** 285.35    **DEA schedule :** 2**Catalog number :** 9300-016**CASRN :** 52-26-6**Name :** Morphine hydrochloride monohydrate**Mol. formula :** C<sub>17</sub>H<sub>20</sub>ClNO<sub>3</sub>**FW :** 321.81    **DEA schedule :** 2**References :** Merck Index, 14th ed., Monograph 6276.**Catalog number :** 9300-002**Name :** Tritium-labeled Morphine sulfate**Mol. formula :** C<sub>17</sub>H<sub>19</sub>NO<sub>3</sub>**FW :** 475.50    **DEA schedule :** 2**Catalog number :** 9300-001**CASRN :** 6211-15-0**Name :** Morphine sulfate pentahydrate**Mol. formula :** C<sub>34</sub>H<sub>40</sub>N<sub>2</sub>O<sub>10</sub>S**FW :** 758.83    **DEA schedule :** 2**Notes :** Narcotic analgesic; prototypic  $\mu$  opioid receptor agonist; sedative**References :** Merck Index, 14th ed., Monograph 6276.**Catalog number :** 9300-005**CASRN :** 67293-88-3**Name :** [N-C<sup>2</sup>H<sub>3</sub>]Morphine**Mol. formula :** C<sub>17</sub>H<sub>19</sub>NO<sub>3</sub>**FW :** 288.36    **DEA schedule :** 2**Catalog number :** 9300-006**CASRN :** 80573-75-7**Name :** [1-<sup>3</sup>H(n)]Morphine**Mol. formula :** C<sub>17</sub>H<sub>19</sub>NO<sub>3</sub>**FW :** 287.35    **DEA schedule :** 2

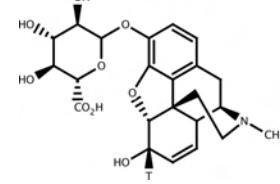
## 6 – Opioids and Opioid-related

**Catalog number :** 9300-011

**Name :** Morphine-(6- $^3$ H)-3-glucuronide

**Mol. formula :** C<sub>23</sub>H<sub>27</sub>NO<sub>9</sub>

**FW :** 463.47    **DEA schedule :** 2



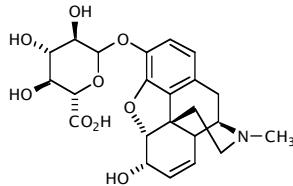
**Catalog number :** 9300-003

**Name :** Morphine-3- $\beta$ -D-glucuronide

**Mol. formula :** C<sub>23</sub>H<sub>27</sub>NO<sub>9</sub>

**FW :** 461.44    **DEA schedule :** 2

**References :** Berrang, B; et al. *Synthetic Communications* 1975, 5, 231-236.

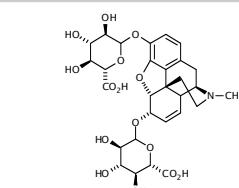


**Catalog number :** 9300-015

**Name :** Morphine-3,6-di- $\beta$ -D-glucuronide, monolithium salt

**Mol. formula :** C<sub>29</sub>H<sub>34</sub>LiNO<sub>15</sub>

**FW :** 643.52    **DEA schedule :** 2



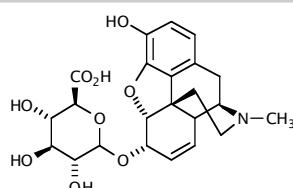
**Catalog number :** 9300-013

**CASRN :** 20290-10-2

**Name :** Morphine-6- $\beta$ -D-glucuronide

**Mol. formula :** C<sub>23</sub>H<sub>27</sub>NO<sub>9</sub>

**FW :** 461.47    **DEA schedule :** 2



**Catalog number :** 9400-001

**CASRN :** 62-67-9

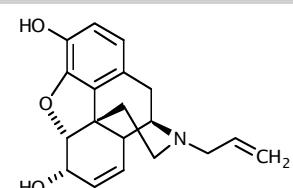
**Name :** Nalorphine hydrochloride

**Mol. formula :** C<sub>19</sub>H<sub>22</sub>CINO<sub>3</sub>

**FW :** 347.84    **DEA schedule :** 3

**Notes :** Narcotic antagonist

**References :** Merck Index, 14th ed., Monograph 6361.

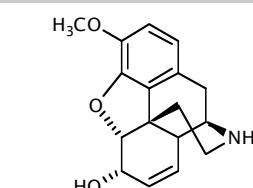


**Catalog number :** 9104-001

**Name :** Norcodeine hydrochloride

**Mol. formula :** C<sub>17</sub>H<sub>20</sub>CINO<sub>3</sub>

**FW :** 321.81    **DEA schedule :** 2



**Catalog number :** 9313-001

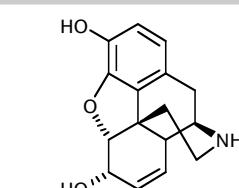
**CASRN :** 3372-02-9

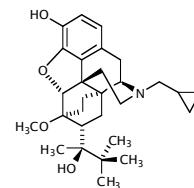
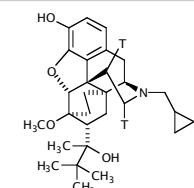
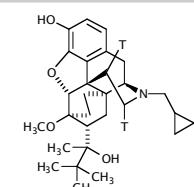
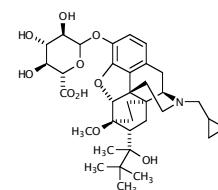
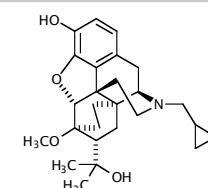
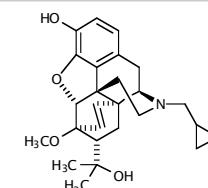
**Name :** Normorphine hydrochloride

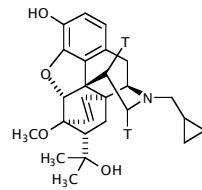
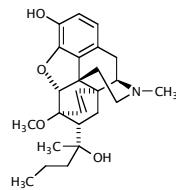
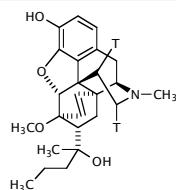
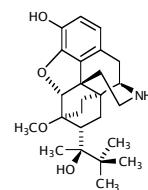
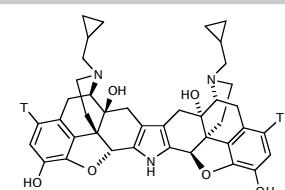
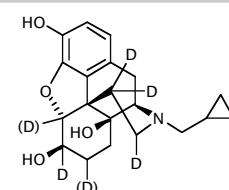
**Mol. formula :** C<sub>16</sub>H<sub>18</sub>CINO<sub>3</sub>

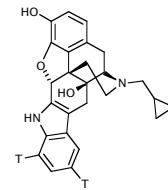
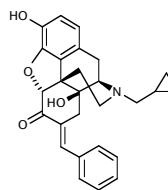
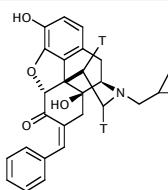
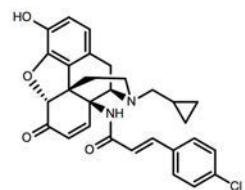
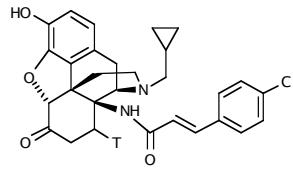
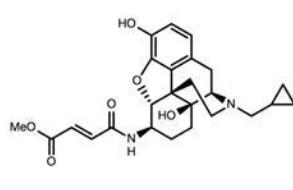
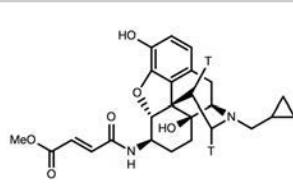
**FW :** 307.78    **DEA schedule :** 1

**References :** Merck Index, 14th ed., Monograph 6711.



**Opioids: Orvinol Class****Catalog number :** 9064-001**CASRN :** 53152-21-9**Name :** Buprenorphine hydrochloride**Mol. formula :** C<sub>29</sub>H<sub>42</sub>ClNO<sub>4</sub>**FW :** 504.11**DEA schedule :** 3**Notes :** Narcotic Analgesic**References :** Robinson, SE *CNS Drug Rev* 2002, 8, 377–90.**Catalog number :** 9064-002**CASRN :** 161772-95-8**Name :** [15,16-<sup>3</sup>H<sub>2</sub>]Buprenorphine hydrochloride**Mol. formula :** C<sub>26</sub>H<sub>38</sub>ClNO<sub>4</sub>**FW :** 508.11**DEA schedule :** 5**Notes :** Narcotic analgesic (tritium-labeled).**References :** Robinson, SE *CNS Drug Rev* 2002, 8, 377–90.**Catalog number :** 9064-003**CASRN :** 161772-95-8**Name :** [15,16-<sup>3</sup>H<sub>2</sub>]Buprenorphine**Mol. formula :** C<sub>29</sub>H<sub>41</sub>NO<sub>4</sub>**FW :** 508.11**DEA schedule :** 3**Notes :** Narcotic analgesic (tritium-labeled).**References :** Robinson, SE *CNS Drug Rev* 2002, 8, 377–90.**Catalog number :** 9064-005**CASRN :** 101224-22-0**Name :** Buprenorphine-3-β-D-glucuronide**Mol. formula :** C<sub>35</sub>H<sub>49</sub>NO<sub>10</sub>**FW :** 654.59**DEA schedule :** 5**Catalog number :** 9058-003**CASRN :** 14357-78-9**Name :** Diprenorphine**Mol. formula :** C<sub>26</sub>H<sub>35</sub>NO<sub>4</sub>**FW :** 425.54**DEA schedule :** 2**Notes :** (see footnotes 1 & 2 in Section C)**References :** Merck Index, 14th ed., Monograph 3340.**Catalog number :** 9058-001**CASRN :** 14357-78-9**Name :** Diprenorphine hydrochloride**Mol. formula :** C<sub>26</sub>H<sub>36</sub>ClNO<sub>4</sub>**FW :** 462.04**DEA schedule :** 2**Notes :** (see footnotes 1 & 2 in Section C)**References :** Merck Index, 14th ed., Monograph 3340.

**Catalog number :** 9058-002**Name :** [15,16-<sup>3</sup>H<sub>2</sub>]Diprenorphine**Mol. formula :** C<sub>26</sub>H<sub>36</sub>CINO<sub>4</sub>**FW :** 429.58    **DEA schedule :** 2**Notes :** (see footnotes 1 & 2 in Section C)**Catalog number :** 9059-001**CASRN :** 14521-96-1**Name :** Etorphine hydrochloride**Mol. formula :** C<sub>25</sub>H<sub>34</sub>CINO<sub>4</sub>**FW :** 448.01    **DEA schedule :** 2**Notes :** (see footnotes 1 & 2 in Section C)**References :** Merck Index, 14th ed., Monograph 3888.**Catalog number :** 9056-001**Name :** [15,16-<sup>3</sup>H<sub>2</sub>]Etorphine**Mol. formula :** C<sub>25</sub>H<sub>33</sub>NO<sub>4</sub>**FW :** 429.58    **DEA schedule :** 1**Notes :** (see footnotes 1 & 2 in Section C)**Catalog number :** 9333-013**CASRN :** 78715-23-8**Name :** Norbuprenorphine base**Mol. formula :** C<sub>25</sub>H<sub>35</sub>NO<sub>4</sub>**FW :** 413.55    **DEA schedule :** 2**Notes :** Buprenorphine metabolite.**References :** Robinson, SE *CNS Drug Rev* 2002, 8, 377–90.**Opioids: Oxymorphone Class****Catalog number :** NOCD-084**Name :** [1,1'-<sup>3</sup>H(n)]Norbinaltorphimine; [<sup>3</sup>H]norBNI**Mol. formula :** C<sub>40</sub>H<sub>43</sub>N<sub>3</sub>O<sub>6</sub>**FW :** 665.80    **DEA schedule :** 0**References :** Birch, PJ; et al. *Eur J Pharmacol* 1987, 144, 405–8.  
Portoghesi, PS; Lipkowski, AW; Takemori, AE *Life Sci* 1987, 40, 1287–92.**Catalog number :** 9652-057**Name :** [5,6,7,15,15,16-<sup>2</sup>H<sub>6</sub>]-6 $\alpha$ -Naltrexol**Mol. formula :** C<sub>20</sub>H<sub>25</sub>NO<sub>4</sub>**FW :** 349.45    **DEA schedule :** 0

**Catalog number :** 9652-061**Name :** [5',7'-<sup>3</sup>H]Naltrindole**Mol. formula :** C<sub>26</sub>H<sub>26</sub>N<sub>2</sub>O<sub>3</sub>**FW :** 418.51    **DEA schedule :** 0**Catalog number :** 9652-067**CASRN :** 173556-52-0**Name :** 7-Benzylidene-7-dehydronaltrexone (BNTX) hydrochloride**Mol. formula :** C<sub>27</sub>H<sub>28</sub>CINO<sub>4</sub>**FW :** 465.97    **DEA schedule :** 0**Catalog number :** 9652-068**Name :** [15,16-<sup>3</sup>H]-7-Benzylidine-7-dehydronaltrexone; [<sup>3</sup>H]BNTX**Mol. formula :** C<sub>27</sub>H<sub>28</sub>CINO<sub>4</sub>**FW :** 433.52    **DEA schedule :** 0**Catalog number :** NOCD-100**CASRN :** 117332-69-1**Name :** Clocinnamox mesylate**Mol. formula :** C<sub>30</sub>H<sub>31</sub>ClN<sub>2</sub>O<sub>7</sub>S**FW :** 599.09**Notes :** Irreversible  $\mu$ -opioid receptor antagonist.**References :** Comer, SD; et al. *J Pharmacol Exp Ther* 1992, 262, 1051-6.**Catalog number :** NOCD-079**Name :** Tritium-labeled Clocinnamox**Mol. formula :** C<sub>29</sub>H<sub>29</sub>ClN<sub>2</sub>O<sub>4</sub>**FW :** 507.01    **DEA schedule :** 0**References :** Comer, SD; Burke, TF; Lewis, JW; Woods, JH *J Pharmacol Exp Ther* 1992, 262, 1051-6.**Catalog number :** 9333-011**CASRN :** 72786-10-8**Name :**  $\beta$ -Funaltrexamine hydrochloride;  $\beta$ -FNA hydrochloride**Mol. formula :** C<sub>25</sub>H<sub>31</sub>ClN<sub>2</sub>O<sub>6</sub>**FW :** 490.99    **DEA schedule :** 2**Notes :** Irreversible binding antagonist for the  $\mu$ -opioid receptor.**References :** Portoghese, PS; el Kouhen, R; Law, PY; Loh, HH; Le Bourdonnec, B *Farmaco* 2001, 56, 191-6.**Catalog number :** 9333-012**Name :** [15,16-<sup>3</sup>H]-6 $\beta$ -Funaltrexamine**Mol. formula :** C<sub>26</sub>H<sub>33</sub>ClN<sub>2</sub>O<sub>6</sub>**FW :** 458.53    **DEA schedule :** 2**Notes :** Irreversible  $\mu$ -opioid receptor antagonist (tritium-labeled).**References :** Portoghese, PS; el Kouhen, R; Law, PY; Loh, HH; Le Bourdonnec, B *Farmaco* 2001, 56, 191-6.

## 6 – Opioids and Opioid-related

**Catalog number :** 9652-062

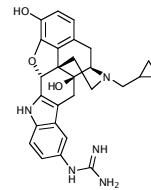
**Name :** 5'-GNTI trihydrochloride

**Mol. formula :** C<sub>27</sub>H<sub>32</sub>Cl<sub>3</sub>N<sub>5</sub>O<sub>3</sub>

**FW :** 580.94    **DEA schedule :** 0

**Notes :** Selective κ-opioid receptor antagonist.

**References :** Jones, RM; Portoghesi, PS *Eur J Pharmacol* 2000, 396, 49–52.



**Catalog number :** 9652-063

**CASRN :** 219655-56-8

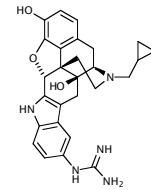
**Name :** 5'-GNTI dihydrochloride

**Mol. formula :** C<sub>27</sub>H<sub>31</sub>Cl<sub>2</sub>N<sub>5</sub>O<sub>3</sub>

**FW :** 544.48    **DEA schedule :** 0

**Notes :** Selective κ-opioid receptor antagonist.

**References :** Jones, RM; Portoghesi, PS *Eur J Pharmacol* 2000, 396, 49–52.



**Catalog number :** 9652-069

**new**

**CASRN :** 350693-06-0

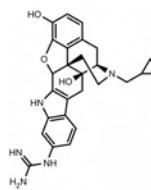
**Name :** 6'-GNTI dihydrochloride

**Mol. formula :** C<sub>27</sub>H<sub>29</sub>N<sub>5</sub>O<sub>3</sub> • 2HCl

**FW :** 544.48    **DEA schedule :** 0

**Notes :** Kappa-opioid receptor agonist that inhibits arrestin recruitment.

**References :** Rives, ML; et al., *J Biol Chem* 2012, 287, 27050–4.



**Catalog number :** 9652-070

**new**

**CASRN :** 1314879-44-1

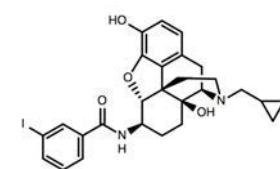
**Name :** IBNtxA

**Mol. formula :** C<sub>27</sub>H<sub>29</sub>IN<sub>2</sub>O<sub>4</sub> • HCl

**FW :** 608.90    **DEA schedule :** 0

**Notes :** Kappa opioid receptor agonist.

**References :** Majumdar, S; et al., *J Med Chem* 2012, 55, 6352–62.



**Catalog number :** 9668-001

**new**

**CASRN :** 152658-17-8

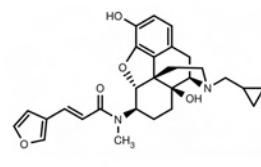
**Name :** Nalfurafine

**Mol. formula :** C<sub>28</sub>H<sub>32</sub>N<sub>2</sub>O<sub>5</sub> • HCl

**FW :** 513.03    **DEA schedule :** 2

**Notes :** Kappa opioid receptor agonist.

**References :** Kawai, K., et al., *Bioorg Med Chem* (2008) 16, 9188.

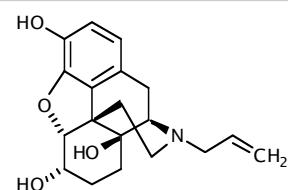


**Catalog number :** 9652-040

**Name :** 6α-Naloxol hydrochloride

**Mol. formula :** C<sub>19</sub>H<sub>24</sub>CINO<sub>4</sub>

**FW :** 365.86    **DEA schedule :** 0

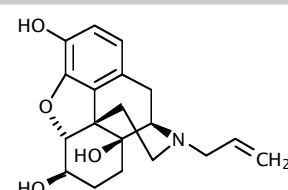


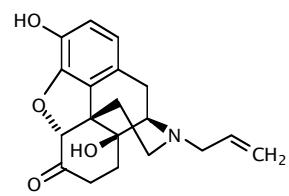
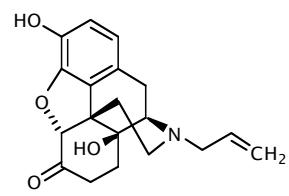
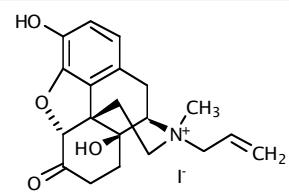
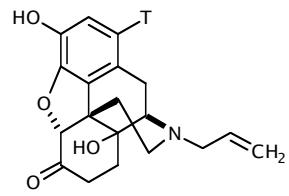
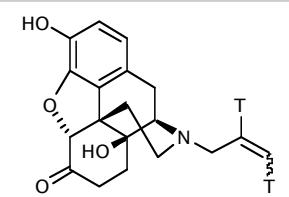
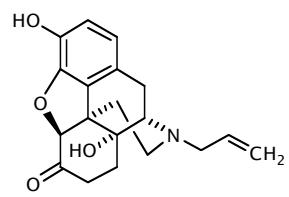
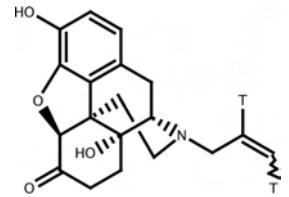
**Catalog number :** 9652-041

**Name :** 6β-Naloxol hydrochloride

**Mol. formula :** C<sub>19</sub>H<sub>24</sub>CINO<sub>4</sub>

**FW :** 365.86    **DEA schedule :** 0



**Catalog number :** 9652-030**CASRN :** 51481-60-8**Name :** Naloxone hydrochloride**Mol. formula :** C<sub>19</sub>H<sub>22</sub>ClNO<sub>4</sub>**FW :** 363.84    **DEA schedule :** 0**Notes :** Narcotic antagonist**References :** Merck Index, 14th ed., Monograph 6362.**Catalog number :** 9652-032**Name :** Naloxone pamoate**Mol. formula :** C<sub>61</sub>H<sub>58</sub>N<sub>2</sub>O<sub>14</sub>**FW :** 1043.14    **DEA schedule :** 0**Catalog number :** 9652-037**Name :** Naloxone methiodide**Mol. formula :** C<sub>20</sub>H<sub>24</sub>INO<sub>4</sub>**FW :** 469.32    **DEA schedule :** 0**Catalog number :** 9652-031**Name :** (–)-[1-<sup>3</sup>H(n)]Naloxone**Mol. formula :** C<sub>19</sub>H<sub>21</sub>NO<sub>4</sub>**FW :** 329.38    **DEA schedule :** 0**Catalog number :** 9652-035**Name :** (–)-[19,20-<sup>3</sup>H<sub>2</sub>]Naloxone**Mol. formula :** C<sub>19</sub>H<sub>21</sub>NO<sub>4</sub>**FW :** 331.39    **DEA schedule :** 0**Catalog number :** 9652-038**CASRN :** 357-08-4**Name :** (+)-Naloxone hydrochloride**Mol. formula :** C<sub>19</sub>H<sub>22</sub>ClNO<sub>4</sub>**FW :** 363.85    **DEA schedule :** 0**Notes :** Unnatural isomer of naloxone. Selective Toll-like receptor 4 antagonist.**References :** Hutchinson, MR; et al., *Brain Behav Immun* 2010, 24, 83–95.; Watkins, LR; et al., *Trends Pharmacol Sci* 2009, 30, 581–91.**Catalog number :** 9652-039**Name :** (+)-[19,20-<sup>3</sup>H<sub>2</sub>]Naloxone**Mol. formula :** C<sub>19</sub>H<sub>21</sub>NO<sub>4</sub>**FW :** 331.39    **DEA schedule :** 0

## 6 – Opioids and Opioid-related

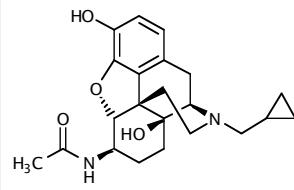
**Catalog number :** 9333-017

**CASRN :** 360770-17-8

**Name :** 6 $\beta$ -Naltrexamide

**Mol. formula :** C<sub>22</sub>H<sub>28</sub>N<sub>2</sub>O<sub>4</sub>

**FW :** 388.975    **DEA schedule :** 2

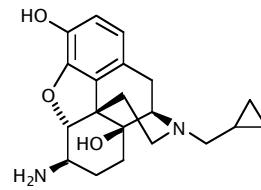


**Catalog number :** 9333-010

**Name :** 6 $\beta$ -Naltrexamine dihydrochloride

**Mol. formula :** C<sub>20</sub>H<sub>28</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>3</sub>

**FW :** 415.36    **DEA schedule :** 2

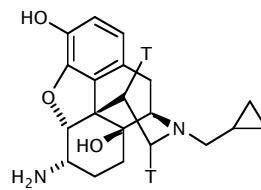


**Catalog number :** 9333-009

**Name :** [15,16-<sup>3</sup>H<sub>2</sub>]-6 $\beta$ -Naltrexamine

**Mol. formula :** C<sub>20</sub>H<sub>26</sub>N<sub>2</sub>O<sub>3</sub>

**FW :** 346.45    **DEA schedule :** 2



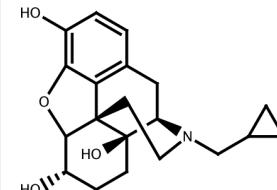
**Catalog number :** 9652-050

**Name :** 6 $\alpha$ -Naltrexol hydrochloride

**Mol. formula :** C<sub>20</sub>H<sub>26</sub>CINO<sub>4</sub>

**FW :** 379.89    **DEA schedule :** 0

**Notes :** Naltrexone metabolite.



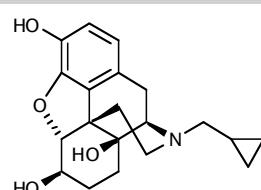
**Catalog number :** 9652-051

**CASRN :** 49625-89-0

**Name :** 6 $\beta$ -Naltrexol hydrochloride

**Mol. formula :** C<sub>20</sub>H<sub>26</sub>CINO<sub>4</sub>

**FW :** 393.41    **DEA schedule :** 0

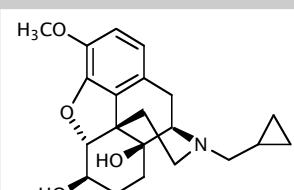


**Catalog number :** 9652-055

**Name :** 3-O-Methyl-6 $\beta$ -naltrexol

**Mol. formula :** C<sub>21</sub>H<sub>27</sub>NO<sub>4</sub>

**FW :** 357.45    **DEA schedule :** 0

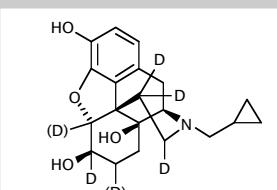


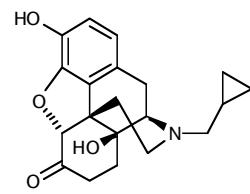
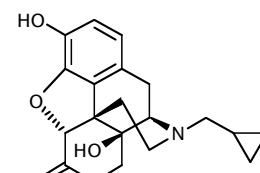
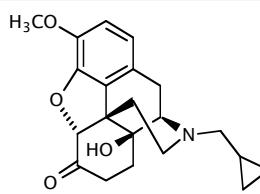
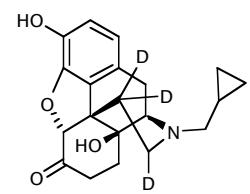
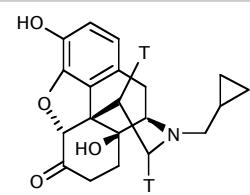
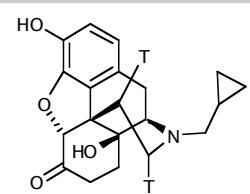
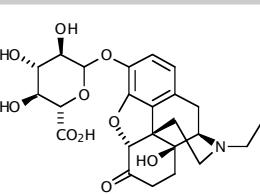
**Catalog number :** 9652-052

**Name :** [5,6,7,15,15,16-<sup>2</sup>H<sub>6</sub>]-6 $\beta$ -Naltrexol hydrochloride

**Mol. formula :** C<sub>20</sub>H<sub>26</sub>CINO<sub>4</sub>

**FW :** 385.91    **DEA schedule :** 0



**Catalog number :** 9652-019**CASRN :** 16676-29-2**Name :** Naltrexone hydrochloride**Mol. formula :** C<sub>20</sub>H<sub>24</sub>ClNO<sub>4</sub>**FW :** 377.88    **DEA schedule :** 0**Notes :** Narcotic antagonist**References :** Merck Index, 14th ed., Monograph 6363.**Catalog number :** 9652-020**CASRN :** 16590-41-3**Name :** Naltrexone base**Mol. formula :** C<sub>20</sub>H<sub>23</sub>NO<sub>4</sub>**FW :** 341.42    **DEA schedule :** 0**Notes :** Narcotic antagonist**References :** Merck Index, 14th ed., Monograph 6363.**Catalog number :** 9652-027**Name :** 3-O-MethylNaltrexone**Mol. formula :** C<sub>21</sub>H<sub>25</sub>NO<sub>4</sub>**FW :** 355.44    **DEA schedule :** 0**Catalog number :** 9652-014**Name :** [15,15,16-<sup>2</sup>H<sub>3</sub>]Naltrexone**Mol. formula :** C<sub>20</sub>H<sub>23</sub>NO<sub>4</sub>**FW :** 344.42    **DEA schedule :** 0**Catalog number :** 9652-012**Name :** [15,16-<sup>3</sup>H<sub>2</sub>]Naltrexone**Mol. formula :** C<sub>20</sub>H<sub>23</sub>NO<sub>4</sub>**FW :** 345.42    **DEA schedule :** 0**Catalog number :** 9652-013**Name :** [15,16-<sup>3</sup>H<sub>2</sub>]Naltrexone hydrochloride**Mol. formula :** C<sub>20</sub>H<sub>24</sub>ClNO<sub>4</sub>**FW :** 381.88    **DEA schedule :** 0**Catalog number :** 9652-025**Name :** Naltrexone-3-β-D-glucuronide**Mol. formula :** C<sub>26</sub>H<sub>31</sub>NO<sub>10</sub>**FW :** 517.53    **DEA schedule :** 0

## 6 – Opioids and Opioid-related

**Catalog number :** 9652-064

**CASRN :** 122517-78-6

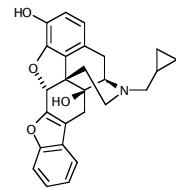
**Name :** Naltriben methanesulfonate; NTB methanesulfonate

**Mol. formula :** C<sub>27</sub>H<sub>29</sub>NO<sub>7</sub>S

**FW :** 511.60    **DEA schedule :** 0

**Notes :** Selective  $\delta$ -opioid receptor antagonist.

**References :** Sofuooglu, M; Portoghese, PS; Takemori, AE *J Pharmacol Exp Ther* 1991, 257, 676–80.



**Catalog number :** 9652-065

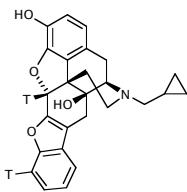
**Name :** Tritium-labeled Naltriben

**Mol. formula :** C<sub>26</sub>H<sub>25</sub>NO<sub>4</sub>

**FW :** 419.50    **DEA schedule :** 0

**Notes :** Selective  $\delta$ -opioid receptor antagonist (tritium-labeled).

**References :** Sofuooglu, M; Portoghese, PS; Takemori, AE *J Pharmacol Exp Ther* 1991, 257, 676–80.



**Catalog number :** 9652-060

**CASRN :** 111469-81-9

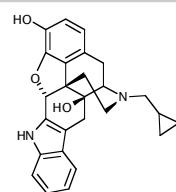
**Name :** Naltrindole hydrochloride; NTI hydrochloride

**Mol. formula :** C<sub>26</sub>H<sub>27</sub>ClN<sub>2</sub>O<sub>3</sub>

**FW :** 450.96    **DEA schedule :** 0

**Notes :** Selective  $\delta$ -opioid receptor antagonist.

**References :** Portoghese, PS *Trends Pharmacol Sci* 1989, 10, 230–5.



**Catalog number :** NOCD-067

**CASRN :** 113158-35-3

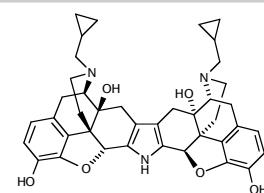
**Name :** Norbinaltorphimine dihydrochloride; norBNI

**Mol. formula :** C<sub>40</sub>H<sub>45</sub>Cl<sub>2</sub>N<sub>3</sub>O

**FW :** 734.73    **DEA schedule :** 0

**Notes :** Selective  $\kappa$ -opioid antagonist.

**References :** Birch, PJ; et al. *Eur J Pharmacol* 1987, 144, 405–8.  
Portoghese, PS; Lipkowski, AW; Takemori, AE *Life Sci* 1987, 40, 1287–92.

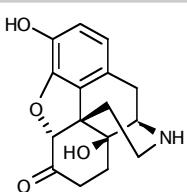


**Catalog number :** 9652-006

**Name :** (–)-Noroxyphorphone

**Mol. formula :** C<sub>16</sub>H<sub>17</sub>NO<sub>4</sub>

**FW :** 287.30    **DEA schedule :** 2

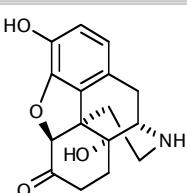


**Catalog number :** 9652-007

**Name :** (+)-Noroxyphorphone; (+)-14-Hydroxydihydronormorphinone

**Mol. formula :** C<sub>16</sub>H<sub>17</sub>NO<sub>4</sub>

**FW :** 287.30    **DEA schedule :** 2



**Catalog number :** 9143-002

**CASRN :** 124-90-3

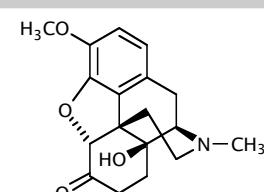
**Name :** Oxycodone hydrochloride; Dihydrohydroxycodeinone hydrochloride

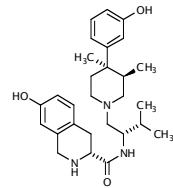
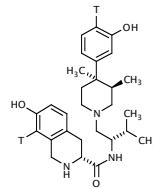
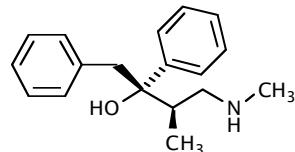
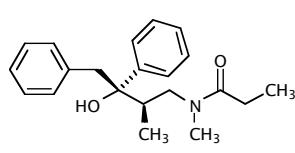
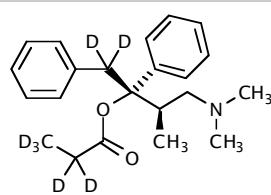
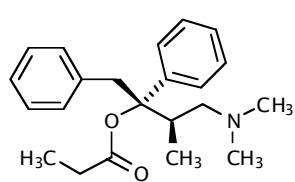
**Mol. formula :** C<sub>18</sub>H<sub>22</sub>CINO<sub>4</sub>

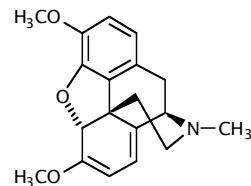
**FW :** 351.84    **DEA schedule :** 2

**Notes :** Narcotic analgesic

**References :** Merck Index, 14th ed., Monograph 6959.



**Opioids: Phenylpiperidine Class****Catalog number :** NOCD-056**CASRN :** 785835-79-2**Name :** JDTic dihydrochloride**Mol. formula :** C<sub>28</sub>H<sub>41</sub>Cl<sub>2</sub>N<sub>3</sub>O<sub>3</sub>**FW :** 538.56    **DEA schedule :** 0**Notes :** Selective kappa-opioid antagonist.**References :** Thomas, JB; Atkinson, RN; Rothman, RB; Fix, SE; Mascarella, SW; Vinson, NA; Xu, H; Dersch, CM; Lu, Y; Cantrell, BE; Zimmerman, DM; Carroll, FI *J Med Chem* 2001, 44, 2687–90.**Catalog number :** NOCD-059**Name :** [<sup>3</sup>H]JDTic**Mol. formula :** C<sub>28</sub>H<sub>39</sub>N<sub>3</sub>O<sub>3</sub>**FW :** 469.64    **DEA schedule :** 0**Notes :** Selective kappa-opioid antagonist (tritium-labeled).**References :** Thomas, JB; et al. *J Med Chem* 2001, 44, 2687–90.**Opioids: Propoxyphene Class****Catalog number :** 9273-011**Name :** (+)-α-Norpropoxyphene maleate**Mol. formula :** C<sub>25</sub>H<sub>31</sub>NO<sub>6</sub>**FW :** 441.53    **DEA schedule :** 0**Catalog number :** 9273-010**Name :** (+)-α-N-Propionylnorpropoxyphene**Mol. formula :** C<sub>21</sub>H<sub>27</sub>NO<sub>2</sub>**FW :** 325.45    **DEA schedule :** 0**Catalog number :** 9273-004**Name :** [<sup>2</sup>H<sub>7</sub>]Propoxyphene hydrochloride**Mol. formula :** C<sub>22</sub>H<sub>29</sub>NO<sub>2</sub>**FW :** 346.51    **DEA schedule :** 2**Catalog number :** 9273-002**Name :** (+)-α-Propoxyphene hydrochloride; Darvon hydrochloride**Mol. formula :** C<sub>22</sub>H<sub>30</sub>ClNO<sub>2</sub>**FW :** 375.94    **DEA schedule :** 2**Notes :** Narcotic analgesic**References :** Miller, RR *Am J Hosp Pharm* 1977, 34, 413–23.  
Barkin, RL; Barkin SJ; Barkin DS *Am J Ther* 2006, 13, 534–42.

**Opioids: Thebaine Class****Catalog number :** 9333-002**CASRN :** 115-37-7**Name :** Thebaine base**Mol. formula :** C<sub>19</sub>H<sub>21</sub>NO<sub>3</sub>**FW :** 311.36    **DEA schedule :** 2**Notes :** Opiate; synthetic starting material for many opiate compounds**References :** Merck Index, 14th ed., Monograph 9276.**Opioids (dosage form): Implantable****Catalog number :** 9250-014**Name :** Methadone HCl implant pellets**DEA schedule :** 2

Dosage Form

**Catalog number :** 9300-008**Name :** Morphine base implant pellets**DEA schedule :** 2

Dosage Form

**Catalog number :** 9300-009**Name :** Placebo for morphine base implant pellets**DEA schedule :** 0

Dosage Form

**Catalog number :** 9652-021**Name :** Naltrexone base implant pellets**DEA schedule :** 0

Dosage Form

**Catalog number :** 9652-022**Name :** Placebo for naltrexone implant pellets**DEA schedule :** 0

Dosage Form

**Peptides: Caged****Catalog number :** MPSP-117**new****Name :** CNB-Y-LE (CYLE)**Sequence :** H-(Carboxynitrobenzyl)Tyr-Gly-Gly-Phe-Leu-OH**Mol. Formula :** C<sub>36</sub>H<sub>42</sub>N<sub>6</sub>O<sub>11</sub>**FW :** 734.76**Note :** Photoactivatable analog of Leu-enkephalin.**Reference:** Banghart, MR; Sabatini BL, *Neuron* 2012, 73, 249-59.**Catalog number :** MPSP-118**new****Name :** CNB-Y-DYN8 (CYD8)**Sequence :** H-(Carboxynitrobenzyl)Tyr-Gly-Gly-Phe-Leu-Arg-Arg-Ile-OH**Mol. Formula :** C<sub>54</sub>H<sub>77</sub>N<sub>15</sub>O<sub>14</sub>**FW :** 1159.31**Note :** Photoactivatable analog of Dynorphin A (1-8).**Reference:** Banghart, MR; Sabatini BL, *Neuron* 2012, 73, 249-59.**Catalog number :** MPSP-119**new****Name :** CNV-Y-LE**Sequence :** H-(Carboxynitroveratryl)Tyr-Gly-Gly-Phe-Leu-OH**Mol. Formula :** C<sub>38</sub>H<sub>46</sub>N<sub>6</sub>O<sub>13</sub>**FW :** 794.70**Note :** Photoactivatable analog of Leu-enkephalin.**Reference:** Russell, AG; et al., *J Org Chem* 2010, 75, 4648-4651.  
Russell, AG; et al., *Photochem Photobiol Sci* 2012, 11, 556-563.**Peptides: Cannabinoid-related****Catalog number :** MPSP-090**Name :** Hemopressin**Sequence :** H-Pro-Val-Asn-Phe-Lys-Phe-Leu-Ser-His-OH**Mol. Formula :** C<sub>53</sub>H<sub>77</sub>N<sub>13</sub>O<sub>12</sub>**FW :** 1088.3**Note :** CB<sub>1</sub> cannabinoid receptor inverse agonist. Analgesic.**Reference :** Heimann, AS; et al. *Proc Natl Acad Sci USA* 2007, 104, 20588-93.**Catalog number :** PEPT-053**Name :** Hemopressin tris(trifluoroacetate)**Sequence :** H-Pro-Val-Asp-Phe-Lys-Phe-Leu-Ser-His**Mol. Formula :** C<sub>59</sub>H<sub>81</sub>F<sub>9</sub>N<sub>13</sub>O<sub>18</sub>**FW :** 1431.36**Note :** CB<sub>1</sub> cannabinoid receptor inverse agonist. Analgesic.**Reference :** Heimann, AS; et al. *Proc Natl Acad Sci USA* 2007, 104, 20588-93.

## 7 – Peptides

**Catalog number :** MPSP-096

**Name :** [<sup>3</sup>H<sub>2</sub>]Hemopressin

**Sequence :** H-Pro-Val-Asn-[<sup>3</sup>H]Phe-Lys-[<sup>3</sup>H]Phe-Leu-Ser-His-OH

**Mol. Formula :** C<sub>53</sub>H<sub>77</sub>N<sub>13</sub>O<sub>12</sub>

**FW :** 1092.3

**Note :** Radiolabeled hemopressin (MPSP-90; PEPT-053).

**Catalog number :** MPSP-091

**Name :** [<sup>3</sup>H<sub>4</sub>]Hemopressin

**Sequence :** H-[<sup>3</sup>H<sub>2</sub>]Pro-Val-Asn-[<sup>3</sup>H]Phe-Lys-[<sup>3</sup>H]Phe-Leu-Ser-His-OH

**Mol. Formula :** C<sub>53</sub>H<sub>77</sub>N<sub>13</sub>O<sub>12</sub>

**FW :** 1096.3

**Note :** Radiolabeled hemopressin (MPSP-90; PEPT-053).

**Catalog number :** MPSP-098

**Name :** ABz–Hemopressin

**Sequence :** 2-ABz-Pro-Val-Asn-Phe-Lys-Phe-Leu-Ser-His-OH

**Mol. Formula :** C<sub>60</sub>H<sub>82</sub>N<sub>14</sub>O<sub>13</sub>

**FW :** 1207.1

**Note :** Hemopressin analog (MPSP-90; PEPT-053).

**Catalog number :** MPSP-099

**Name :** K<sup>5</sup>-ABz–Hemopressin

**Sequence :** H-Pro-Val-Asn-Phe-Lys(2-ABz)-Phe-Leu-Ser-His-OH

**Mol. Formula :** C<sub>60</sub>H<sub>82</sub>N<sub>14</sub>O<sub>13</sub>

**FW :** 1207.1

**Note :** Hemopressin analog (MPSP-90; PEPT-053).

**Catalog number :** MPSP-100

**Name :** Asp<sup>3</sup>–Hemopressin

**Sequence :** H-Pro-Val-Asp-Phe-Lys-Phe-Leu-Ser-His-OH

**Mol. Formula :** C<sub>53</sub>H<sub>76</sub>N<sub>12</sub>O<sub>13</sub>

**FW :** 1089.3

**Note :** Hemopressin analog (MPSP-90; PEPT-053).

**Catalog number :** MPSP-094

**Name :** DIT<sup>7</sup>–Hemopressin (1–6)

**Sequence :** H-Pro-Val-Asn-Phe-Lys-Phe-Tyr(3,5-diiodo)-OH

**Mol. Formula :** C<sub>47</sub>H<sub>61</sub>N<sub>9</sub>O<sub>10</sub>I<sub>2</sub>

**FW :** 1165.9

**Note :** Hemopressin analog (MPSP-90; PEPT-053).

**Catalog number :** MPSP-101

**Name :** D-His<sup>9</sup>–Hemopressin

**Sequence :** H-Pro-Val-Asn-Phe-Lys-Phe-Leu-Ser-D-His-OH

**Mol. Formula :** C<sub>53</sub>H<sub>77</sub>N<sub>13</sub>O<sub>12</sub>

**FW :** 1088.3

**Note :** Hemopressin analog (MPSP-90; PEPT-053).

**Catalog number :** PEPT-054

**Name :** Leu<sup>6</sup>–Hemopressin

**Sequence :** H-Pro-Val-Asn-Phe-Lys-Leu-Leu-Ser-His-OH

**Mol. Formula :** C<sub>50</sub>H<sub>79</sub>N<sub>13</sub>O<sub>12</sub>

**FW :** 1054.26

**Note :** CB<sub>1</sub> cannabinoid receptor antagonist.

**Reference :** Gomes et al., The FASEB Journal, 23, 1 (2009)

**Catalog number :** MPSP-097**Name :** [<sup>3</sup>H]Leu<sup>6</sup>-Hemopressin**Sequence :** H-Pro-Val-Asn-[<sup>3</sup>H]Phe-Lys-Leu-Leu-Ser-His-OH**Mol. Formula :** C<sub>50</sub>H<sub>79</sub>N<sub>13</sub>O<sub>12</sub>**FW :** 1056.3**Note :** Radiolabeled Leu<sup>6</sup>-Hemopressin (PEPT-054).**Catalog number :** MPSP-105**Name :** RVD-Hemopressin**Sequence :** H-Arg-Val-Asp-Pro-Val-Asn-Phe-Lys-Phe-Leu-Ser-His-OH**Mol. Formula :** C<sub>68</sub>H<sub>103</sub>N<sub>19</sub>O<sub>17</sub>**FW :** 1458.7**Note :** Agonist of CB<sub>1</sub> cannabinoid receptors.**Reference :** Gomes et al., FASEB J. 2009; 23(9): 3020-9**Catalog number :** PEPT-057**Name :** RVD-Leu<sup>6</sup>-Hemopressin tetrakis(trifluoroacetate)**Sequence :** H-Arg-Val-Asp-Pro-Val-Asn-Phe-Lys-Leu-Leu-Ser-His-OH**Mol. Formula :** C<sub>65</sub>H<sub>105</sub>N<sub>19</sub>O<sub>17</sub> • 4 CF<sub>3</sub>CO<sub>2</sub>H**FW :** 1880.75**Note :** N-terminal extended hemopressin, CB<sub>1</sub> receptor agonist.**Reference :** Dale, C. S.; Pagano Rde, L.; Rioli, V.; Hyslop, S.; Giorgi, R.; Ferro, E. S., *Peptides*, **26**, 431 (2005). Gomes, I.; Grushko, J. S.; Golebiowska, U.; Hoogendoorn, S.; Gupta, A.; Heimann, A. S.; Ferro, E. S.; Scarlata, S.; Fricker, L. D.; Devi, L. A., *FASEB J.*, **23**, 3020 (2009).**Catalog number :** MPSP-107**Name :** RVD-Hemopressin (1-7)**Sequence :** H-Arg-Val-Asp-Pro-Val-Asn-Phe-Lys-Phe-Leu-OH**Mol. Formula :** C<sub>59</sub>H<sub>91</sub>N<sub>15</sub>O<sub>14</sub>**FW :** 1234.5**Note :** RVD-Hemopressin analog (MPSP-105; PEPT-057).**Catalog number :** MPSP-092**Name :** Tyr<sup>7</sup>-Hemopressin (1-6)**Sequence :** H-Pro-Val-Asn-Phe-Lys-Phe-Tyr-OH**Mol. Formula :** C<sub>47</sub>H<sub>63</sub>N<sub>9</sub>O<sub>10</sub>**FW :** 914.1**Note :** Analog of MPSP-090.**Catalog number :** MPSP-093**Name :** [<sup>3</sup>H]Tyr<sup>7</sup>-Hemopressin (1-6)**Sequence :** H-Pro-Val-Asn-Phe-Lys-Phe-[<sup>3</sup>H]Tyr-OH**Mol. Formula :** C<sub>47</sub>H<sub>61</sub>N<sub>9</sub>O<sub>103</sub>H<sub>2</sub>**FW :** 918.1**Note :** Radioligand for MPSP-092.**Catalog number :** MPSP-103**Name :** VD-Hemopressin**Sequence :** H-Val-Asp-Pro-Val-Asn-Phe-Lys-Phe-Leu-Ser-His-OH**Mol. Formula :** C<sub>62</sub>H<sub>91</sub>N<sub>15</sub>O<sub>16</sub>**FW :** 1302.5**Note :** Agonist of CB<sub>1</sub> cannabinoid receptors.**Reference :** Gomes et al., FASEB J. 2009; 23(9): 3020-9.

**Catalog number :** PEPT-055**Name :** VD-Leu<sup>6</sup>-Hemopressin**Sequence :** H-Val-Asp-Pro-Val-Asn-Phe-Lys-Leu-Leu-Ser-His-OH**Mol. Formula :** C<sub>59</sub>H<sub>93</sub>N<sub>15</sub>O<sub>16</sub>**FW :** 1268.1**Note :** CB<sub>1</sub> cannabinoid receptor antagonist.**Reference :** Gelman *et al.*, J. Neurochem., 113, 871 (2010)**Peptides: Nicotinic Class****Catalog number :** PEPT-058**Name :** α-Conotoxin MII tris(trifluoroacetate)**Sequence :** H-Gly-Cys-Cys-Ser-Asn-Pro-Val-Cys-His-Leu-Glu-His-Ser-Asn-Leu-Cys-NH<sub>2</sub> (disulfide bonds Cys2-Cys8, Cys3-Cys16)**Mol. Formula :** C<sub>67</sub>H<sub>103</sub>N<sub>23</sub>O<sub>22</sub>S<sub>4</sub> • 3 CF<sub>3</sub>CO<sub>2</sub>H**FW :** 2053.02**Note :** Highly potent and selective α3β2 nicotinic receptor antagonist.**Reference :** Cartier, G.; Yoshikami, D.; Gray, W.; Luo, S.; Olivera, B.; McIntosh, J., *Journal of Biological Chemistry*, 271, 7522 (1966). Hill, J. M.; Oomen, C. J.; Miranda, L. P.; Bingham, J. P.; Alewood, P. F.; Craik, D. J., *Biochemistry*, 37, 15621 (1998).**Catalog number :** MPSP-109**Name :** ω-Conotoxin GVIA**Sequence :** H-Cys-Lys-Ser-Hyp-Gly-Ser-Ser-Cys-Ser-Hyp-Thr-Ser-Tyr-Asn-Cys-Cys-Arg-Ser-Cys-Asn-Hyp-Tyr-Thr-Lys-Arg-Cys-Tyr-NH<sub>2</sub> (disulfide bonds Cys1-Cys16, Cys8-Cys19, Cys15-Cys26)**Mol. Formula :** C<sub>120</sub>H<sub>182</sub>N<sub>38</sub>O<sub>43</sub>S<sub>6</sub>**FW :** 3037.4**Note :** ω-Conotoxin GVIA, extracted from the venom of the fish-hunting cone snail *Conus geographus* is a neuronal calcium channel blocker.**Reference :** B.M. Olivera *et al.*, Biochemistry 26, 2086 (1987); D.R. Hillyard *et al.*, Neuron 9, 69 (1992); K. Sato *et al.*, Biochem. Biophys. Res. Commun. 194, 1292 (1993); J.R. Abbott *et al.*, Int. J. Devl Neurosci. 12, 43 (1994)**Catalog number :** MPSP-111**Name :** ω-Conotoxin MVIIA**Sequence :** H-Cys-Lys-Gly-Lys-Gly-Ala-Lys-Cys-Ser-Arg-Leu-Met-Tyr-Asp-Cys-Cys-Thr-Gly-Ser-Cys-Arg-Ser-Gly-Lys-Cys-NH<sub>2</sub> (disulfide bonds Cys1-Cys16, Cys8-Cys20, Cys15-Cys25)**Mol. Formula :** C<sub>102</sub>H<sub>172</sub>N<sub>36</sub>O<sub>32</sub>S<sub>7</sub>**FW :** 2639.2**Note :** ω-Conotoxin MVIIA, extracted from the venom of the fish-hunting cone snail *Conus magus* is a neuronal calcium channel blocker.**Reference :** B.M. Olivera *et al.*, Biochemistry 26, 2086 (1987); D.R. Hillyard *et al.*, Neuron 9, 69 (1992); J.R. Abbott *et al.*, Int. J. Devl Neurosci. 12, 43 (1994); R. Newcomb *et al.*, Brain Res. 638, 95 (1994)**Catalog number :** MPSP-113**Name :** ω-Conotoxin MVIIC**Sequence :** H-Cys-Lys-Gly-Lys-Gly-Ala-Pro-Cys-Arg-Lys-Thr-Met-Tyr-Asp-Cys-Cys-Ser-Gly-Ser-Cys-Gly-Arg-Arg-Gly-Lys-Cys-NH<sub>2</sub> (disulfide bonds Cys1-Cys16, Cys8-Cys20, Cys15-Cys26)**Mol. Formula :** C<sub>106</sub>H<sub>178</sub>N<sub>40</sub>O<sub>32</sub>S<sub>7</sub>**FW :** 2749.3**Note :** ω-Conotoxin MVIIC, extracted from the venom of the fish-hunting cone snail *Conus magus* is a neuronal calcium channel blocker.**Reference :** D.R. Hillyard *et al.*, Neuron 9, 69 (1992); R. Newcomb *et al.*, Brain Res. 638, 95 (1994)

**Peptides: Opioid****Catalog number :** PEPT-042**Name :** Biphalin trifluoroacetate/acetate**Sequence :** H-Tyr-D-Ala-Gly-Phe-NH-Tyr-D-Ala-Gly-Phe-NH<sub>2</sub>**Mol. Formula :** C<sub>50</sub>H<sub>58</sub><sub>-3</sub>F<sub>5</sub><sub>-7</sub>N<sub>10</sub>O<sub>14</sub>**FW :** 1120.26**Note :** Synthetic dimeric enkephalin having potent agonist activity at  $\mu$  and  $\delta$  receptors.**Reference :** Lipkowski, AW; et al. *Life Sci* 1987, 40, 2283-8.  
Li, G; et al. *Bioorg Med Chem Lett* 1998, 8, 555-60.**Catalog number :** PEPT-015**Name :** N-(tert-Butyloxycarbonyl)tyrosyl-D-alanylglycyl-N $\alpha$ -methylphenylalanylglycine methyl ester**Sequence :** Boc-Tyr-D-Ala-N $\alpha$ -Me-Phe-Gly-OCH<sub>3</sub>**Mol. Formula :** C<sub>32</sub>H<sub>43</sub>N<sub>5</sub>O<sub>9</sub>**FW :** 641.72**Catalog number :** PEPT-022**Name :** N-(tert-Butyloxycarbonyl)tyrosyl-O-tert-butyl-D-threonylglycylphenylalanylleucine hydrazide**Sequence :** Boc-Tyr(Bu<sup>t</sup>)-D-Thr-Gly-Phe-Leu-NH-NH<sub>2</sub>**Mol. Formula :** C<sub>39</sub>H<sub>59</sub>N<sub>7</sub>O<sub>9</sub>**FW :** 769.95**Catalog number :** PEPT-060**new****Name :** CJ-15,208**Sequence :** [c(Phe<sup>1</sup>-D-Pro<sup>2</sup>-Phe<sup>3</sup>-Trp<sup>4</sup>)]**Mol. Formula :** C<sub>34</sub>H<sub>35</sub>N<sub>5</sub>O<sub>4</sub> • CF<sub>3</sub>CO<sub>2</sub>H**FW :** 691.70**Note :** Kappa-opioid receptor antagonist. Peptide content 63%.**Reference:** Ross, NC; et al., *Tetrahedron Lett.* 2010, 51, 5020-5023.**Catalog number :** PEPT-061**new****Name :** D-Trp<sup>4</sup>-CJ-15,208**Sequence :** [c(Phe<sup>1</sup>-D-Pro<sup>2</sup>-Phe<sup>3</sup>-D-Trp<sup>4</sup>)]**Mol. Formula :** C<sub>34</sub>H<sub>35</sub>N<sub>5</sub>O<sub>4</sub> • CF<sub>3</sub>CO<sub>2</sub>H**FW :** 691.70**Note :** Kappa-opioid receptor antagonist. Peptide content 54%.**Reference:** Ross, NC; et al., *Tetrahedron Lett.* 2010, 51, 5020-5023.**Catalog number :** MPSP-013**Name :** CTAP**Sequence :** H-D-Phe-c[Cys-Tyr-D-Trp-Arg-Thr-Pen]-Thr-NH<sub>2</sub>**Mol. Formula :** C<sub>51</sub>H<sub>69</sub>N<sub>13</sub>O<sub>11</sub>S<sub>2</sub>**FW :** 1103.0**Note :** Cyclic somatostatin analog with high  $\mu$  selectivity.**Reference :** Pelton, JT; et al. *J Med Chem* 1986, 29, 2370-5.  
Bilsky, EJ; et al. *J Pharmacol Exp Ther* 1996, 277, 484-90.

## 7 – Peptides

**Catalog number :** MPSP-014

**Name :** [<sup>3</sup>H]CTAP

**Sequence :** H-D-Phe[<sup>3</sup>H]-c[Cys-Tyr-D-Trp-Arg-Thr-Pen]-Thr-NH<sub>2</sub>

**Mol. Formula :** C<sub>51</sub>H<sub>68</sub>N<sub>13</sub>O<sub>11</sub>S<sub>23</sub>H

**FW :** 1105.0

**Note :** Radioactive ligand for MPSP-013

**Reference :** Abbruscato, TJ; et al. *J Pharmacol Exp Ther* 1997, 280, 402-9.

**Catalog number :** MPSP-054

**Name :** CTOP

**Sequence :** H-D-Phe-c[Cys-Tyr-D-Trp-Orn-Thr-Pen]-Thr-NH<sub>2</sub>

**Mol. Formula :** C<sub>50</sub>H<sub>67</sub>N<sub>11</sub>O<sub>11</sub>S<sub>2</sub>

**FW :** 1062.4

**Note :** Cyclic somatin analog with high  $\mu$  selectivity.

**Reference :** Gulya, K; et al. *Life Sci* 1986, 38, 2221-9.  
Pelton, JT; et al. *J Med Chem* 1986, 29, 2370-5.

**Catalog number :** MPSP-006

**Name :** DADLE

**Sequence :** H-Tyr-D-Ala-Gly-Phe-D-Leu-OH

**Mol. Formula :** C<sub>29</sub>H<sub>39</sub>N<sub>5</sub>O<sub>7</sub>

**FW :** 569.7

**Note :** Synthetic enkephalin agonist having improved biological stability and some selectivity for the  $\delta$  receptor over the  $\mu$  receptor. It shows roughly the same anti-nociceptive activity as  $\beta$ -endorphin.

**Reference :** Chang, KJ; Cuatrecasas, PJ *J Biol Chem* 1979, 254, 2610-8.  
Gorin, FA; et al. *J Med Chem* 1980, 23, 1113-22.  
Knapp, RJ; Yamamura, HI *Biochem Pharmacol* 1992, 44, 1687-95.

**Catalog number :** PEPT-001

**Name :** DADLE hydrochloride; [D-Ala<sup>2</sup>,D-Leu<sup>5</sup>]Enkephalin

**Sequence :** H-Tyr-D-Ala-Gly-Phe-D-Leu-OH

**Mol. Formula :** C<sub>29</sub>H<sub>40</sub>ClN<sub>5</sub>O<sub>7</sub>

**FW :** 606.12

**Note :** Synthetic enkephalin agonist having improved biological stability and some selectivity for the  $\delta$  receptor over the  $\mu$  receptor.

**Reference :** Chang, KJ; Cuatrecasas, PJ *J Biol Chem* 1979, 254, 2610.  
Gorin, FA; et al. *J Med Chem* 1980, 23, 1113.  
Knapp, RJ; Yamamura, HI *Biochem Pharmacol* 1992, 44, 1687.

**Catalog number :** MPSP-007

**Name :** [<sup>3</sup>H]DADLE

**Sequence :** H-Tyr[<sup>3</sup>H]-D-Ala-Gly-Phe-D-Leu-OH

**Mol. Formula :** C<sub>29</sub>H<sub>37</sub>N<sub>5</sub>O<sub>73</sub>H<sub>2</sub>

**FW :** 573.7

**Note :** Tritiated DADLE

**Reference :** Luciano, MG; et al. *Brain Res Bull* 1981, 7, 677-82.

**Catalog number :** PEPT-008

**Name :** DALA hydrochloride

**Sequence :** H-Tyr-D-Ala-Gly-Phe-Met-NH<sub>2</sub>

**Mol. Formula :** C<sub>28</sub>H<sub>39</sub>ClN<sub>6</sub>O<sub>6</sub>S

**FW :** 623.17

**Note :** Potent, long-lasting analog of [Met5]enkephalin.

**Reference :** Pert, CB; et al. *Science* 1976, 194, 330.

**Catalog number :** MPSP-034**Name :** DALCE**Sequence :** H-Tyr-D-Ala-Gly-Phe-Leu-Cys-OH**Mol. Formula :** C<sub>32</sub>H<sub>43</sub>N<sub>6</sub>O<sub>8</sub>S**FW :** 673.0**Note :** Irreversible antagonist for the  $\delta 1$  receptor.**Reference :** Bowen, WD; et al. *J Biol Chem* 1987, 262, 13434–9.  
Traynor, JR; Elliott, J *TIPS* 1993, 14, 84.**Catalog number :** MPSP-035**Name :** [<sup>3</sup>H<sub>2</sub>]DALCE**Sequence :** H-Tyr[<sup>3</sup>H<sub>2</sub>]-D-Ala-Gly-Phe-Leu-Cys-OH**Mol. Formula :** C<sub>33</sub>H<sub>44</sub>N<sub>6</sub>O<sub>10</sub>S<sub>3</sub>H<sub>2</sub>**FW :** 677.0**Note :** Radioactive ligand for MPSP-034**Catalog number :** PEPT-035**Name :** DALCE trifluoroacetate**Sequence :** Tyr-D-Ala-Gly-Phe-Leu-Cys-OH**Mol. Formula :** C<sub>34</sub>H<sub>45</sub>F<sub>3</sub>N<sub>6</sub>O<sub>10</sub>S**FW :** 786.82**Note :** Irreversible antagonist for the  $\delta 1$  receptor.**Reference :** Bowen, WD; et al. *J Biol Chem* 1987, 262, 13434–9.  
Traynor, JR; Elliott, J *TIPS* 1993, 14, 84.**Catalog number :** MPSP-027**Name :** DALDA**Sequence :** H-Tyr-D-Arg-Phe-Lys-NH<sub>2</sub>**Mol. Formula :** C<sub>30</sub>H<sub>45</sub>N<sub>9</sub>O<sub>5</sub>**FW :** 611.8**Note :** Synthetic tetrapeptide agonist highly selective for the  $\mu$  receptor.**Reference :** Schiller, PW; et al. *J Med Chem* 1989, 32, 698–703.**Catalog number :** MPSP-084**Name :** (DMT)<sup>1</sup>-DALDA**Sequence :** H-DMT-D-Arg-Phe-Lys-NH<sub>2</sub>**Mol. Formula :** C<sub>32</sub>H<sub>49</sub>N<sub>9</sub>O<sub>5</sub>**FW :** 639.6**Note :** Super DALDA**Reference :** Zhao, K; et al. *J Biol Chem* 2004, 279, 34682–90.**Catalog number :** PEPT-038**Name :** DALDA tris(trifluoroacetate)**Sequence :** H-Tyr-D-Arg-Phe-Lys-NH<sub>2</sub>**Mol. Formula :** C<sub>36</sub>H<sub>48</sub>F<sub>9</sub>N<sub>9</sub>O<sub>11</sub>**FW :** 611.75**Note :** Synthetic tetrapeptide agonist highly selective for the  $\mu$  receptor.**Reference :** Schiller, PW; et al. *J Med Chem* 1989, 32, 698.**Catalog number :** PEPT-047**Name :** Super DALDA; SS-02; [Dmt1]DALDA tris(trifluoroacetate)**Sequence :** Dmt-D-Arg-Phe-Lys-NH<sub>2</sub>**Mol. Formula :** C<sub>38</sub>H<sub>52</sub>F<sub>9</sub>N<sub>9</sub>O<sub>11</sub>**FW :** 981.354**Reference :** Zhao, K; et al. *J Biol Chem* 2004, 279, 34682–90.  
Schiller, PW; et al. *Eur J Med Chem* 2000, 35, 895–901.

**Catalog number :** MPSP-028**Name :** [ $^3\text{H}_2$ ]DALDA**Sequence :** H-Tyr[ $^3\text{H}_2$ ]-D-Arg-Phe-Lys-NH<sub>2</sub>**Mol. Formula :** C<sub>30</sub>H<sub>43</sub>N<sub>9</sub>O<sub>53</sub>H<sub>2</sub>**FW :** 615.8**Note :** Radioactive ligand for MPSP-027**Catalog number :** MPSP-011**Name :** DAMGO**Sequence :** H-Tyr-D-Ala-Gly-N<sup>α</sup>-Me-Phe-Gly-ol**Mol. Formula :** C<sub>26</sub>H<sub>35</sub>N<sub>5</sub>O<sub>6</sub>**FW :** 513.7**Note :** Synthetic enkephalin agonist highly selective for the  $\mu$  receptor.**Reference :** Handa, BK; et al. *Eur J Pharmacol* 1981, 70, 531-40.  
Kosterlitz, HW; Paterson SJ; Robson LE *Br J Pharmacol* 1981, 73, 939-49.  
Reddy, PA; et al. *Org Prep Internat* 1995, 27, 469.**Catalog number :** PEPT-014**Name :** DAMGO trifluoroacetate**Sequence :** Tyr-D-Ala-Gly-N<sup>α</sup>-Me-Phe-Gly-ol**Mol. Formula :** C<sub>28</sub>H<sub>36</sub>F<sub>3</sub>N<sub>5</sub>O<sub>8</sub>**FW :** 627.62**Note :** Synthetic enkephalin agonist highly selective for the  $\mu$  receptor.**Reference :** Handa, BK; et al. *Eur J Pharmacol* 1981, 70, 531.  
Kosterlitz, HW; Paterson, SJ *Br J Pharmacol* 1981, 73, 299P.  
Reddy, PA; et al. *Org Prep Internat* 1995, 27, 469.**Catalog number :** MPSP-012**Name :** [ $^3\text{H}_2$ ]DAMGO**Sequence :** H-Tyr[ $^3\text{H}_2$ ]-D-Ala-Gly-N<sup>α</sup>-Me-Phe-Gly-ol**Mol. Formula :** C<sub>26</sub>H<sub>33</sub>N<sub>5</sub>O<sub>63</sub>H<sub>2</sub>**FW :** 517.7**Note :** Radioactive ligand for MPSP-011**Reference :** Zajac, JM; Roques BP *Life Sci* 1983, 33 Suppl 1, 155-8.**Catalog number :** MPSP-030**Name :** Deltorphin I**Sequence :** H-Tyr-D-Ala-Phe-Asp-Val-Val-Gly-NH<sub>2</sub>**Mol. Formula :** C<sub>37</sub>H<sub>52</sub>N<sub>8</sub>O<sub>10</sub>**FW :** 768.9**Note :** Selective  $\delta$  receptor agonist isolated from the skin of *Phyllomedusa bicolor***Reference :** Amodeo, P; et al. *Pept Res* 1992, 5, 48-55.  
Melchiorri, P; et al. *Eur J Pharmacol* 1991, 195, 201-7.  
Salvadori, S; et al. *J Med Chem* 1991, 34, 1656-61.  
Lazarus, LH; et al. *J Med Chem* 1991, 34, 1350-5.**Catalog number :** PEPT-033**Name :** Deltorphin I hemitrifluoroacetate**Sequence :** Tyr-D-Ala-Phe-Asp-Val-Val-Gly-NH<sub>2</sub>**Mol. Formula :** C<sub>37</sub>H<sub>52</sub>N<sub>8</sub>O<sub>10</sub>**FW :** 768.87**Note :** Selective  $\delta$  receptor agonist isolated from the skin of *Phyllomedusa bicolor*.**Reference :** Ersperer, V; et al. *Proc Natl Acad Sci USA* 1989, 86, 5188.  
Salvadori, S; et al. *J Med Chem* 1991, 34, 1656.  
DLHeyl and SESchullery, *CurrMedChem.*, 4, 117 (1997).

**Catalog number :** MPSP-031**Name :** [<sup>3</sup>H<sub>2</sub>]Deltorphin I**Sequence :** H-Tyr[<sup>3</sup>H<sub>2</sub>]-D-Ala-Phe-Asp-Val-Val-Gly-NH<sub>2</sub>**Mol. Formula :** C<sub>37</sub>H<sub>50</sub>N<sub>8</sub>O<sub>10</sub>H<sub>2</sub>**FW :** 772.9**Note :** Radioactive ligand for MPSP-030**Reference :** Erspamer, V; et al. *Proc Natl Acad Sci USA* 1989, 86, 5188.**Catalog number :** MPSP-036**Name :** Deltorphin II**Sequence :** H-Tyr-D-Ala-Phe-Glu-Val-Val-Gly-NH<sub>2</sub>**Mol. Formula :** C<sub>38</sub>H<sub>54</sub>N<sub>8</sub>O<sub>10</sub>**FW :** 782.9**Note :** A selective δ-opioid receptor agonist isolated from the skin of *Phyllomedusa bicolor***Reference :** Amodeo, P; et al. *Pept Res* 1992, 5, 48-55.  
Melchiorri, P; et al. *Eur J Pharmacol* 1991, 195, 201-7.  
Salvadori, S; et al. *J Med Chem* 1991, 34, 1656-61.  
Lazarus, LH; et al. *J Med Chem* 1991, 34, 1350-5.**Catalog number :** PEPT-034**Name :** Deltorphin II trifluoroacetate**Sequence :** Tyr-D-Ala-Phe-Glu-Val-Val-Gly-NH<sub>2</sub>**Mol. Formula :** C<sub>40</sub>H<sub>55</sub>F<sub>3</sub>N<sub>8</sub>O<sub>12</sub>**FW :** 896.92**Note :** Selective δ2 receptor agonist isolated from the skin of *Phyllomedusa bicolor*.**Reference :** Erspamer, V; et al. *Proc Natl Acad Sci USA* 1989, 86, 5188.  
Salvadori, S; et al. *J Med Chem* 1991, 34, 1656.  
Traynor, JR; Elliott, J *TIPS* 1993, 14, 84.**Catalog number :** MPSP-037**Name :** [<sup>3</sup>H<sub>2</sub>]Deltorphin II**Sequence :** H-Tyr[<sup>3</sup>H<sub>2</sub>]-D-Ala-Phe-Glu-Val-Val-Gly-NH<sub>2</sub>**Mol. Formula :** C<sub>38</sub>H<sub>52</sub>N<sub>8</sub>O<sub>10</sub>H<sub>2</sub>**FW :** 786.9**Note :** Radioactive ligand for MPSP-036**Reference :** Erspamer, V; et al. *Proc Natl Acad Sci USA* 1989, 86, 5188.**Catalog number :** PEPT-037**Name :** Dermorphin trifluoroacetate**Sequence :** Tyr-D-Ala-Phe-Gly-Tyr-Pro-Ser-NH<sub>2</sub>**Mol. Formula :** C<sub>42</sub>H<sub>51</sub>F<sub>3</sub>N<sub>8</sub>O<sub>12</sub>**FW :** 916.91**Note :** Selective μ receptor agonist isolated from the skin of *Phyllomedusa sauvagei*.**Reference :** Montecucchi, PC; et al. *Int J Peptide Protein Res* 1981, 17, 275.  
Melchiorri, P; Negri, L *Gen Pharmac* 1996, 27, 1099.**Catalog number :** PEPT-049**Name :** 2',6'-Dimethyltyrosyl-Ng-nitro-d-arginylphenylalanyl-Ne-2-Cl-Cbz-lysinamide trifluoroacetate**Sequence :** Drmt-D-Arg(NO<sub>2</sub>)-Phe-Lys(2-Cl-Cbz)-NH<sub>2</sub>**Mol. Formula :** C<sub>42</sub>H<sub>55</sub>ClF<sub>3</sub>N<sub>10</sub>O<sub>11</sub>**FW :** 949.376**Reference :** Zhao, K; et al. *J Biol Chem* 2004, 279, 34682-90.

## 7 – Peptides

**Catalog number :** PEPT-048

**Name :** 2',6'-Dimethyltyrosyl-N<sub>g</sub>-nitro-D-arginylphenylalanyllysinamide trifluoroacetate

**Sequence :** Dmt-D-Arg(NO<sub>2</sub>)-Phe-Lys-NH<sub>2</sub>

**Mol. Formula :** C<sub>36</sub>H<sub>50</sub>F<sub>6</sub>N<sub>10</sub>O<sub>11</sub>

**FW :** 944.2

**Reference :** Zhao, K; et al. *J Biol Chem* 2004, 279, 34682-90.

**Catalog number :** PEPT-046

**Name :** DIPP-NH<sub>2</sub>[Ψ] bis(Trifluoroacetate)

**Sequence :** 2TFA •Dmt-TicΨ[CH<sub>2</sub>NH]Phe-Phe-NH<sub>2</sub>

**Mol. Formula :** C<sub>43</sub>H<sub>47</sub>F<sub>6</sub>N<sub>5</sub>O<sub>8</sub>

**FW :** 875.85

**Note :** Synthetic high potency pseudopeptide having balanced μ agonist/δ antagonist properties.

**Reference :** Schiller, PW; et al. *J Med Chem* 1999, 42, 3520-6.

**Catalog number :** MPSP-001

**Name :** DPDPE

**Sequence :** H-Tyr-c[D-Pen-Gly-Phe-D-Pen]-OH

**Mol. Formula :** C<sub>30</sub>H<sub>39</sub>N<sub>7</sub>O<sub>5</sub>S<sub>2</sub>

**FW :** 645.8

**Note :** Synthetic, conformationally restricted enkephalin agonist selective for the δ1 receptor. Minimal cross-reactivity with μ- and κ- receptors.

**Reference :** Mosberg, HI; et al. *Proc Natl Acad Sci USA* 1983, 80, 5871-4.

Akiyama, K; et al. *Proc Natl Acad Sci USA* 1985, 82, 2543-7.

Mosberg, HI; Omnaas JR; Goldstein A *Mol Pharmacol* 1987, 31, 599-602.

Knapp, RJ; Yamamura HI *Biochem Pharmacol* 1992, 44, 1687-95.

**Catalog number :** MPSP-044

**Name :** p-Cl-Phe-DPDPE

**Sequence :** H-Tyr-c[D-Pen-Gly-4-Cl-Phe-D-Pen]-OH

**Mol. Formula :** C<sub>30</sub>H<sub>38</sub>ClN<sub>5</sub>O<sub>7</sub>S<sub>2</sub>

**FW :** 680.4

**Note :** Analog of DPDPE. δ-selectivity 5 times higher than DPDPE due to a 5-fold increased δ-receptor affinity.

**Reference :** Toth, G; et al. *J Med Chem* 1990, 33, 249-53.

Vaughn, LK; et al. *Life Sci* 1989, 45, 1001-8.

**Catalog number :** PEPT-010

**Name :** DPDPE trifluoroacetate; [D-Pen<sup>2</sup>,D-Pen<sup>5</sup>]Enkephalin

**Sequence :** H-Tyr-c[D-Pen-Gly-Phe-D-Pen]-OH

**Mol. Formula :** C<sub>32</sub>H<sub>40</sub>F<sub>3</sub>N<sub>5</sub>O<sub>9</sub>S<sub>2</sub>

**FW :** 759.82

**Note :** Synthetic, conformationally restricted enkephalin agonist selective for the δ1 receptor.

**Reference :** Mosberg, HI; et al. *Proc Natl Acad Sci USA* 1983, 80, 5871-4.

Knapp, RJ; Yamamura, HI *Biochem Pharmacol* 1992, 44, 1687.

Traynor, JR; Elliott, J *TIPS* 1993, 14, 84.

**Catalog number :** MPSP-002

**Name :** [<sup>3</sup>H<sub>2</sub>]DPDPE

**Sequence :** H-Tyr[<sup>3</sup>H<sub>2</sub>]-c[D-Pen-Gly-Phe-D-Pen]-OH

**Mol. Formula :** C<sub>30</sub>H<sub>37</sub>N<sub>7</sub>O<sub>5</sub>S<sub>23</sub>H<sub>2</sub>

**FW :** 649.8

**Note :** Radioactive ligand for MPSP-001

**Reference :** Cotton, R; et al. *Eur J Pharmacol* 1984, 97, 331-2.

**Catalog number :** MPSP-045**Name :** [<sup>3</sup>H<sub>2</sub>]p-Cl-Phe-DPDPE**Sequence :** H-Tyr[<sup>3</sup>H<sub>2</sub>]-c[D-Pen-Gly-4-Cl-Phe-D-Pen]-OH**Mol. Formula :** C<sub>30</sub>H<sub>36</sub>ClN<sub>5</sub>O<sub>7</sub>S<sub>2</sub>H<sub>2</sub>**FW :** 684.4**Note :** Radioactive ligand for MPSP-044**Catalog number :** MPSP-086**Name :** DV1.2.DA1.5.Lan.Enk.(DPDPE lanthionine analog)**Sequence :** H-Tyr-[D-S(Val L-Gly-Phe-D-Ala) L]-OH**Mol. Formula :** C<sub>28</sub>H<sub>35</sub>N<sub>5</sub>O<sub>7</sub>S**FW :** 584.7**Note :** DPDPE lanthionine analog.**Catalog number :** MPSP-003**Name :** DSLET**Sequence :** H-Tyr-D-Ser-Gly-Phe-Leu-Thr-OH**Mol. Formula :** C<sub>33</sub>H<sub>46</sub>N<sub>6</sub>O<sub>10</sub>**FW :** 686.9**Note :** Synthetic enkephalin agonist selective for the δ2 receptor.**Reference :** Fournie-Zaluski, MC; et al. *Mol Pharmacol* 1981, 20, 484–91.  
Traynor, JR; Elliott J *Trends Pharmacol Sci* 1993, 14, 84–6.**Catalog number :** PEPT-039**Name :** DSLET trifluoroacetate**Sequence :** Tyr-D-Ser-Gly-Phe-Leu-Thr-OH**Mol. Formula :** C<sub>35</sub>H<sub>47</sub>F<sub>3</sub>N<sub>6</sub>O<sub>12</sub>**FW :** 800.79**Note :** Synthetic enkephalin agonist selective for the δ2 receptor.**Reference :** Gacel, G; et al. *FEBS Lett* 1980, 118, 245.  
Gacel, G; et al. *J Med Chem* 1981, 24, 1119.  
Traynor, JR; Elliott, J *TIPS* 1993, 14, 84.**Catalog number :** MPSP-004**Name :** [<sup>3</sup>H<sub>2</sub>]DSLET**Sequence :** H-Tyr[<sup>3</sup>H<sub>2</sub>]-D-Ser-Gly-Phe-Leu-Thr-OH**Mol. Formula :** C<sub>33</sub>H<sub>44</sub>N<sub>6</sub>O<sub>10</sub>H<sub>2</sub>**FW :** 690.9**Note :** Radioactive ligand for MPSP-003**Reference :** David, M; et al. *Eur J Pharmacol* 1982, 78, 385–7.**Catalog number :** MPSP-032**Name :** DSTBULET**Sequence :** H-Tyr-D-Ser(Bu<sup>t</sup>)-Gly-Phe-Leu-Thr-OH**Mol. Formula :** C<sub>37</sub>H<sub>44</sub>N<sub>6</sub>O<sub>10</sub>**FW :** 742.9**Note :** Synthetic enkephalin agonist selective for the δ receptor**Reference :** Delay-Goyet, P; et al. *J Biol Chem* 1988, 263, 4124–30.  
Gacel, G; et al. *J Med Chem* 1988, 31, 1891–7.**Catalog number :** PEPT-043**Name :** DSTBULET acetate**Sequence :** H-Tyr-D-Ser(Bu<sup>t</sup>)-Gly-Phe-Leu-Thr-OH**Mol. Formula :** C<sub>39</sub>H<sub>58</sub>N<sub>6</sub>O<sub>12</sub>**FW :** 802.92**Note :** Synthetic enkephalin agonist selective for the δ receptor.**Reference :** Delay-Goyet, P; et al. *J Biol Chem* 1988, 263, 4124–30.  
Gacel, G; et al. *J Med Chem* 1988, 31, 1891–7.

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**Catalog number :** MPSP-033

**Name :** [<sup>3</sup>H<sub>2</sub>]DSTBULET

**Sequence :** H-Tyr[<sup>3</sup>H<sub>2</sub>]-D-Ser(Bu<sup>t</sup>)-Gly-Phe-Leu-Thr-OH

**Mol. Formula :** C<sub>33</sub>H<sub>44</sub>N<sub>6</sub>O<sub>10</sub>H<sub>2</sub>

**FW :** 746.9

**Note :** Radioactive ligand for MPSP-032

**Reference :** Delay-Goyet, P *NIDA Res Mono* 1986, 75, 197–200.

**Catalog number :** MPSP-005

**Name :** DTLET

**Sequence :** H-Tyr-D-Ser-Gly-Phe-Leu-Thr-OH

**Mol. Formula :** C<sub>34</sub>H<sub>48</sub>N<sub>6</sub>O<sub>10</sub>

**FW :** 700.9

**Note :** Synthetic enkephalin agonist moderately selective for the δ receptor.

**Reference :** Zajac, JM; et al. *Biochem Biophys Res Commun* 1983, 111, 390–7.  
Delay-Goyet, P; et al. *FEBS Lett* 1985, 183, 439–43.

**Catalog number :** PEPT-021

**Name :** DTLET trifluoroacetate

**Sequence :** Tyr-D-Thr-Gly-Phe-Leu-Thr-OH

**Mol. Formula :** C<sub>36</sub>H<sub>49</sub>F<sub>3</sub>N<sub>6</sub>O<sub>12</sub>

**FW :** 814.81

**Reference :** Zajac, JM; et al. *Biochem Biophys Res Commun* 1983, 111, 390.  
Delay-Goyet, P; et al. *FEBS Lett* 1985, 183, 439.

**Catalog number :** MPSP-088

**Name :** [(2S)-Mdp]<sup>1</sup>-Dyn NH<sub>2</sub> (1–11); Dynantin

**Sequence :** [(2S)-Mdp]<sup>1</sup>-Gly-Gly-Phe-Leu-Arg-Arg-Ile-Arg-Pro-Lys-NH<sub>2</sub>

**Mol. Formula :** C<sub>66</sub>H<sub>109</sub>N<sub>21</sub>O<sub>12</sub>

**FW :** 1388.4

**Note :** Highly and potent selective kappa antagonist.

**Reference :** Lu, Y et al. *J Med Chem* 2001, 44, 3048–53.

**Catalog number :** PEPT-056

**Name :** Dynantin

**Sequence :** [2S]-Mdp-Gly-Gly-Phe-Leu-Arg-Arg-Ile-Arg-Pro-Lys-NH<sub>2</sub>

**Mol. Formula :** C<sub>66</sub>H<sub>109</sub>N<sub>21</sub>O<sub>12</sub> • 4 CF<sub>3</sub>CO<sub>2</sub>H

**FW :** 1844.41

**Note :** κ-Opioid antagonist.

**Reference :** (1) Lu, Y.; et al., *J Med Chem*, 2001, 44, 3048. (2) Schiller, P. W.; et al., *Life Sci*, 2003, 73, 691.

**Catalog number :** MPSP-019

**Name :** Dynorphin (1–11)

**Sequence :** H-Tyr-Gly-Gly-Phe-Leu-Arg-Arg-Ile-Arg-Pro-Lys-OH

**Mol. Formula :** C<sub>63</sub>H<sub>103</sub>N<sub>21</sub>O<sub>13</sub>

**FW :** 1362.7

**Note :** Truncated analog of dynorphin A with similar potency

**Catalog number :** MPSP-020

**Name :** [<sup>3</sup>H<sub>2</sub>]Dynorphin (1–11)

**Sequence :** H-Tyr[<sup>3</sup>H<sub>2</sub>]-Gly-Gly-Phe-Leu-Arg-Arg-Ile-Arg-Pro-Lys-OH

**Mol. Formula :** C<sub>63</sub>H<sub>101</sub>N<sub>21</sub>O<sub>133</sub>H<sub>2</sub>

**FW :** 1366.7

**Note :** Radioactive ligand for MPSP-019

**Reference :** Chavkin, C; Goldstein, A *Proc Natl Acad Sci USA* 1981, 78, 6543–7.

**Catalog number :** MPSP-016**Name :** Dynorphin (1–13)**Sequence :** H-Tyr-Gly-Gly-Phe-Leu-Arg-Arg-Ile-Arg-Pro-Lys-Leu-Lys-OH**Mol. Formula :** C<sub>75</sub>H<sub>126</sub>N<sub>24</sub>O<sub>15</sub>**FW :** 1604.2**Note :** Truncated analog of dynorphin A with similar potency**Reference :** Goldstein, A; et al. *Proc Natl Acad Sci USA* 1979, 78, 6666–70.**Catalog number :** MPSP-017**Name :** Dynorphin (1–13) amide**Sequence :** H-Tyr-Gly-Gly-Phe-Leu-Arg-Arg-Ile-Arg-Pro-Lys-Leu-Lys-NH<sub>2</sub>**Mol. Formula :** C<sub>75</sub>H<sub>127</sub>N<sub>25</sub>O<sub>14</sub>**FW :** 1603.2**Note :** Truncated amide analog of dynorphin A with similar potency**Reference :** Chavkin, C; Goldstein, A *Proc Natl Acad Sci USA* 1981, 78, 6543–7.**Catalog number :** MPSP-018**Name :** [<sup>3</sup>H<sub>2</sub>]Dynorphin (1–13) amide**Sequence :** H-Tyr[<sup>3</sup>H<sub>2</sub>]-Gly-Gly-Phe-Leu-Arg-Arg-Ile-Arg-Pro-Lys-Leu-Lys-NH<sub>2</sub>**Mol. Formula :** C<sub>75</sub>H<sub>125</sub>N<sub>25</sub>O<sub>143</sub>H<sub>2</sub>**FW :** 1607.2**Note :** Radioactive ligand for MPSP-017**Catalog number :** MPSP-021**Name :** Dynorphin (1–9)**Sequence :** H-Tyr-Gly-Gly-Phe-Leu-Arg-Arg-Ile-Arg-OH**Mol. Formula :** C<sub>52</sub>H<sub>84</sub>N<sub>18</sub>O<sub>11</sub>**FW :** 1137.5**Note :** Selective ligand for  $\kappa$ -binding sites.**Reference :** Corbett, AD; et al. *Nature* 1982, 299, 79–81.  
Yoshimura, K; et al. *J Pharmacol Exp Ther* 1982, 222, 71–9.**Catalog number :** MPSP-022**Name :** [<sup>3</sup>H<sub>2</sub>]Dynorphin (1–9)**Sequence :** H-Tyr[<sup>3</sup>H<sub>2</sub>]-Gly-Gly-Phe-Leu-Arg-Arg-Ile-Arg-OH**Mol. Formula :** C<sub>52</sub>H<sub>82</sub>N<sub>18</sub>O<sub>113</sub>H<sub>2</sub>**FW :** 1141.5**Note :** Radioactive ligand for MPSP-021**Reference :** Robson, LE; et al. *Life Sci* 1983, 33 Suppl 1, 283–6.  
Wood, MS; Rodriguez FD; Traynor JR *Neuropharmacology* 1989, 28, 1041–6.**Catalog number :** MPSP-048**Name :** Dynorphin (2–11)**Sequence :** H-Gly-Gly-Phe-Leu-Arg-Arg-Ile-Arg-Pro-Lys-OH**Mol. Formula :** C<sub>33</sub>H<sub>44</sub>N<sub>6</sub>O<sub>10</sub>**FW :** 1199.7**Note :** Dynorphin truncation which does not bind to opioid receptors**Reference :** Takemori, AE; Loh HH; Lee NM *J Pharmacol Exp Ther* 1993, 266, 121–4.  
Meyer, ME *Pharmacol Biochem Behav* 1993, 44, 329–32.**Catalog number :** MPSP-046**Name :** Dynorphin (2–13)**Sequence :** H-Gly-Gly-Phe-Leu-Arg-Arg-Ile-Arg-Pro-Lys-Leu-Lys-OH**Mol. Formula :** C<sub>66</sub>H<sub>117</sub>N<sub>23</sub>O<sub>13</sub>**FW :** 1441.1**Note :** Dynorphin truncation that does not bind to opioid receptors. Highly immunoreactive as the first tyrosine appears not to be essential for immunoreactivity.**Reference :** Young, EA; et al. *Peptides* 1987, 8, 701–7.  
Walker, JM; et al. *Eur J Pharmacol* 1982, 85, 121–2.

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**Catalog number :** MPSP-040

**Name :** Dynorphin (2-17)

**Sequence :** H-Gly-Gly-Phe-Leu-Arg-Arg-Ile-Arg-Pro-Lys-Leu-Lys-Trp-Asp-Asn-Gln-OH

**Mol. Formula :** C<sub>90</sub>H<sub>156</sub>N<sub>30</sub>O<sub>21</sub>

**FW :** 1984.8

**Note :** *Dynorphin truncation that does not bind to opioid receptors.*

**Reference :** Chavkin, C; Goldstein, A *Proc Natl Acad Sci USA* **1981**, *78*, 6543-6547.

**Catalog number :** MPSP-041

**Name :** [<sup>3</sup>H]Dynorphin (2-17)

**Sequence :** H-Gly-Gly-Phe[<sup>3</sup>H]-Leu-Arg-Arg-Ile-Arg-Pro-Lys-Leu-Lys-Trp-Asp-Asn-Gln-OH

**Mol. Formula :** C<sub>90</sub>H<sub>155</sub>N<sub>30</sub>O<sub>21</sub>H

**FW :** 1986.8

**Note :** *Radioactive ligand for MPSP-040*

**Catalog number :** MPSP-050

**Name :** Dynorphin A (1-8)

**Sequence :** H-Tyr-Gly-Gly-Phe-Leu-Arg-Arg-Ile-OH

**Mol. Formula :** C<sub>46</sub>H<sub>72</sub>N<sub>14</sub>O<sub>10</sub>

**FW :** 981.4

**Note :** *Endogenous peptide agonist for opioid receptors.*

**Reference :** Nakao, K; et al. *Biochem Biophys Res Commun* **1983**, *117*, 695-701.  
Seizinger, BR; et al. *J Neurochem* **1984**, *42*, 447-57.  
Bell, KM; Traynor JR *Can J Physiol Pharmacol* **1998**, *76*, 325-33.

**Catalog number :** MPSP-066

**Name :** [<sup>3</sup>Ψ<sup>4</sup>,D-Leu<sup>8</sup>]Dynorphin A (1-8)amide

**Sequence :** H-Tyr-Gly-Gly-Ψ(CH<sub>2</sub>-NH)-Phe-Leu-Arg-Arg-D-Leu-NH<sub>2</sub>

**Mol. Formula :** C<sub>33</sub>H<sub>44</sub>N<sub>6</sub>O<sub>10</sub>

**FW :** 967.4

**Note :** *Kappa-selective dynorphin A analog*

**Reference :** Ambo, A; et al. *Chem Pharm Bull* **1995**, *43*, 1547-50.

**Catalog number :** MPSP-052

**Name :** Dynorphin A (2-8)

**Sequence :** H-Gly-Gly-Phe-Leu-Arg-Arg-Ile-OH

**Mol. Formula :** C<sub>37</sub>H<sub>63</sub>N<sub>13</sub>O<sub>8</sub>

**FW :** 818.2

**Note :** *Truncated analog of dynorphin A which does not bind to opioid receptors*

**Reference :** Takemori, AE; Loh HH; Lee NM *J Pharmacol Exp Ther* **1993**, *266*, 121-4.  
Meyer, ME *Pharmacol Biochem Behav* **1993**, *44*, 329-32.

**Catalog number :** PEPT-040

**Name :** Dynorphin A 1-8 tris(trifluoroacetate)

**Sequence :** H-Tyr-Gly-Gly-Phe-Leu-Arg-Arg-Ile-OH

**Mol. Formula :** C<sub>52</sub>H<sub>75</sub>F<sub>9</sub>N<sub>14</sub>O<sub>16</sub>

**FW :** 1323.24

**Note :** *Endogenous peptide agonist for opioid receptors.*

**Reference :** Weber, E; et al. *Nature* **1982**, *299*, 77.  
Corbett, A; et al. *Nature* **1982**, *299*, 79.  
Bell, KM; Traynor, JR *Can J Physiol Pharmacol* **1998**, *76*, 325.

**Catalog number :** PEPT-041

**Name :** Dynorphin A 2-8 tris(trifluoroacetate)

**Sequence :** H-Gly-Gly-Phe-Leu-Arg-Arg-Ile-OH

**Mol. Formula :** C<sub>43</sub>H<sub>66</sub>F<sub>9</sub>N<sub>13</sub>O<sub>14</sub>

**FW :** 1159.69

**Note :** *Des-Tyr1 analog of dynorphin A (1-8).*

**Reference :** Takemori, AE; Loh HH; Lee NM *J Pharmacol Exp Ther* **1993**, *266*, 121-4.  
Meyer, ME *Pharmacol Biochem Behav* **1993**, *44*, 329-32.

**Catalog number :** MPSP-023**Name :** Dynorphin B**Sequence :** H-Tyr-Gly-Gly-Phe-Leu-Arg-Arg-Gln-Phe-Lys-Val-Val-Thr-OH**Mol. Formula :** C<sub>74</sub>H<sub>115</sub>N<sub>21</sub>O<sub>17</sub>**FW :** 1571.1**Note :** *N-terminal part of leumorphin***Reference :** Kilpatrick, DL; et al. *Proc Natl Acad Sci USA* 1982, 79, 6480–83.  
Seizinger, BR; et al. *J Neurochem* 1984, 42, 447–457.**Catalog number :** MPSP-015**Name :** Dynorphin(1-17)**Sequence :** H-Tyr-Gly-Gly-Phe-Leu-Arg-Arg-Ile-Arg-Pro-Lys-Leu-Lys-Trp-Asp-Asn-Gln-OH**Mol. Formula :** C<sub>99</sub>H<sub>155</sub>N<sub>31</sub>O<sub>23</sub>**FW :** 2147.8**Note :** *Considered the endogenous ligand for kappa receptors.***Reference :** Goldstein, A; et al. *Proc Natl Acad Sci USA* 1981, 78, 7219–23.  
Cox, BM; et al. *Life Sci* 1975, 16, 1777–1782.  
Goldstein, A; et al. *Proc Natl Acad Sci USA* 1979, 76, 6666–70.**Catalog number :** MPSP-070**Name :** Endomorphin-1**Sequence :** H-Tyr-Pro-Trp-Phe-NH<sub>2</sub>**Mol. Formula :** C<sub>34</sub>H<sub>38</sub>N<sub>6</sub>O<sub>5</sub>**FW :** 610.7**Note :** *Endogenous tetrapeptide agonist selective for the μ receptor.***Reference :** Zadina, JE; et al. *Nature* 1997, 386, 499.  
Goldberg, IE; et al. *J Pharmacol Exp Ther* 1998, 286, 1007.  
McConalogue, K; et al. *Neuroscience* 1999, 90, 1051.**Catalog number :** PEPT-044**Name :** Endomorphin-1 Trifluoroacetate/Acetate**Sequence :** TFA/HOAc • Tyr-Pro-Trp-Phe-NH<sub>2</sub>**Mol. Formula :** C<sub>36</sub>H<sub>39.15</sub>F<sub>2.85</sub>N<sub>6</sub>O<sub>7</sub>**FW :** 722.04**Note :** *Endogenous tetrapeptide agonist selective for the μ receptor.***Reference :** JEZadina et al., *Nature*, 386, 499 (1997)  
IEGoldberg et al., *J PharmacolExp Ther.*, 286, 1007 (1998)  
KMcConalogue et al., *Neuroscience*, 90, 1051 (1999)**Catalog number :** MPSP-073**Name :** Endomorphin-2**Sequence :** H-Tyr-Pro-Phe-Phe-NH<sub>2</sub>**Mol. Formula :** C<sub>32</sub>H<sub>37</sub>N<sub>5</sub>O<sub>5</sub>**FW :** 571.7**Note :** *Endogenous tetrapeptide agonist selective for the μ receptor.***Reference :** Zadina, JE; et al. *Nature* 1997, 386, 499–502.  
Goldberg, IE; et al. *J Pharmacol Exp Ther* 1998, 286, 1007–13.  
McConalogue, K; et al. *Neuroscience* 1999, 90, 1051–9.**Catalog number :** PEPT-045**Name :** Endomorphin-2 Trifluoroacetate/Acetate**Sequence :** TFA/HOAc • Tyr-Pro-Phe-Phe-NH<sub>2</sub>**Mol. Formula :** C<sub>34</sub>H<sub>38.3</sub>F<sub>2.7</sub>N<sub>5</sub>O<sub>7</sub>**FW :** 680.30**Note :** *Endogenous tetrapeptide agonist selective for the μ receptor.***Reference :** Zadina, JE; et al. *Nature* 1997, 386, 499–502.  
Goldberg, IE; et al. *J Pharmacol Exp Ther* 1998, 286, 1007–13.  
McConalogue, K; et al. *Neuroscience* 1999, 90, 1051–9.

**Catalog number :** MPSP-074**Name :** [<sup>3</sup>H<sub>2</sub>]Endomorphin-2**Sequence :** H-Tyr[<sup>3</sup>H<sub>2</sub>]-Pro-Phe-Phe-NH<sub>2</sub>**Mol. Formula :** C<sub>32</sub>H<sub>35</sub>N<sub>5</sub>O<sub>5</sub>H<sub>2</sub>**FW :** 575.7**Note :** Radioactive ligand for MPSP-073**Reference :** Spetea, M; et al. *Biochem Biophys Res Commun* 1998, 250, 720-5.**Catalog number :** MPSP-024**Name :** β-Endorphin**Sequence :** H-Tyr-Gly-Gly-Phe-Met-Thr-Ser-Glu-Lys-Ser-Gln-Thr-Pro-Leu-Val-Thr-Leu-Phe-Lys-Asn-Ala-Ile-Ile-Lys-Asn-Ala-Tyr-Lys-Lys-Gly-Glu-OH**Mol. Formula :** C<sub>158</sub>H<sub>251</sub>N<sub>39</sub>O<sub>46</sub>S**FW :** 3465.6**Note :** Endogenous opioid peptide. Contains enkephalin sequence.**Reference :** Li, CH; et al. *Biochem Biophys Res Commun* 1976, 72, 1542-1547.Cox, BM; et al. *Proc Natl Acad Sci USA* 1976, 73, 1821-1823.Bradbury, AF; et al. *Nature* 1976, 260, 165-166.**Catalog number :** MPSP-026**Name :** [<sup>125</sup>I]β-Endorphin**Sequence :** H-YGGFMTSEKSQTPLVTLFKNAlIKNAYKY[<sup>125</sup>I<sub>2</sub>]GE-OH**Mol. Formula :** C<sub>158</sub>H<sub>249</sub>N<sub>39</sub>O<sub>46</sub>S<sub>125</sub>I<sub>2</sub>**FW :** 3589.6**Note :** Radioactive ligand for MPSP-024**Reference :** Deby-Dupont, G; et al. *C R Seances Soc Biol Fil* 1983, 177, 259-68.  
Schweigerer, L; et al. *J Biol Chem* 1983, 258, 12287-92.**Catalog number :** MPSP-025**Name :** [<sup>3</sup>H<sub>2</sub>]β-Endorphin**Sequence :** H-Tyr-Gly-Gly-Phe-Met-Thr-Ser-Glu-Lys-Ser-Gln-Thr-Pro-Leu-Val-Thr-Leu-Phe-Lys-Asn-Ala-Ile-Ile-Lys-Asn-Ala-[<sup>3</sup>H<sub>2</sub>]Tyr-Lys-Lys-Gly-Glu-OH**Mol. Formula :** C<sub>158</sub>H<sub>249</sub>N<sub>39</sub>O<sub>46</sub>S<sub>3</sub>H<sub>2</sub>**FW :** 3469.6**Note :** Radioactive ligand for MPSP-024**Reference :** Li, CH; et al. *Proc Natl Acad Sci USA* 1980, 77, 2303-4.**Catalog number :** MPSP-081**Name :** [<sup>3</sup>H<sub>2</sub>]Leu-Enkephalin-acid**Sequence :** H-[<sup>3</sup>H<sub>2</sub>]Tyr-Gly-Gly-Phe-Leu-OH**Mol. Formula :** C<sub>28</sub>H<sub>37</sub>N<sub>5</sub>O<sub>7</sub>**FW :** 559.3**Note :** Radioactive ligand for MPSP-080.**Catalog number :** PEPT-036**Name :** FMRF amide bis(trifluoroacetate)**Sequence :** H-Phe-Met-Arg-Phe-NH<sub>2</sub>**Mol. Formula :** C<sub>33</sub>H<sub>44</sub>F<sub>6</sub>N<sub>8</sub>O<sub>8</sub>S**FW :** 826.82**Note :** Molluscan cardioexcitatory neuropeptide.**Reference :** Price, DA; Greenberg, MJ *Science* 1997, 197, 670.  
Tang, J; et al. *Proc Natl Acad Sci USA* 1984, 81, 5002.

**Catalog number :** MPSP-008**Name :** ICI 174,864**Sequence :** N,N-Diallyl-Tyr-Aib-Aib-Phe-Leu-OH**Mol. Formula :** C<sub>38</sub>H<sub>53</sub>N<sub>5</sub>O<sub>7</sub>**FW :** 691.87**Note :** *Synthetic enkephalin antagonist selective for the δ receptor.***Reference :** Cotton, R; et al. US Patent 4,474,767 (1984).Cotton, R; et al. *Eur J Pharmacol* 1984, 97, 331–2.Dray, A; Nunan L *Peptides* 1984, 5, 1015–6.Smith, CB; Bennett-Kelly L; Woods JH *Neuropeptides* 1984, 5, 161–4.**Catalog number :** PEPT-017**Name :** ICI 174864 hydrochloride**Sequence :** N,N-Diallyl-Tyr-Aib-Aib-Phe-Leu-OH**Mol. Formula :** C<sub>38</sub>H<sub>54</sub>ClN<sub>5</sub>O<sub>7</sub>**FW :** 728.34**Note :** *Synthetic enkephalin antagonist selective for the δ receptor.***Reference :** Cotten, R; et al. US Patent 4,474,767 (1984).Cotten, R; et al. *Eur J Pharmacol* 1984, 97, 331.Dray, D; Nunan, L *Peptides* 1984, 5, 1015.**Catalog number :** MPSP-078**Name :** Kaffiralin-1**Sequence :** H-D-Phe-D-Phe-D-Ile-D-Arg-NH<sub>2</sub>**Mol. Formula :** C<sub>30</sub>H<sub>44</sub>N<sub>8</sub>O<sub>4</sub>**FW :** 580.7**Note :** *Kappa-selective agonist identified from a combinatorial library***Reference :** Dooley, CT; et al. *J Biol Chem* 1998, 273, 18848–56.**Catalog number :** MPSP-079**Name :** [<sup>3</sup>H]Kaffiralin-1**Sequence :** H-[<sup>3</sup>H]D-Phe-[<sup>3</sup>H]D-Phe-D-Ile-D-Arg-NH<sub>2</sub>**Mol. Formula :** C<sub>30</sub>H<sub>42</sub>N<sub>8</sub>O<sub>43</sub>H<sub>2</sub>**FW :** 584.7**Note :** *Radioactive ligand for MPSP-076***Reference :** Dooley, CT; et al. *J Biol Chem* 1998, 273, 18848–56.**Catalog number :** MPSP-076**Name :** Kaffiralin-2**Sequence :** H-D-Phe-D-Phe-D-Nle-D-Arg-NH<sub>2</sub>**Mol. Formula :** C<sub>30</sub>H<sub>44</sub>N<sub>8</sub>O<sub>4</sub>**FW :** 580.7**Note :** *Kappa-selective agonist identified from a combinatorial library.***Reference :** Dooley, CT; et al. *J Bio Chem* 1998, 273, 18848–18856.**Catalog number :** MPSP-077**Name :** [<sup>3</sup>H]Kaffiralin-2**Sequence :** H-[<sup>3</sup>H]D-Phe-[<sup>3</sup>H]D-Phe-D-Nle-D-Arg-NH<sub>2</sub>**Mol. Formula :** C<sub>30</sub>H<sub>42</sub>N<sub>8</sub>O<sub>43</sub>H<sub>2</sub>**FW :** 584.7**Note :** *Radioactive ligand for MPSP-076.*

## 7 – Peptides

**Catalog number :** PEPT-003

**Name :** [Leu<sup>5</sup>]Enkephalin trifluoroacetate

**Sequence :** H-Tyr-Gly-Gly-Phe-Leu-OH

**Mol. Formula :** C<sub>30</sub>H<sub>38</sub>F<sub>3</sub>N<sub>5</sub>O<sub>9</sub>

**FW :** 669.62

**Note :** *Endogenous enkephalin.*

**Reference :** Hughes, J; et al. *Nature* 1975, 258, 577.

Jones, D *Tetrahedron Lett* 1977, 2853.

Vilkas, E; et al. *Int J Peptide Protein Res* 1980, 15, 29.

**Catalog number :** MPSP-080

**Name :** Leu-Enkephalin-acid

**Sequence :** H-Tyr-Gly-Gly-Phe-Leu-OH

**Mol. Formula :** C<sub>28</sub>H<sub>37</sub>N<sub>5</sub>O<sub>7</sub>

**FW :** 555.3

**Note :** *Endogenous enkephalin.*

**Reference :** Hughes, J; et al. *Nature* 1975, 258, 577.

Jones, D *Tetrahedron Lett* 1977, 2853.

Vilkas, E; et al. *Int J Peptide Protein Res* 1980, 15, 29.

**Catalog number :** PEPT-007

**Name :** [Met<sup>5</sup>]Enkephalinamide hydrochloride

**Sequence :** H-Tyr-Gly-Gly-Phe-Met-NH<sub>2</sub>

**Mol. Formula :** C<sub>27</sub>H<sub>37</sub>ClN<sub>6</sub>O<sub>6</sub>S

**FW :** 609.14

**Note :** *Amide analog of [Met5]enkephalin.*

**Reference :** Puig, MM; et al. *Arch Int Pharmacol Ther* 1979, 226, 69.

Berger, E; et al. *Pharmazie* 1979, 34, 349.

**Catalog number :** MPSP-064

**Name :** Met-Enkephalin-acid

**Sequence :** H-Tyr-Gly-Gly-Phe-Met-OH

**Mol. Formula :** C<sub>28</sub>H<sub>37</sub>N<sub>5</sub>O<sub>7</sub>

**FW :** 573.7

**Note :** *Endogenous opioid peptide*

**Catalog number :** MPSP-029

**Name :** Met-Enkephalin-amide

**Sequence :** H-Tyr-Gly-Gly-Phe-Met-NH<sub>2</sub>

**Mol. Formula :** C<sub>27</sub>H<sub>36</sub>N<sub>6</sub>O<sub>6</sub>S

**FW :** 572.8

**Note :** *Amide analog of [Met5]enkephalin, endogenous opioid peptide.*

**Reference :** Hughes, J; et al. *Nature* 1975, 258, 577–80.

Vavrek, RJ; et al. *Peptides* 1981, 2, 303–8.

**Catalog number :** PEPT-020

**Name :** Methyl N,N-Diallyl-O-tert-butyltyrosyl- $\alpha$ -aminoisobutyryl- $\alpha$ -aminoisobutyrate

**Sequence :** N,N-Dallyl-Tyr(Bu<sup>t</sup>)-Aib-Aib-OMe

**Mol. Formula :** C<sub>28</sub>H<sub>43</sub>N<sub>3</sub>O<sub>5</sub>

**FW :** 501.67

**Catalog number :** MPSP-042

**Name :** Metkephamid

**Sequence :** H-Tyr-Ala-Gly-N <sup>$\alpha$</sup> -Me-Phe-Met-NH<sub>2</sub>

**Mol. Formula :** C<sub>29</sub>H<sub>40</sub>N<sub>6</sub>O<sub>6</sub>S

**FW :** 600.8

**Note :** *Stable, systemically active analog of [Met5]enkephalin.*

**Reference :** RCFredrickson, et al., *Science*, 211, 603–605(1981)

**Catalog number :** PEPT-009**Name :** Metkephamide hydrochloride**Sequence :** Tyr-D-Ala-Gly-N<sup>α</sup>-Me-Phe-Met-NH<sub>2</sub>**Mol. Formula :** C<sub>29</sub>H<sub>41</sub>ClN<sub>6</sub>O<sub>6</sub>S**FW :** 637.19**Note :** Stable, systemically active analog of [Met<sup>5</sup>]enkephalin.**Reference :** Frederickson, RCA; et al. *Science* 1981, 211, 603.**Catalog number :** PEPT-004**Name :** N-(tert-Butyloxycarbonyl)tyrosylglycylglycylphenylalanylleucine methyl ester**Sequence :** Boc-Tyr-Gly-Phe-Leu-OMe**Mol. Formula :** C<sub>34</sub>H<sub>47</sub>N<sub>5</sub>O<sub>9</sub>S**FW :** 669.77**Note :** [Leu<sup>5</sup>]enkephalin synthetic precursor.**Reference :** Vilkas, E; et al. *Int J Peptide Protein Res* 1980, 15, 29.**Catalog number :** PEPT-006**Name :** N-(tert-Butyloxycarbonyl)tyrosylglycylglycylphenylalanylmethionine methyl ester**Sequence :** Boc-Tyr-Gly-Phe-Met-OMe**Mol. Formula :** C<sub>33</sub>H<sub>45</sub>N<sub>5</sub>O<sub>9</sub>S**FW :** 687.81**Note :** [Met<sup>5</sup>]enkephalin synthetic precursor.**Reference :** Bhotre, BJ; et al. *J Indian Chem Soc* 1978, 55, 1128.**Catalog number :** PEPT-018**Name :** N,N-Diallyl-O-tert-butyltyrosyl- $\alpha$ -aminoisobutyryl- $\alpha$ -aminoisobutyrylphenylalanylleucine**Sequence :** N,N-Diallyl-Tyr(Bu<sup>t</sup>)-Aib-Aib-Phe-Leu-OH**Mol. Formula :** C<sub>42</sub>H<sub>61</sub>N<sub>5</sub>O<sub>7</sub>**FW :** 747.98**Reference :** Cotton, R.; et al. *Eur J Pharmacol* 1984, 97, 331-2.**Catalog number :** PEPT-019**Name :** N,N-Diallyl-O-tert-butyltyrosyl- $\alpha$ -aminoisobutyryl- $\alpha$ -aminoisobutyrylphenylalanylleucine methyl ester**Sequence :** N,N-Diallyl-Tyr(Bu<sup>t</sup>)-Aib-Aib-Phe-Leu-OMe**Mol. Formula :** C<sub>43</sub>H<sub>63</sub>N<sub>5</sub>O<sub>7</sub>**FW :** 762.01**Note :** ICI 174864 synthetic intermediate.**Reference :** Flippin-Anderson, JL; et al. *Lett Pept Sci* 1994, 1, 107.**Catalog number :** MPSP-059**Name :** [<sup>3</sup>H]Orphanin FQ; [<sup>3</sup>H]Nociceptin**Sequence :** H-Phe[<sup>3</sup>H]-Gly-Gly-Phe[<sup>3</sup>H]-Thr-Gly-Ala-Arg-Lys-Ser-Ala-Arg-Lys-Leu-Ala-Asn-Gln-OH**Mol. Formula :** C<sub>79</sub>H<sub>127</sub>N<sub>27</sub>O<sub>22</sub>H<sub>2</sub>**FW :** 1813.4**Note :** Radioactive ligand for MPSP-058**Reference :** Dooley, CT; Houghten RA *Life Sci* 1996, 59, PL23-9.**Catalog number :** MPSP-082**Name :** [<sup>3</sup>H<sub>4</sub>]Tyr<sup>14</sup>Orphanin FQ**Sequence :** H-Phe[<sup>3</sup>H]-Gly-Gly-Phe[<sup>3</sup>H]-Thr-Gly-Ala-Arg-Lys-Ser-Ala-Arg-Lys-Tyr[<sup>3</sup>H]-Ala-Asn-Gln-OH**Mol. Formula :** C<sub>82</sub>H<sub>123</sub>N<sub>27</sub>O<sub>23</sub>H<sub>4</sub>**FW :** 1867.1**Note :** Radioactive ligand for MPSP-058**Reference :** Dooley, CT; et al. *Life Science* 1996, 59, PL23-PL29.

## 7 – Peptides

**Catalog number :** MPSP-095

**Name :** [ $^3\text{H}_4$ ]Orphanin FQ

**Sequence :** H-[ $^3\text{H}$ ]Phe-Gly-Gly-[ $^3\text{H}$ ]Phe-Thr-Gly-Ala-Arg-Lys-Ser-Ala-Arg-Lys-[ $^3\text{H}_2$ ]Leu-Ala-Asn-Gln-OH

**Mol. Formula :** C<sub>79</sub>H<sub>125</sub>N<sub>27</sub>O<sub>22</sub>H<sub>4</sub>

**FW :** 1817.4

**Note :** Radioactive ligand for MPSP-058.

**Catalog number :** MPSP-083

**Name :** (Tyr<sup>14</sup>)Orphanin FQ analog

**Sequence :** H-Phe-Gly-Gly-Phe-Thr-Gly-Ala-Arg-Lys-Ser-Ala-Arg-Lys-Tyr-Ala-Asn-Gln-OH

**Mol. Formula :** C<sub>82</sub>H<sub>127</sub>N<sub>27</sub>O<sub>23</sub>

**FW :** 1859.1

**Note :** Control ligand for MPSP-082.

**Catalog number :** MPSP-058

**Name :** Orphanin FQ; Nociceptin

**Sequence :** H-Phe-Gly-Gly-Phe-Thr-Gly-Ala-Arg-Lys-Ser-Ala-Arg-Lys-Leu-Ala-Asn-Gln-OH

**Mol. Formula :** C<sub>79</sub>H<sub>129</sub>N<sub>27</sub>O<sub>22</sub>

**FW :** 1809.4

**Note :** Endogenous ligand for orphan opioid like receptor (ORL)

**Reference :** Reinscheid, RK; et al. *Science* 1995, 270, 792-4.  
Meunier, JC; et al. *Nature* 1995, 377, 532-5.

**Catalog number :** PEPT-023

**Name :** PL017 trifluoroacetate

**Sequence :** Tyr-Pro-N<sup>α</sup>-Me-Phe-D-Pro-NH<sub>2</sub>

**Mol. Formula :** C<sub>31</sub>H<sub>38</sub>F<sub>3</sub>N<sub>5</sub>O<sub>7</sub>

**FW :** 649.67

**Note :** Synthetic morphiceptin agonist selective for the  $\mu$  receptor.

**Reference :** Chang, KJ; et al. *Science* 1981, 212, 75.

**Catalog number :** MPSP-009

**Name :** PLO17

**Sequence :** H-Tyr-Pro-N<sup>α</sup>-Me-Phe-D-Pro-NH<sub>2</sub>

**Mol. Formula :** C<sub>29</sub>H<sub>37</sub>N<sub>5</sub>O<sub>5</sub>

**FW :** 535.65

**Note :** Synthetic morphiceptin agonist selective for the  $\mu$  receptor. Casomorphin analog.

**Reference :** Chang, KJ; et al. *J Pharmacol Exp Ther* 1983, 227, 403-8.

**Catalog number :** MPSP-010

**Name :** [ $^3\text{H}_2$ ]PLO17

**Sequence :** H-Tyr[ $^3\text{H}_2$ ]-Pro-N<sup>α</sup>-Me-Phe-D-Pro-NH<sub>2</sub>

**Mol. Formula :** C<sub>29</sub>H<sub>35</sub>N<sub>5</sub>O<sub>5</sub>H<sub>2</sub>

**FW :** 539.6

**Note :** Radioactive ligand for MPSP-009.

**Reference :** Hawkins, KN; et al. *Eur J Pharmacol* 1987, 133, 351-2.

**Catalog number :** MPSP-060

**Name :** Dansyl-PQR-amide

**Sequence :** Dansyl-Pro-Gln-Arg-NH<sub>2</sub>

**Mol. Formula :** C<sub>28</sub>H<sub>41</sub>N<sub>9</sub>O<sub>6</sub>S

**FW :** 631.5

**Note :** Fluorescent truncation analog of neuropeptide FF(NPFF) an anti-opiate peptide

**Reference :** Malin, DH; et al. *Life Sci* 1993, 53, PL261-6.

**Catalog number :** MPSP-062**Name :** Benzyl-PQR-amide**Sequence :** Benzyl-Pro-Gln-Arg-NH<sub>2</sub>**Mol. Formula :** C<sub>23</sub>H<sub>36</sub>N<sub>8</sub>O<sub>4</sub>**FW :** 488.6**Note :** Truncation analog of neuropeptide FF(NPFF) an anti-opiate peptide**Catalog number :** PEPT-051**Name :** SS-20; Phenylalanyl-D-arginylphenylalanillysinamide tris(trifluoroacetate)**Sequence :** Phe-D-Arg-Phe-Lys-NH<sub>2</sub>**Mol. Formula :** C<sub>36</sub>H<sub>48</sub>F<sub>9</sub>N<sub>8</sub>O<sub>9</sub>**FW :** 938.9**Reference :** Zhao, K; et al. *J Biol Chem* 2004, 279, 34682-90.**Catalog number :** PEPT-050**Name :** SS-31; D-Arginyl-(2',6'-dimethyl)tyrosyllysylphenylalaninamide tris(Trifluoroacetate)**Sequence :** D-Arg-Dmt-Lys-Phe-NH<sub>2</sub>**Mol. Formula :** C<sub>38</sub>H<sub>52</sub>F<sub>9</sub>N<sub>9</sub>O<sub>11</sub>**FW :** 981.354**Reference :** Zhao, K; et al. *J Biol Chem* 2004, 279, 34682-90.**Catalog number :** MPSP-068**Name :** TICP[Ψ]**Sequence :** H-Tyr-TicΨ[CH<sub>2</sub>-NH]Cha-Phe-OH**Mol. Formula :** C<sub>34</sub>H<sub>38</sub>N<sub>6</sub>O<sub>5</sub>**FW :** 610.7**Note :** Very stable potent δ antagonist**Reference :** Schiller, PW; et al. *J Signal Transduction Research* 1999, 19, 573-88.  
Szatmari, I; et al. *Peptides* 1999, 20, 1079-83.**Catalog number :** MPSP-056**Name :** TIPP[Ψ]**Sequence :** H-Tyr-TicΨ[CH<sub>2</sub>-NH]Phe-Phe-OH**Mol. Formula :** C<sub>37</sub>H<sub>40</sub>N<sub>4</sub>O<sub>5</sub>**FW :** 620.8**Note :** Highly potent and stable δ receptor antagonist with extraordinary δ selectivity.**Reference :** Schiller, PW; et al. *J Med Chem* 1993, 36, 3182-7.  
Visconti, LM; et al. *Neurosci Lett* 1994, 181, 47-9.**Catalog number :** PEPT-030**Name :** TIPP trifluoroacetate**Sequence :** H-Tyr-Tic-Phe-Phe-OH**Mol. Formula :** C<sub>39</sub>H<sub>39</sub>F<sub>3</sub>N<sub>4</sub>O<sub>8</sub>**FW :** 748.76**Note :** Highly potent and selective δ receptor antagonist.**Reference :** Schiller, PW; et al. *Proc Natl Acad Sci USA* 1992, 89, 11871.**Catalog number :** PEPT-032**Name :** TIPP[Ψ] acetate/trifluoroacetate**Sequence :** H-Tyr-TicΨ[CH<sub>2</sub>NH]Phe-Phe-OH**Mol. Formula :** C<sub>41</sub>H<sub>45</sub>F<sub>3</sub>N<sub>4</sub>O<sub>9</sub>**FW :** 794.82**Note :** Highly potent and stable δ receptor antagonist with extraordinary δ selectivity.**Reference :** Schiller, PW; et al. *J Med Chem* 1993, 36, 3182.  
Visconti, LM; et al. *Neurosci Lett* 1994, 181, 47.

## 7 – Peptides

**Catalog number :** PEPT-052

**Name :** TIPP[Ψ] bis(trifluoroacetate)

**Sequence :** Tyr-Tic-Ψ[CH<sub>2</sub>NH]Phe-Phe-OH

**Mol. Formula :** C<sub>41</sub>H<sub>42</sub>F<sub>6</sub>N<sub>4</sub>O<sub>9</sub>

**FW :** 848.80

**Note :** Selective delta opioid receptor antagonist.

**Reference :** Schiller, PW; et al. *J Med Chem* 1993, 36, 3182-7.

**Catalog number :** MPSP-038

**Name :** TIPP-Enkephalin (TIPP)

**Sequence :** H-Tyr-Tic-Phe-Phe-OH

**Mol. Formula :** C<sub>37</sub>H<sub>38</sub>N<sub>4</sub>O<sub>6</sub>

**FW :** 634.8

**Note :** Highly potent and selective δ-opioid receptor antagonist

**Reference :** Schiller, PW; et al., *Proc Natl Acad Sci USA* 1992, 89, 11871-11875.  
Flippen-Anderson, JL; et al. *Lett Pept Sci* 1994, 1, 107.

**Catalog number :** MPSP-039

**Name :** [<sup>3</sup>H<sub>2</sub>]Tipp-Enkephalin

**Sequence :** H-Tyr[<sup>3</sup>H<sub>2</sub>]-Tic-Phe-Phe-OH

**Mol. Formula :** C<sub>37</sub>H<sub>36</sub>N<sub>4</sub>O<sub>6</sub><sub>3</sub>H<sub>2</sub>

**FW :** 638.8

**Note :** Radioactive ligand for MPSP-038

**Reference :** Nevin, ST; et al. *Life Sci* 1993, 53, PL57-62.

**Catalog number :** PEPT-031

**Name :** D-TIPP-NH<sub>2</sub> trifluoroacetate/acetate

**Sequence :** Tyr-D-Tic-Phe-Phe-NH<sub>2</sub>

**Mol. Formula :** C<sub>39</sub>H<sub>40.9</sub>F<sub>2.1</sub>N<sub>5</sub>O<sub>7</sub>

**FW :** 731.58

**Note :** Potent and highly selective μ receptor agonist.

**Reference :** Schiller, PW; et al. *Proc Natl Acad Sci USA* 1992, 89, 11871.  
Flippen-Anderson, JL; et al. *J Peptide Res* 1997, 49, 384.

### Peptides: Orexin Class

**Catalog number :** MPSP-115

**Name :** Orexin A (human, bovine, rat, mouse), Hypocretin-1

**Sequence :** pGlu-Pro-Leu-Pro-Asp-Cys-Cys-Arg-Gln-Lys-Thr-Cys-Ser-Cys-Arg-Leu-Tyr-Glu-Leu-His-Gly-Ala-Gly-Asn-His-Ala-Ala-Gly-Ile-Leu-Thr-Leu-NH<sub>2</sub> (Disulfide bridges Cys6-Cys12 and Cys7-Cys14)

**Mol. Formula :** C<sub>152</sub>H<sub>243</sub>N<sub>47</sub>O<sub>44</sub>S<sub>4</sub>

**FW :** 3561.2

**Note :** Hypothalamic neuropeptide that regulates feeding behavior.

**Reference :** M.W. Schwartz, *Nat. Med.* 4, 385 (1998); T. Sakurai et al., *Cell* 92, 573 (1998); M.R. Jain et al., *Regul. Peptides* 87, 19 (2000); E. Goncz et al., *Endocrinology* 149, 1618 (2008)

**Catalog number :** MPSP-116

**Name :** Orexin B (human), Hypocretin-2

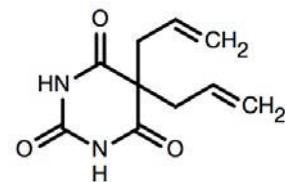
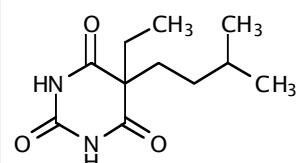
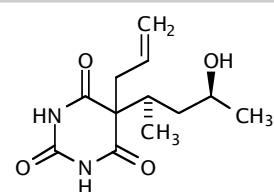
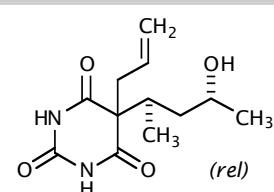
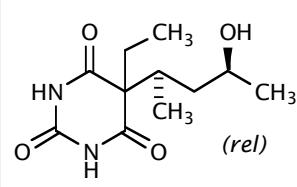
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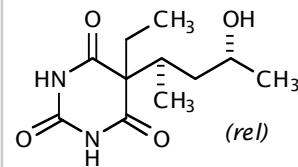
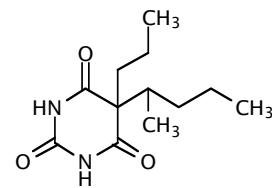
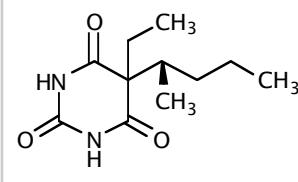
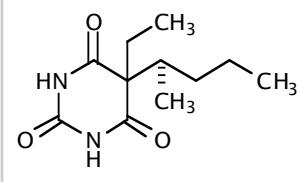
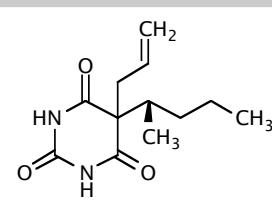
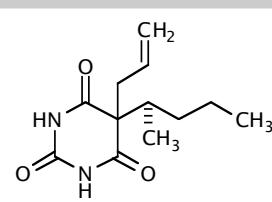
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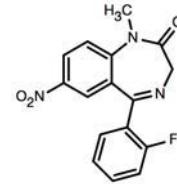
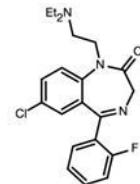
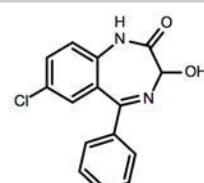
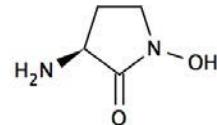
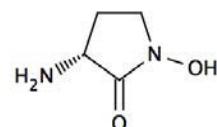
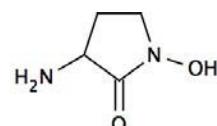
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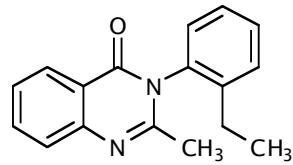
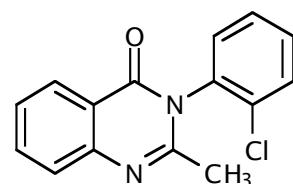
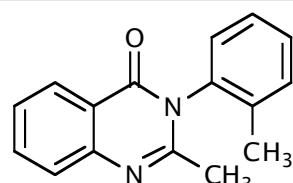
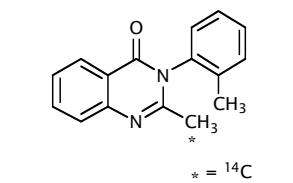
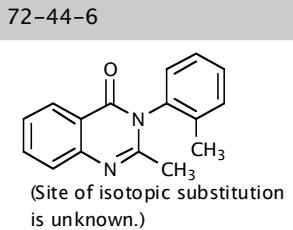
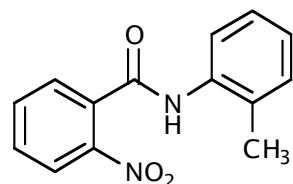
**Note :** Hypothalamic neuropeptide that regulates feeding behavior.

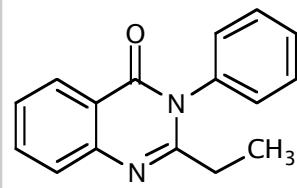
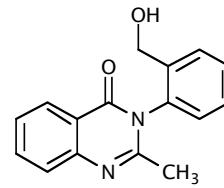
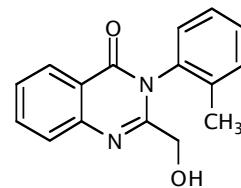
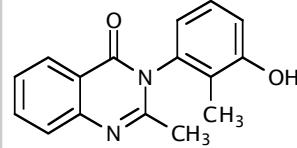
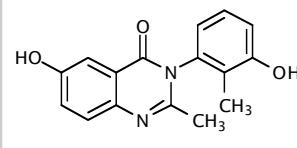
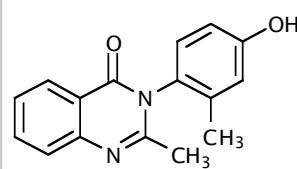
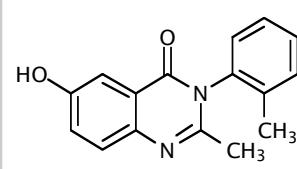
**Reference :** M.W. Schwartz, *Nat. Med.* 4, 385 (1998); T. Sakurai et al., *Cell* 92, 573 (1998); M.R. Jain et al., *Regul. Peptides* 87, 19 (2000)

**Sedatives & Hypnotics: Barbiturate Class****Catalog number :** 2100-001**CASRN :** 52-43-7**Name :** 5,5-Diallylbarbituric acid; Allobarbital**Mol. formula :** C<sub>10</sub>H<sub>12</sub>N<sub>2</sub>O<sub>3</sub>**FW :** 208.21    **DEA schedule :** 2**Notes :** Anti-convulsant**References :** Merck Index, 14th ed., Monograph 263.**Catalog number :** 2125-001**CASRN :** 57-43-2**Name :** (±)-Amobarbital**Mol. formula :** C<sub>11</sub>H<sub>18</sub>N<sub>2</sub>O<sub>3</sub>**FW :** 226.27    **DEA schedule :** 2**Notes :** Hypnotic; sedative (but not anti-anxiety)**References :** Merck Index, 14th ed., Monograph 570.**Catalog number :** 2315-010**Name :** (1'R,S,3'SR)-5-Allyl-5-(3'-hydroxy-1'-methylbutyl)barbituric acid**Mol. formula :** C<sub>12</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub>**FW :** 254.28    **DEA schedule :** 2**Notes :** Secobarbital metabolite**Catalog number :** 2315-011**Name :** (1'R,S,3'RS)-5-Allyl-5-(3'-hydroxy-1'-methylbutyl)barbituric acid**Mol. formula :** C<sub>12</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub>**FW :** 254.28    **DEA schedule :** 2**Notes :** Secobarbital metabolite**References :** Carroll, FI; Mitchell, GN J Med Chem 1975, 18, 37-41.**Catalog number :** 2270-010**Name :** (1'RS,3'SR)-5-Ethyl-5-(3'-hydroxy-1'-methylbutyl)barbituric acid**Mol. formula :** C<sub>11</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub>**FW :** 242.27    **DEA schedule :** 2**Notes :** Pentobarbital metabolite**References :** Carroll, FI; Mitchell, GN J Med Chem 1975, 18, 37-41.

**Catalog number :** 2270-011**Name :** (1'*RS*,3'*RS*)-5-Ethyl-5-(3'-hydroxy-1'-methylbutyl)barbituric acid**Mol. formula :** C<sub>11</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub>**FW :** 242.27    **DEA schedule :** 2**Notes :** Pentobarbital metabolite**References :** Carroll, FI; Mitchell, GN *J Med Chem* 1975, 18, 37–41.**Catalog number :** 2100-010**Name :** (±)-5-Propyl-5-(1'-methylbutyl)barbituric acid**Mol. formula :** C<sub>12</sub>H<sub>20</sub>N<sub>2</sub>O<sub>3</sub>**FW :** 240.30    **DEA schedule :** 2**Notes :** Sedative**Catalog number :** 2100-006**CASRN :** 56-29-1**Name :** (±)-Hexobarbital**Mol. formula :** C<sub>12</sub>H<sub>16</sub>N<sub>2</sub>O<sub>3</sub>**FW :** 236.26    **DEA schedule :** 2**Notes :** Hypnotic; sedative; GABA moderator**References :** Merck Index, 14th ed., Monograph 4704.**Catalog number :** 2270-002**CASRN :** 21642-82-0**Name :** (–)-(S)-Pentobarbital**Mol. formula :** C<sub>11</sub>H<sub>18</sub>N<sub>2</sub>O<sub>3</sub>**FW :** 226.27    **DEA schedule :** 2**Notes :** Hypnotic; sedative (but not anti-anxiety)**Catalog number :** 2270-003**CASRN :** 21642-83-1**Name :** (+)-(R)-Pentobarbital**Mol. formula :** C<sub>11</sub>H<sub>18</sub>N<sub>2</sub>O<sub>3</sub>**FW :** 226.27    **DEA schedule :** 2**Notes :** Hypnotic; sedative (but not anti-anxiety)**References :** Merck Index, 14th ed., Monograph 7130.**Catalog number :** 2315-001**CASRN :** 20224-45-7**Name :** (–)-(S)-Secobarbital**Mol. formula :** C<sub>12</sub>H<sub>18</sub>N<sub>2</sub>O<sub>3</sub>**FW :** 238.27    **DEA schedule :** 2**Notes :** Sedative (but not anti-anxiety)**Catalog number :** 2315-002**CASRN :** 22328-94-5**Name :** (+)-(R)-Secobarbital**Mol. formula :** C<sub>12</sub>H<sub>18</sub>N<sub>2</sub>O<sub>3</sub>**FW :** 238.27    **DEA schedule :** 2**Notes :** Hypnotic; sedative (but not anti-anxiety)**References :** Merck Index, 14th ed., Monograph 8420.  
Carroll, FI; Mitchell, GN *J Med Chem* 1975, 18, 37–41.

**Sedatives & Hypnotics: Benzodiazepine Class****Catalog number :** 2763-001**CASRN :** 1622-62-4**Name :** Flunitrazepam; Rohypnol**Mol. formula :** C<sub>16</sub>H<sub>12</sub>FN<sub>3</sub>O<sub>2</sub>**FW :** 313.28**DEA schedule :** 4**Notes :** Hypnotic.**References :** Mattila, MA; Larni, HM *Drugs* **1980**, *20*, 353-74.**Catalog number :** 2767-001**CASRN :** 1172-18-5**Name :** Flurazepam dihydrochloride**Mol. formula :** C<sub>21</sub>H<sub>23</sub>ClFN<sub>3</sub>O**FW :** 460.80**DEA schedule :** 4**References :** Merck Index, 14th ed., Monograph 4198.**Catalog number :** 2835-001**CASRN :** 604-75-1**Name :** (±)-Oxazepam**Mol. formula :** C<sub>15</sub>H<sub>11</sub>ClN<sub>2</sub>O<sub>2</sub>**FW :** 286.71**DEA schedule :** 4**Notes :** Anti-anxiety, anti-insomnia**References :** Merck Index, 14th ed., Monograph 6926.**Sedatives & Hypnotics: Butyrolactam Class****Catalog number :** NOCD-071**Name :** (–)(S)-3-Amino-1-hydroxypyrrolidin-2-one; (–)(S)-HA-966**Mol. formula :** C<sub>4</sub>H<sub>8</sub>N<sub>2</sub>O<sub>2</sub>**FW :** 116.12**DEA schedule :** 0**Notes :** Potent γ-butyrolactone-like sedative**References :** Singh, L; et al. *Proc Natl Acad Sci USA* **1990**, *87*, 347-51.**Catalog number :** NOCD-072**Name :** (+)-(R)-3-Amino-1-hydroxypyrrolidin-2-one; (+)-(R)-HA-966**Mol. formula :** C<sub>4</sub>H<sub>8</sub>N<sub>2</sub>O<sub>2</sub>**FW :** 116.12**DEA schedule :** 0**Notes :** Glycine/NMDA receptor antagonist**References :** Singh, L; et al. *Proc Natl Acad Sci USA* **1990**, *87*, 347-51.**Catalog number :** NOCD-070**CASRN :** 1003-51-6**Name :** (±)-3-Amino-1-hydroxypyrrolidin-2-one; (±)-HA-966**Mol. formula :** C<sub>4</sub>H<sub>8</sub>N<sub>2</sub>O<sub>2</sub>**FW :** 116.12**DEA schedule :** 0**Notes :** Glycine/NMDA receptor antagonist**References :** Leeson, PD; Iversen, LL *J Med Chem* **1994**, *37*, 4053-4067.

**Sedatives & Hypnotics: Methaqualone Class****Catalog number :** 2565-021**CASRN :** 7432-25-9**Name :** Etaqualone hydrochloride**Mol. formula :** C<sub>17</sub>H<sub>17</sub>ClN<sub>2</sub>O**FW :** 300.79**DEA schedule :** 0**Notes :** CNS depressant; sedative; hypnotic**References :** Merck Index, 14th ed., Monograph 3714.**Catalog number :** 2572-001**CASRN :** 340-57-8**Name :** Mecloqualone**Mol. formula :** C<sub>15</sub>H<sub>11</sub>ClN<sub>2</sub>O**FW :** 270.74**DEA schedule :** 1**Notes :** CNS depressant; sedative; hypnotic**References :** Merck Index, 14th ed., Monograph 5781.**Catalog number :** 2565-003**CASRN :** 72-44-6**Name :** Methaqualone**Mol. formula :** C<sub>16</sub>H<sub>14</sub>N<sub>2</sub>O**FW :** 250.30**DEA schedule :** 1**Notes :** CNS depressant; sedative; hypnotic**References :** Merck Index, 14th ed., Monograph 5960.**Catalog number :** 2565-002**CASRN :** 72-44-6**Name :** [2-<sup>14</sup>C]Methaqualone**Mol. formula :** C<sub>16</sub>H<sub>14</sub>N<sub>2</sub>O**FW :** 251.30**DEA schedule :** 1**Notes :** Sedative; hypnotic (carbon-labeled).**Catalog number :** 2565-001**CASRN :** 72-44-6**Name :** [<sup>2</sup>H<sub>4</sub>]Methaqualone**Mol. formula :** C<sub>16</sub>H<sub>14</sub>N<sub>2</sub>O**FW :** 254.32**DEA schedule :** 1**Catalog number :** 2565-012**CASRN :** 2385-25-3**Name :** 2-Nitro-*o*-benzotoluidide**Mol. formula :** C<sub>14</sub>H<sub>12</sub>N<sub>2</sub>O<sub>3</sub>**FW :** 256.26**DEA schedule :** 0**Notes :** Methaqualone urinary metabolite**References :** Murata, T; Yamamoto, I *Chem Pharm Bull (Tokyo)* 1970, 18, 133-7.

**Catalog number :** 2565-020**CASRN :** 5260-41-3**Name :** 2-Ethyl-3-phenyl-4(3H)-quinazolinone**Mol. formula :** C<sub>16</sub>H<sub>14</sub>N<sub>2</sub>O**FW :** 250.30    **DEA schedule :** 0**References :** Brine, GA; Coleman, ML; Carroll, FI *J Heterocyclic Chem* 1979, 16, 25.**Catalog number :** 2565-015**CASRN :** 5060-50-4**Name :** 2'-Hydroxymethaqualone**Mol. formula :** C<sub>16</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub>**FW :** 266.30    **DEA schedule :** 0**References :** Brine, GA; Coleman, ML; Carroll, FI *J Heterocyclic Chem* 1979, 16, 25.**Catalog number :** 2565-019**CASRN :** 5060-49-1**Name :** 2-Hydroxymethaqualone**Mol. formula :** C<sub>16</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub>**FW :** 266.30    **DEA schedule :** 0**References :** Brine, GA; Coleman, ML; Carroll, FI *J Heterocyclic Chem* 1979, 16, 25.**Catalog number :** 2565-014**CASRN :** 5060-63-9**Name :** 3'-Hydroxymethaqualone**Mol. formula :** C<sub>16</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub>**FW :** 266.30    **DEA schedule :** 0**References :** Brine, GA; Coleman, ML; Carroll, FI *J Heterocyclic Chem* 1979, 16, 25.**Catalog number :** 2565-017**CASRN :** 29541-82-0**Name :** 6, 3'-Dihydroxymethaqualone**Mol. formula :** C<sub>10</sub>H<sub>14</sub>N<sub>2</sub>O<sub>3</sub>**FW :** 282.29    **DEA schedule :** 0**References :** Brine, GA; Coleman, ML; Carroll, FI *J Heterocyclic Chem* 1979, 16, 25.**Catalog number :** 2565-013**CASRN :** 5060-52-6**Name :** 4'-Hydroxymethaqualone**Mol. formula :** C<sub>16</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub>**FW :** 266.30    **DEA schedule :** 0**References :** Brine, GA; Coleman, ML; Carroll, FI *J Heterocyclic Chem* 1979, 16, 25.**Catalog number :** 2565-016**CASRN :** 5060-51-5**Name :** 6-Hydroxymethaqualone**Mol. formula :** C<sub>16</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub>**FW :** 266.30    **DEA schedule :** 0**References :** Brine, GA; Coleman, ML; Carroll, FI *J Heterocyclic Chem* 1979, 16, 25.

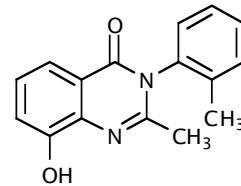
Catalog number : 2565-018

CASRN : 5060-53-7

Name : 8-Hydroxymethaqualone

Mol. formula : C<sub>16</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub>

FW : 266.30    DEA schedule : 0

References : Brine, GA; Coleman, ML; Carroll, FI *J Heterocyclic Chem* 1979, 16, 25.**Sedatives & Hypnotics: Miscellaneous**

Catalog number : 2010-001

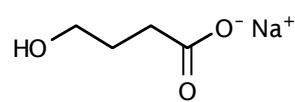
CASRN : 502-85-2

Name : γ-Hydroxybutyric acid, sodium salt; GHB

Mol. formula : C<sub>4</sub>H<sub>8</sub>O<sub>3</sub>Na

FW : 126.09    DEA schedule : 1

Notes : CNS depressant; analgesic

References : *Merck Index*, 14th ed., Monograph 4815.

Catalog number : 2605-001

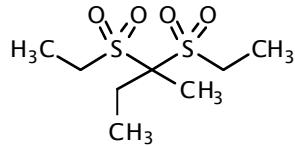
CASRN : 76-20-0

Name : Sulfonethylmethane; Ethylsulfonal

Mol. formula : C<sub>8</sub>H<sub>18</sub>O<sub>4</sub>S<sub>4</sub>

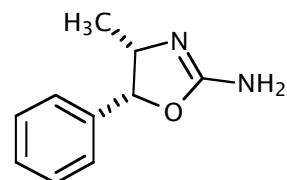
FW : 242.36    DEA schedule : 3

Notes : Hypnotic

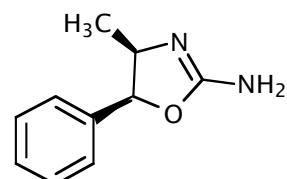
References : *Merck Index*, 14th ed., Monograph 8958.

**Stimulants: Aminorex Class****Catalog number :** 1590-005**CASRN :** 133633-24-6

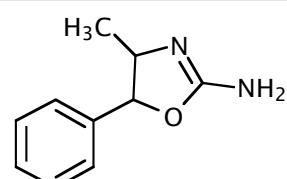
**Name :**  $(-)$ -*cis*-(4*S*,5*R*)-2-Amino-4-methyl-5-phenyl-2-oxazoline hydrochloride;  $(-)$ -*cis*-4-Methylaminorex HCl

**Mol. formula :** C<sub>10</sub>H<sub>13</sub>ClN<sub>2</sub>O**FW :** 212.68**DEA schedule :** 1**Notes :** CNS stimulant**References :** Merck Index, 14th ed., Monograph 6018.**Catalog number :** 1590-006**CASRN :** 933777-34-5

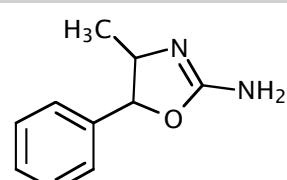
**Name :**  $(+)$ -*cis*-(4*R*,5*S*)-2-Amino-4-methyl-5-phenyl-2-oxazoline hydrochloride;  $(+)$ -*cis*-4-Methylaminorex HCl

**Mol. formula :** C<sub>10</sub>H<sub>13</sub>ClN<sub>2</sub>O**FW :** 212.68**DEA schedule :** 1**Notes :** CNS stimulant**References :** Merck Index, 14th ed., Monograph 6018.**Catalog number :** 1590-001**CASRN :** 3568-94-3

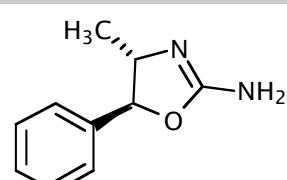
**Name :**  $(\pm)$ -*cis*-(4*R*,5*S*)-2-Amino-4-methyl-5-phenyl-2-oxazoline;  $(\pm)$ -*cis*-4-Methylaminorex

**Mol. formula :** C<sub>10</sub>H<sub>12</sub>N<sub>2</sub>O**FW :** 176.22**DEA schedule :** 1**Notes :** CNS stimulant**References :** Merck Index, 14th ed., Monograph 6018.**Catalog number :** 1590-002**CASRN :** 3568-94-3

**Name :**  $(\pm)$ -*cis*-(4*R*,5*S*)-2-Amino-4-methyl-5-phenyl-2-oxazoline hydrochloride;  $(\pm)$ -*cis*-4-Methylaminorex HCl

**Mol. formula :** C<sub>10</sub>H<sub>13</sub>ClN<sub>2</sub>O**FW :** 212.68**DEA schedule :** 1**Notes :** CNS stimulant**References :** Merck Index, 14th ed., Monograph 6018.**Catalog number :** 1590-003**CASRN :** 933777-34-5

**Name :**  $(-)$ -*trans*-(4*S*,5*S*)-2-Amino-4-methyl-5-phenyl-2-oxazoline hydrochloride;  $(-)$ -*trans*-4-Methylaminorex HCl

**Mol. formula :** C<sub>10</sub>H<sub>13</sub>ClN<sub>2</sub>O**FW :** 212.68**DEA schedule :** 1**Notes :** CNS stimulant**References :** Merck Index, 14th ed., Monograph 6018.

Catalog number : 1590-004

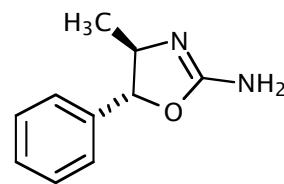
CASRN : 933777-37-8

Name : (+)-*trans*-(4*R*,5*R*)-2-Amino-4-methyl-5-phenyl-2-oxazoline hydrochloride; (+)-*trans*-4-Methylaminorex HCl

Mol. formula : C<sub>10</sub>H<sub>13</sub>ClN<sub>2</sub>O

FW : 212.68 DEA schedule : 1

Notes : CNS stimulant

References : *Merck Index*, 14th ed., Monograph 6018.

Catalog number : 1590-007

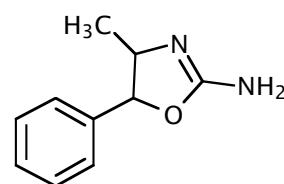
CASRN : 2077-59-0

Name : ( $\pm$ )-*trans*-(4*RS*,5*RS*)-2-Amino-4-methyl-5-phenyl-2-oxazoline hydrochloride; ( $\pm$ )-*trans*-4-Methylaminorex HCl

Mol. formula : C<sub>10</sub>H<sub>13</sub>ClN<sub>2</sub>O

FW : 212.68 DEA schedule : 1

Notes : CNS stimulant

References : *Merck Index*, 14th ed., Monograph 6018.**Stimulants: Amphetamine Class**

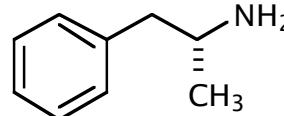
Catalog number : 1100-003

CASRN : 51-62-7

Name : (-)-Amphetamine sulfate; Levamphetamine

Mol. formula : C<sub>18</sub>H<sub>28</sub>N<sub>2</sub>O<sub>4</sub>S

FW : 368.50 DEA schedule : 2

References : *Merck Index*, 14th ed., Monograph 582.

Catalog number : 1100-006

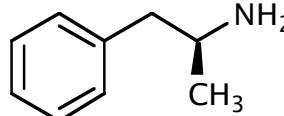
CASRN : 60-13-9

Name : (+)-Amphetamine sulfate; Dextroamphetamine sulfate

Mol. formula : C<sub>18</sub>H<sub>28</sub>N<sub>2</sub>O<sub>4</sub>S

FW : 368.50 DEA schedule : 2

Notes : CNS stimulant; sympathomimetic; anorexic

References : *Merck Index*, 14th ed., Monograph 2954.

Catalog number : 1100-007

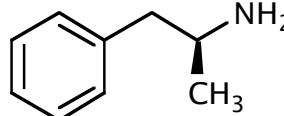
CASRN : 1462-73-3

Name : (+)-Amphetamine hydrochloride; Dextroamphetamine hydrochloride

Mol. formula : C<sub>9</sub>H<sub>14</sub>ClN

FW : 171.70 DEA schedule : 2

Notes : CNS stimulant

References : *Merck Index*, 14th ed., Monograph 2954.

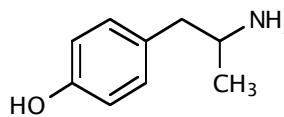
Catalog number : 1100-010

CASRN : 306-21-8

Name : ( $\pm$ )-4-Hydroxyamphetamine hydrobromideMol. formula : C<sub>9</sub>H<sub>14</sub>BrNO

FW : 232.12 DEA schedule : 2

Notes : CNS stimulant; sympathomimetic; mydriatic

References : *Merck Index*, 14th ed., Monograph 4810.

Catalog number : 1100-011

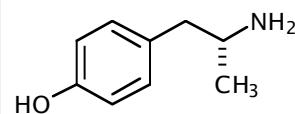
CASRN : 41509-97-1

Name : (-)-4-Hydroxyamphetamine hydrobromide

Mol. formula : C<sub>9</sub>H<sub>14</sub>BrNO

FW : 232.12    DEA schedule : 2

Notes : CNS stimulant; sympathomimetic; mydriatic

References : *Merck Index*, 14th ed., Monograph 4810.

Catalog number : 1100-012

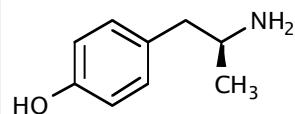
CASRN : 1693-66-9

Name : (+)-4-Hydroxyamphetamine hydrobromide

Mol. formula : C<sub>9</sub>H<sub>14</sub>BrNO

FW : 232.12    DEA schedule : 2

Notes : CNS stimulant; sympathomimetic; mydriatic

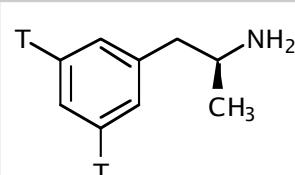
References : *Merck Index*, 14th ed., Monograph 4810.

Catalog number : 1100-009

Name : (+)-(S)-[3,5-<sup>3</sup>H(n)]AmphetamineMol. formula : C<sub>9</sub>H<sub>13</sub>N

FW : 139.22    DEA schedule : 2

Notes : CNS stimulant (tritium-labeled).

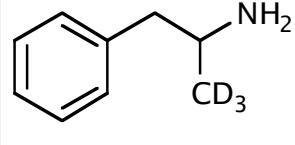


Catalog number : 1100-004

CASRN : 38875-35-3

Name : (±)-[1,1,1-<sup>2</sup>H<sub>3</sub>]Amphetamine sulfateMol. formula : C<sub>9</sub>H<sub>13</sub>N

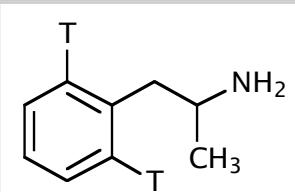
FW : 374.53    DEA schedule : 2

References : Cho, AK; et al., *Anal Chem* 1973, 45, 570-4.  
Valtier, S; Cody, JT *J Anal Toxicol* 1995, 19, 375-80.

Catalog number : 1100-005

Name : (±)-[2',6'-<sup>3</sup>H<sub>2</sub>]Amphetamine; 2,6-TritoamphetamineMol. formula : C<sub>9</sub>H<sub>13</sub>N

FW : 135.21    DEA schedule : 2



Catalog number : 1645-001

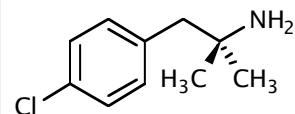
CASRN : 461-78-9

Name : Chlorphentermine; 4-Chloro-α,α-dimethyl-β-phenethylamine

Mol. formula : C<sub>10</sub>H<sub>14</sub>ClN

FW : 183.68    DEA schedule : 3

Notes : Anorectic

References : *Merck Index*, 14th ed., Monograph 2182.

Catalog number : 1503-001

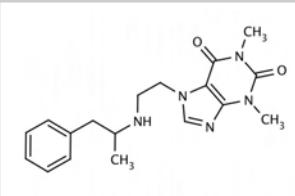
CASRN : 1892-80-4

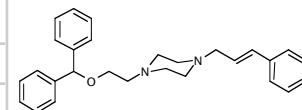
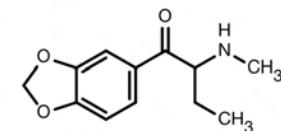
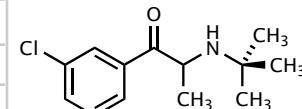
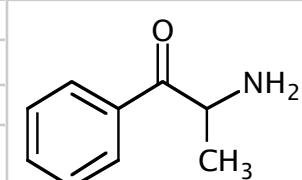
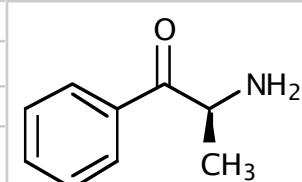
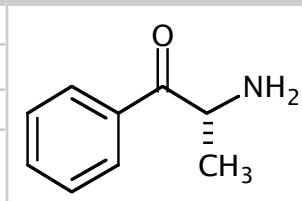
Name : Fenethylline hydrochloride; Captagon HCl

Mol. formula : C<sub>18</sub>H<sub>24</sub>N<sub>5</sub>O<sub>2</sub>Cl

FW : 341.419    DEA schedule : 2

Notes : CNS stimulant

References : *Merck Index*, 14th ed., Monograph 3972.

**Stimulants: Benzhydrol Class****Catalog number :** NOCD-040**CASRN :** 67469-57-2**Name :** GBR 12783**Mol. formula :** C<sub>28</sub>H<sub>34</sub>Cl<sub>2</sub>N<sub>2</sub>O**FW :** 485.48    **DEA schedule :** 0**Notes :** Dopamine uptake inhibitor.**References :** Bonnet, JJ; Costentin JEur J Pharmacol 1986, 121, 199–209.  
Chagraoui, A; et al. Neurosci Lett 1987, 78, 175–9.**Stimulants: Cathinone Class****Catalog number :** 7541-001**new****CASRN :** 802575-11-7**Name :** Butylone; bk-MBDB**Mol. formula :** C<sub>12</sub>H<sub>15</sub>NO<sub>3</sub>**FW :** 221.26    **DEA schedule :** 1**References :** Gatch, MB; Taylor CM; Forster MJ, *Behav Pharmacol* 2013, 24, 437–47.**Catalog number :** 1610-002**CASRN :** 31677-93-7**Name :** (±)-Bupropion hydrochloride**Mol. formula :** C<sub>13</sub>H<sub>19</sub>Cl<sub>2</sub>NO**FW :** 276.21    **DEA schedule :** 0**References :** Martin, P; Massol, J; Colin, JN; Lacomblez, L; Puech, AJ, *Pharmacopsychiatry* 1990, 23, 87–94.**Catalog number :** 1235-010**CASRN :** 76333-53-4**Name :** (±)-Cathinone hydrochloride**Mol. formula :** C<sub>9</sub>H<sub>12</sub>CINO**FW :** 185.66    **DEA schedule :** 1**Notes :** CNS stimulant; psychotropic drug**References :** Kalix, P *Pharmacol Toxicol* 1992, 70, 77–86.  
*Merck Index*, 14th ed., Monograph 1906.**Catalog number :** 1235-011**CASRN :** 71031-15-7**Name :** (−)-(S)-Cathinone hydrochloride**Mol. formula :** C<sub>9</sub>H<sub>12</sub>CINO**FW :** 185.66    **DEA schedule :** 1**Notes :** CNS stimulant; psychotropic drug**References :** *Merck Index*, 14th ed., Monograph 1906.**Catalog number :** 1235-012**CASRN :** 80096-54-4**Name :** (+)-(R)-Cathinone hydrochloride**Mol. formula :** C<sub>9</sub>H<sub>12</sub>CINO**FW :** 185.66    **DEA schedule :** 1**Notes :** CNS stimulant; psychotropic drug

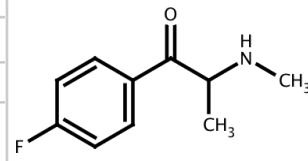
Catalog number : 1237-003

CASRN : 7589-35-7

Name : 4-Fluoromethcathinone; 4-FMC; Flephedrone

Mol. formula : C<sub>10</sub>H<sub>12</sub>FNO

FW : 181.21    DEA schedule : 1

References : Archer RP, *Forensic Sci Int*, 2009, 185(1-3), 10-20.

Catalog number : 7535-001

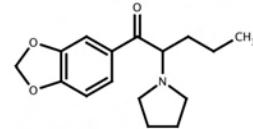
CASRN : 24622-62-6

Name : (±)-Methylenedioxypyrovalerone HCl; MDPV HCl

Mol. formula : C<sub>16</sub>H<sub>22</sub>CINO<sub>3</sub>

FW : 311.81    DEA schedule : 1

Notes : Stimulant; norepinephrine/dopamine reuptake inhibitor.

References : Coppola, M; Mondola R, *Toxicol Lett* 2012, 208, 12-5.

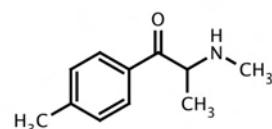
Catalog number : 1248-001

CASRN : 1189726-22-4

Name : (±)-Mephedrone hydrochloride

Mol. formula : C<sub>11</sub>H<sub>16</sub>CINO

FW : 213.70    DEA schedule : 0

References : Wood, DM; et al., *J Med Toxicol* 2010, 10.1007/s13181-010-0018-5.

Catalog number : 1237-001

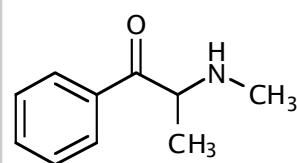
CASRN : 5650-44-2

Name : (±)-N-Methcathinone hydrochloride

Mol. formula : C<sub>10</sub>H<sub>14</sub>CINO

FW : 199.67    DEA schedule : 1

Notes : CNS stimulant; psychotropic drug



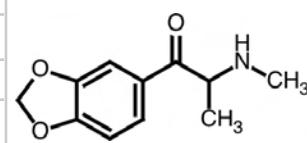
Catalog number : 7540-001

CASRN : 186028-79-5

Name : Methylone HCl

Mol. formula : C<sub>11</sub>H<sub>13</sub>NO<sub>3</sub>

FW : 207.23    DEA schedule : 1

References : Cozzi NV, *Neuropsychopharmacology*, 2012, 37(5), 1192-1203.  
Niesink RJ, *Addict Biol*, 2005, 10(4), 321-323.

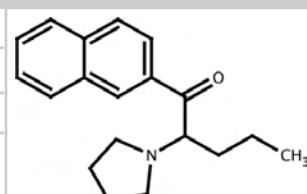
Catalog number : NOCD-126

CASRN : 850352-11-3

Name : Naphyrone; Naphthylpyrovalerone

Mol. formula : C<sub>19</sub>H<sub>23</sub>NO

FW : 281.39    DEA schedule : 1

References : Meltzer PC, Butler D, Deschamps JR, Madras BK, *J Med Chem*, 2006, 49(4), 1420-1432.

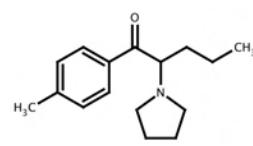
Catalog number : 1485-001

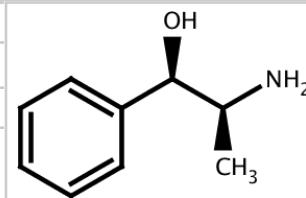
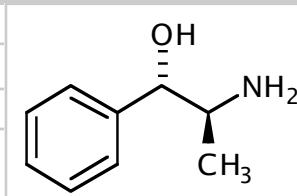
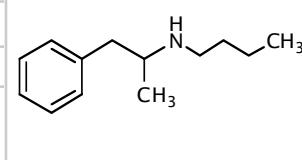
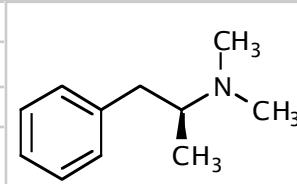
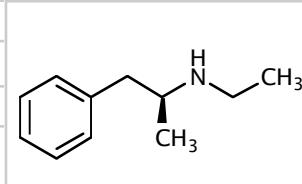
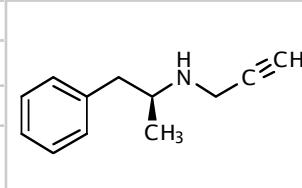
CASRN : 1147-62-2

Name : (±)-Pyrovalerone HCl

Mol. formula : C<sub>16</sub>H<sub>24</sub>CINO

FW : 281.82    DEA schedule : 5

References : Stille, G; et al., *Arzneimittelforschung* 1963, 13, 871-7. Michaelis, W; Russel JH; Schindler O, *J Med Chem* 1970, 13, 497-503.

**Stimulants: Ephedrine Class****Catalog number :** 1230-016**CASRN :** 53643-20-2**Name :** (–)-Norephedrine hydrochloride**Mol. formula :** C<sub>9</sub>H<sub>14</sub>CINO**FW :** 187.68**DEA schedule :** 4**Notes :** Nasal decongestant; appetite suppressant**References :** Merck Index, 14th ed., Monograph 7307.**Catalog number :** 1230-017**CASRN :** 36393-56-3**Name :** (+)-Norpseudephedrine hydrochloride**Mol. formula :** C<sub>9</sub>H<sub>14</sub>CINO**FW :** 187.68**DEA schedule :** 4**Notes :** Nasal decongestant; appetite suppressant**References :** Merck Index, 14th ed., Monograph 6714.**Stimulants: Methamphetamine Class****Catalog number :** 1100-008**CASRN :** 51799-33-8**Name :** (±)-N-(n-Butyl)amphetamine hydrochloride**Mol. formula :** C<sub>13</sub>H<sub>22</sub>CIN**FW :** 227.78**DEA schedule :** 2**Notes :** CNS stimulant**References :** Woolverton WL; Shybut, G; Johanson, CE *Pharmacol Biochem Behav* 1980, 13, 869–76.**Catalog number :** 1480-001**CASRN :** 17279-39-9**Name :** (+)-N,N-Dimethylamphetamine hydrochloride**Mol. formula :** C<sub>11</sub>H<sub>18</sub>CIN**FW :** 199.72**DEA schedule :** 1**Notes :** CNS stimulant**References :** Ricaurte, GA; et al. *Brain Res* 1989, 490, 301–6.  
Katz, JL; et al. *Psychopharmacology (Berl)* 1992, 107, 315–8.**Catalog number :** 1475-001**CASRN :** 33817-11-7**Name :** (+)-N-Ethylamphetamine hydrochloride**Mol. formula :** C<sub>11</sub>H<sub>18</sub>CIN**FW :** 199.71**DEA schedule :** 1**Notes :** CNS stimulant**References :** Merck Index, 14th ed., Monograph 3763.**Catalog number :** MEDD-007**Name :** (–)-(S)-Desmethylselegiline hydrochloride**Mol. formula :** C<sub>12</sub>H<sub>16</sub>CIN**FW :** 209.72**DEA schedule :** 0**References :** Mytilineou C; Radcliffe PM; Olanow CW *J Neurochem* 1997, 68, 434–6.

Catalog number : 1105-001

CASRN : 51-57-0

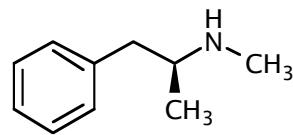
Name : (+)-(S)-Methamphetamine hydrochloride

Mol. formula : C<sub>10</sub>H<sub>16</sub>CIN

FW : 185.70 DEA schedule : 2

Notes : CNS stimulant; sympathomimetic; anorexic

References : Merck Index, 14th ed., Monograph 5948.



Catalog number : 1105-003

CASRN : 537-46-2

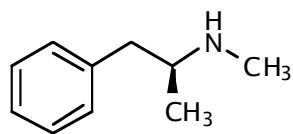
Name : (+)-Methamphetamine base

Mol. formula : C<sub>10</sub>H<sub>15</sub>N

FW : 149.24 DEA schedule : 2

Notes : CNS stimulant

References : Merck Index, 14th ed., Monograph 5948.



Catalog number : 1105-005

CASRN : 300-42-5

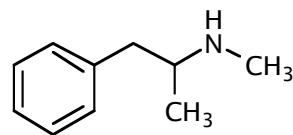
Name : (±)-Methamphetamine hydrochloride

Mol. formula : C<sub>10</sub>H<sub>16</sub>CIN

FW : 185.69 DEA schedule : 2

Notes : CNS stimulant

References : Merck Index, 14th ed., Monograph 5948.



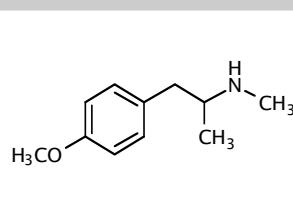
Catalog number : 1105-014

CASRN : 22331-70-0

Name : (±)-4-Methoxymethamphetamine hydrochloride; PMMA

Mol. formula : C<sub>11</sub>H<sub>18</sub>CINO

FW : 215.75 DEA schedule : 0

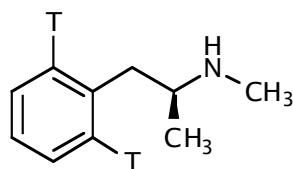
References : Glennon, RA; Ismaiel, AE; Martin, B; Poff, D; Sutton, M *Pharmacol Biochem Behav* 1988, 31, 9-13.

Catalog number : 1105-004

Name : (+)-[2',6'-<sup>3</sup>H(n)]Methamphetamine hydrochlorideMol. formula : C<sub>10</sub>H<sub>16</sub>CIN

FW : 185.69 DEA schedule : 2

Notes : CNS stimulant (tritium-labeled).

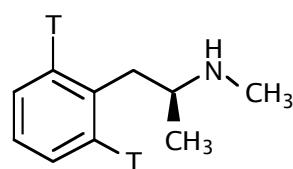


Catalog number : 1105-008

Name : (+)-[2,6-<sup>3</sup>H(n)]MethamphetamineMol. formula : C<sub>10</sub>H<sub>15</sub>N

FW : 153.25 DEA schedule : 2

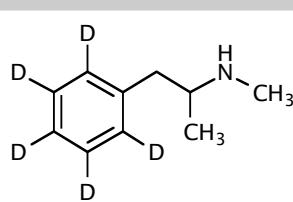
Notes : CNS stimulant (tritium-labeled).



Catalog number : 1105-002

Name : (±)-[2',3',4',5',6'-<sup>2</sup>H<sub>5</sub>]Methamphetamine hydrochlorideMol. formula : C<sub>10</sub>H<sub>16</sub>CIN

FW : 190.72 DEA schedule : 2



## 9 – Stimulants

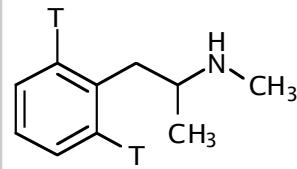
**Catalog number :** 1105-006

**Name :**  $(\pm)$ -[2',6'- $^3$ H(n)]Methamphetamine hydrochloride

**Mol. formula :** C<sub>10</sub>H<sub>16</sub>ClN

**FW :** 189.71    **DEA schedule :** 2

**Notes :** CNS stimulant (tritium-labeled).



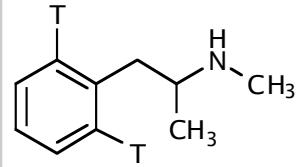
**Catalog number :** 1105-007

**Name :**  $(\pm)$ -[2,6- $^3$ H(n)]Methamphetamine

**Mol. formula :** C<sub>10</sub>H<sub>15</sub>N

**FW :** 153.25    **DEA schedule :** 2

**Notes :** CNS stimulant (tritium-labeled).

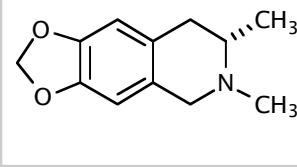


**Catalog number :** NOCD-074

**Name :** (3*S*)-(+)–2,3-Dimethyl-6,7-methylenedioxytetrahydroisoquinoline hydrochloride

**Mol. formula :** C<sub>12</sub>H<sub>16</sub>ClNO<sub>2</sub>

**FW :** 241.72    **DEA schedule :** 0



### Stimulants: Methylphenidate Class

**Catalog number :** 1724-001

**CASRN :** 298-59-9

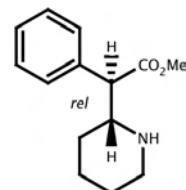
**Name :**  $(\pm)$ -*threo*-Methylphenidate hydrochloride; Ritalin

**Mol. formula :** C<sub>14</sub>H<sub>20</sub>ClNO<sub>2</sub>

**FW :** 269.77    **DEA schedule :** 2

**Notes :** Mild CNS stimulant

**References :** Merck Index, 14th ed., Monograph 6110.



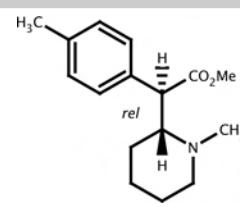
**Catalog number :** MEDD-014

**CASRN :** 204981-87-3

**Name :**  $(\pm)$ -N-Methyl-*threo*-*p*-methylmethylphenidate hydrochloride

**Mol. formula :** C<sub>16</sub>H<sub>24</sub>ClNO<sub>2</sub>

**FW :** 297.83    **DEA schedule :** 0



### Stimulants: Miscellaneous

**Catalog number :** NOCD-076

**CASRN :** 34262-84-5

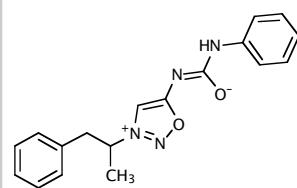
**Name :** Mesocarb; Sydnocarb

**Mol. formula :** C<sub>18</sub>H<sub>18</sub>N<sub>4</sub>O<sub>2</sub>

**FW :** 322.14    **DEA schedule :** 3

**Notes :** Stimulant; dopamine reuptake inhibitor

**References :** Bashkatova V; et al. Ann N Y Acad Sci 2002, 965, 180–92.



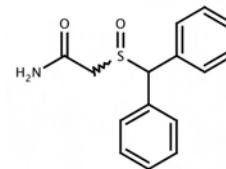
Catalog number : 1680-001

CASRN : 112111-43-0

Name : (±)-Modafinil

Mol. formula : C<sub>15</sub>H<sub>15</sub>NO<sub>2</sub>S

FW : 273.35    DEA schedule : 4

References : Minzenberg, M; Carter, C *Neuropsychopharmacology* 2007, 33, 1477–1502.**Stimulants: Piperazine Class**

Catalog number : 7493-001

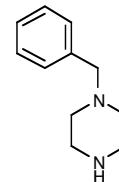
CASRN : 2759-28-6

Name : 1-Benzylpiperazine difumarate; BZP

Mol. formula : C<sub>19</sub>H<sub>24</sub>N<sub>2</sub>O<sub>8</sub>

FW : 408.41    DEA schedule : 1

Notes : Psychomotor stimulant; serotonin (5-HT1) agonist.

References : Lyon, RA; et al. *J Med Chem* 1986, 29, 630–4.  
Staack, RF *Lancet* 2007, 369, 1411–3.  
Lecompte, Y; Roussel O; Perrin M *Ann Pharm Fr* 2008, 66, 85–91.

Catalog number : 7494-001

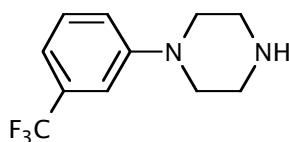
CASRN : 16015-69-3

Name : 1-(3-Trifluoromethylphenyl)piperazine hydrochloride; TFMPP

Mol. formula : C<sub>11</sub>H<sub>14</sub>ClF<sub>3</sub>N<sub>2</sub>

FW : 266.69    DEA schedule : 1

Notes : Psychomotor stimulant; serotonin (5-HT1) agonist.

References : Glennon, RA; McKenney JD; Young R *Life Sci* 1984, 35, 1475–80.  
Lecompte, Y; Roussel O; Perrin M *Ann Pharm Fr* 2008, 66, 85–91.**Stimulants: Tropane Class**

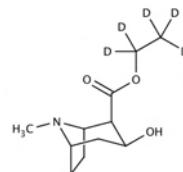
Catalog number : 9180-021

new

CASRN : 259526-73-3

Name : Ecgonine (1,1,2,2,2-<sup>2</sup>H<sub>5</sub>)ethyl ester perchlorateMol. formula : C<sub>11</sub>H<sub>14</sub>D<sub>5</sub>NO<sub>3</sub> • HClO<sub>4</sub>

FW : 318.76    DEA schedule : 2

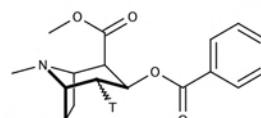


Catalog number : 9041-004

CASRN : 85438-94-4

Name : (–)-[4-<sup>3</sup>H]CocaineMol. formula : C<sub>17</sub>H<sub>21</sub>NO<sub>4</sub>

FW : 303.35    DEA schedule : 2

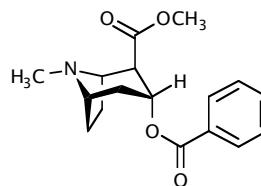


Catalog number : 9041-010

Name : (±)-Allococaine

Mol. formula : C<sub>17</sub>H<sub>21</sub>NO<sub>4</sub>

FW : 303.35    DEA schedule : 2



## 9 – Stimulants

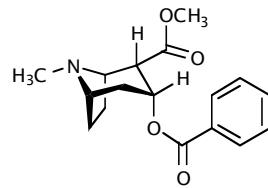
**Catalog number :** 9041-008

**CASRN :** 518-97-8

**Name :** ( $\pm$ )-Allopseudococaine hydrochloride

**Mol. formula :** C<sub>17</sub>H<sub>22</sub>ClNO<sub>4</sub>

**FW :** 339.81    **DEA schedule :** 2

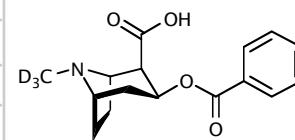


**Catalog number :** 9180-003

**Name :** (-)-[N-C<sup>2</sup>H<sub>3</sub>]Benzoylecgonine

**Mol. formula :** C<sub>16</sub>H<sub>19</sub>NO<sub>4</sub>

**FW :** 292.34    **DEA schedule :** 2

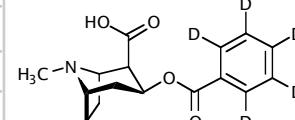


**Catalog number :** 9180-011

**Name :** (-)-[Phenyl-<sup>2</sup>H<sub>5</sub>]Benzoylecgonine

**Mol. formula :** C<sub>16</sub>H<sub>19</sub>NO<sub>4</sub>

**FW :** 294.36    **DEA schedule :** 2



**Catalog number :** 9180-001

**CASRN :** 519-09-05

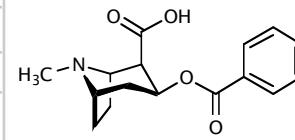
**Name :** (-)-Benzoylecgonine

**Mol. formula :** C<sub>16</sub>H<sub>19</sub>NO<sub>4</sub>

**FW :** 289.34    **DEA schedule :** 2

**Notes :** Major metabolite of cocaine.

**References :** Merck Index, 14th ed., Monograph 1113.

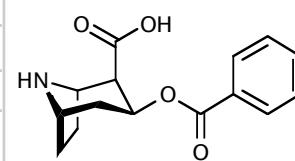


**Catalog number :** 9180-004

**Name :** (-)-Benzoylnorecgonine hydrochloride

**Mol. formula :** C<sub>15</sub>H<sub>18</sub>ClNO<sub>4</sub>

**FW :** 311.77    **DEA schedule :** 2



**Catalog number :** 9041-011

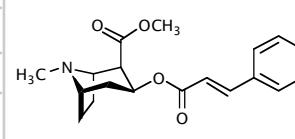
**CASRN :** 521-67-5

**Name :** (-)-trans-Cinnamoylcocaine

**Mol. formula :** C<sub>19</sub>H<sub>23</sub>NO<sub>4</sub>

**FW :** 329.38    **DEA schedule :** 2

**References :** Novak, M; Salemink, CA; Khan, I *J Ethnopharmacol* 1984, 10, 261-74.



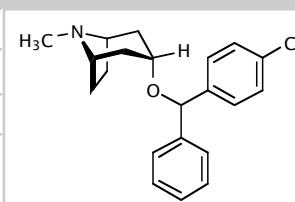
**Catalog number :** NOCD-004

**CASRN :** 5627-46-3

**Name :** Clobenztropine HCl

**Mol. formula :** C<sub>21</sub>H<sub>24</sub>ClNO • HCl

**FW :** 378.35    **DEA schedule :** 0



**Catalog number :** 9041-018

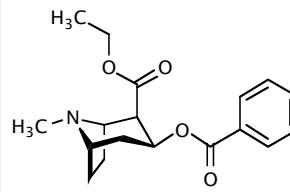
**Name :** (–)-Cocaethylene fumarate

**Mol. formula :** C<sub>22</sub>H<sub>27</sub>NO<sub>8</sub>

**FW :** 433.45    **DEA schedule :** 2

**Notes :** Cocaine metabolite.

**References :** Hearn, WL; et al. *Pharmacol Biochem Behav* 1991, 39, 531-3.  
Hearn, WL; et al. *J Neurochem* 1991, 56, 698-701.



**Catalog number :** 9041-001

**CASRN :** 53-21-4

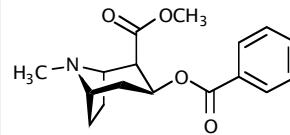
**Name :** (–)-Cocaine hydrochloride

**Mol. formula :** C<sub>17</sub>H<sub>22</sub>ClNO<sub>4</sub>

**FW :** 339.81    **DEA schedule :** 2

**Notes :** CNS stimulant; local anesthetic

**References :** Merck Index, 14th ed., Monograph 2455.



**Catalog number :** 9041-012

**CASRN :** 50-36-2

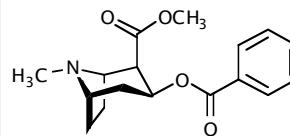
**Name :** (–)-Cocaine base

**Mol. formula :** C<sub>17</sub>H<sub>21</sub>NO<sub>4</sub>

**FW :** 303.35    **DEA schedule :** 2

**Notes :** CNS stimulant; local anesthetic

**References :** Merck Index, 14th ed., Monograph 2455.



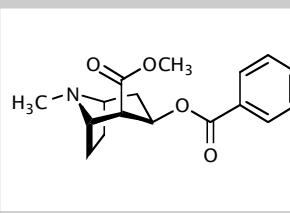
**Catalog number :** 9041-020

**CASRN :** 47195-07-3

**Name :** (+)-Cocaine base

**Mol. formula :** C<sub>17</sub>H<sub>21</sub>NO<sub>4</sub>

**FW :** 303.35    **DEA schedule :** 2

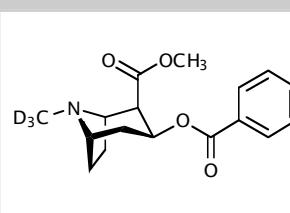


**Catalog number :** 9041-006

**Name :** (–)-[N-C<sup>2</sup>H<sub>3</sub>]Cocaine

**Mol. formula :** C<sub>17</sub>H<sub>21</sub>NO<sub>4</sub>

**FW :** 306.37    **DEA schedule :** 2

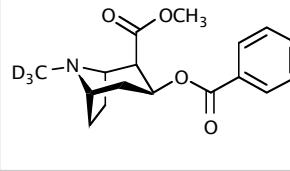


**Catalog number :** 9041-007

**Name :** (–)-[N-C<sup>2</sup>H<sub>3</sub>]Cocaine hydrochloride

**Mol. formula :** C<sub>17</sub>H<sub>22</sub>ClNO<sub>4</sub>

**FW :** 342.83    **DEA schedule :** 2

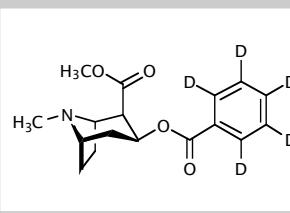


**Catalog number :** 9041-009

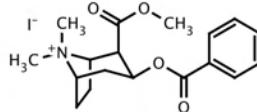
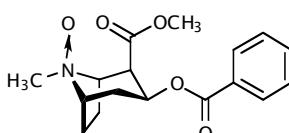
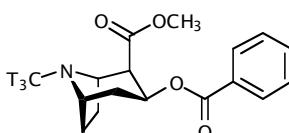
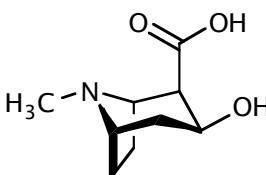
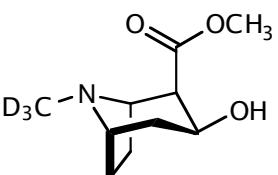
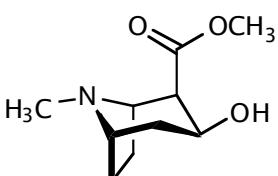
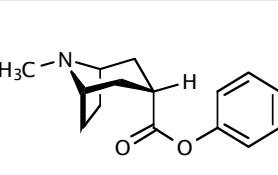
**Name :** (–)-[Phenyl-<sup>2</sup>H<sub>5</sub>]Cocaine

**Mol. formula :** C<sub>17</sub>H<sub>21</sub>NO<sub>4</sub>

**FW :** 344.84    **DEA schedule :** 2



## 9 – Stimulants

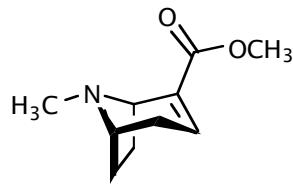
Catalog number : 9041-013		CASRN : 5937-29-1
Name : (-)-Cocaine methiodide		
Mol. formula : C <sub>18</sub> H <sub>24</sub> INO <sub>4</sub>	FW : 445.28	DEA schedule : 2
References : Abraham, P; Pitner, JB; Lewin, AH; Boja, JW; Kuhar, MJ; Carroll, FI <i>J Med Chem</i> 1992, 35, 141–4.		
Catalog number : 9041-014		
Name : (-)-Cocaine N-oxide hydrochloride		
Mol. formula : C <sub>17</sub> H <sub>22</sub> CINO <sub>5</sub>	FW : 355.81	DEA schedule : 2
		
Catalog number : 9041-003		
Name : (-)-[N-C <sup>3</sup> H <sub>3</sub> ]Cocaine		
Mol. formula : C <sub>17</sub> H <sub>21</sub> NO <sub>4</sub>	FW : 309.38	DEA schedule : 2
		
Catalog number : 9180-002		CASRN : 5796-31-6
Name : (-)-Ecgonine hydrochloride		
Mol. formula : C <sub>9</sub> H <sub>16</sub> CINO <sub>3</sub>	FW : 221.69	DEA schedule : 2
Notes : Cocaine metabolite.		
References : <i>Merck Index</i> , 14th ed., Monograph 3493.		
Catalog number : 9180-007		
Name : [N-C <sup>2</sup> H <sub>3</sub> ]Ecgonine methyl ester hydrochloride		
Mol. formula : C <sub>10</sub> H <sub>18</sub> CINO <sub>3</sub>	FW : 238.73	DEA schedule : 2
		
Catalog number : 9180-006		CASRN : 7143-09-1
Name : (-)-Ecgonine methyl ester hydrochloride		
Mol. formula : C <sub>10</sub> H <sub>18</sub> CINO <sub>3</sub>	FW : 235.71	DEA schedule : 2
		
Catalog number : 9041-015		
Name : Isotropacocaine hydrochloride		
Mol. formula : C <sub>15</sub> H <sub>20</sub> CINO <sub>2</sub>	FW : 281.79	DEA schedule : 2
		

Catalog number : 9180-015

Name : (-)-Anhydroecgonine methyl ester fumarate; Methyl ecgonidine

Mol. formula : C<sub>14</sub>H<sub>19</sub>NO<sub>6</sub>

FW : 297.31    DEA schedule : 0



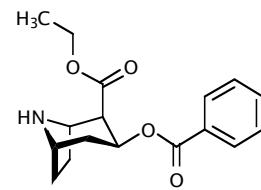
Catalog number : 9041-019

CASRN : 137220-02-1

Name : (-)-Norcocaethylene fumarate

Mol. formula : C<sub>21</sub>H<sub>25</sub>NO<sub>8</sub>

FW : 419.43    DEA schedule : 2



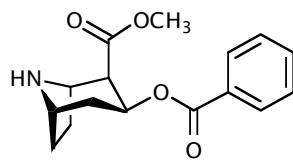
Catalog number : 9041-002

CASRN : 18717-72-1

Name : (-)-Norcocaine

Mol. formula : C<sub>16</sub>H<sub>19</sub>NO<sub>4</sub>

FW : 289.32    DEA schedule : 2

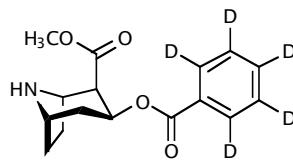


**References :** Wang, Q; Simpao, A; Sun L; Falk, JL; Lau, CE *Psychopharmacology (Berl)* 2001, 153, 341–52.  
Kovacic, P *Med Hypotheses* 2005, 64, 350–6.

Catalog number : 9041-017

Name : (-)-[Phenyl-<sup>2</sup>H<sub>5</sub>]Norcocaine fumarateMol. formula : C<sub>20</sub>H<sub>23</sub>NO<sub>8</sub>

FW : 410.43    DEA schedule : 2



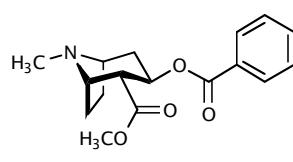
Catalog number : 9041-021

CASRN : 478-73-9

Name : (-)-Pseudococaine hydrochloride

Mol. formula : C<sub>17</sub>H<sub>22</sub>CINO<sub>4</sub>

FW : 339.81    DEA schedule : 2



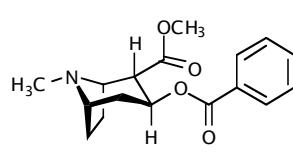
Catalog number : 9041-005

CASRN : 478-73-9

Name : (+)-Pseudococaine hydrochloride

Mol. formula : C<sub>17</sub>H<sub>22</sub>CINO<sub>4</sub>

FW : 339.81    DEA schedule : 2

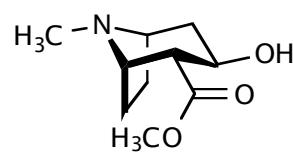


Catalog number : 9180-020

Name : (-)-Pseudoecgonine methyl ester

Mol. formula : C<sub>10</sub>H<sub>17</sub>NO<sub>3</sub>

FW : 199.25    DEA schedule : 2



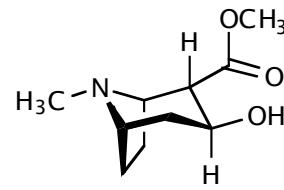
## 9 – Stimulants

**Catalog number :** 9180-005

**Name :** (+)-Pseudoecgonine methyl ester

**Mol. formula :** C<sub>10</sub>H<sub>17</sub>NO<sub>3</sub>

**FW :** 199.25    **DEA schedule :** 2



**Catalog number :** NOCD-020

**CASRN :** 130342-80-2

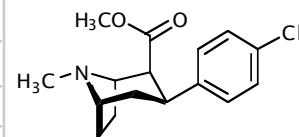
**Name :** (-)-3β-(4-Chlorophenyl)tropan-2β-carboxylic acid methyl ester tartrate salt; RTI-31

**Mol. formula :** C<sub>20</sub>H<sub>26</sub>ClNO<sub>8</sub>

**FW :** 443.87    **DEA schedule :** 0

**Notes :** Nonselective monoamine uptake inhibitor.

**References :** Carroll, FI; et al. *J Med Chem* 1995, 38, 379-88.



**Catalog number :** NOCD-021

**CASRN :** 130342-81-3

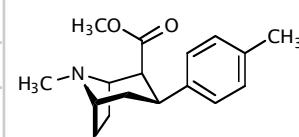
**Name :** (-)-3β-(4-Methylphenyl)tropan-2β-carboxylic acid methyl ester tartrate; RTI-32

**Mol. formula :** C<sub>21</sub>H<sub>29</sub>NO<sub>8</sub>

**FW :** 423.46    **DEA schedule :** 0

**Notes :** Nonselective monoamine uptake inhibitor.

**References :** Boja, JW; Carroll, FI; Rahman, MA; Philip, A; Lewin, AH; Kuhar, MJ *Eur J Pharmacol* 1990, 184, 329-32.



**Catalog number :** NOCD-025

**CASRN :** 133647-95-7

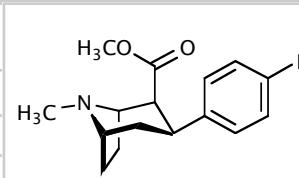
**Name :** (-)-3β-(4-Iodophenyl)tropan-2β-carboxylic acid methyl ester tartrate; RTI-55

**Mol. formula :** C<sub>20</sub>H<sub>26</sub>INO<sub>8</sub>

**FW :** 535.32    **DEA schedule :** 0

**Notes :** Nonselective monoamine uptake inhibitor.

**References :** Boja, JW; et al. *Eur J Pharmacol* 1991, 194, 133-4.  
Carroll, FI; et al. *J Med Chem* 1991, 34, 2719-25.  
Carroll, FI; et al. *J Med Chem* 1995, 38, 379-88.



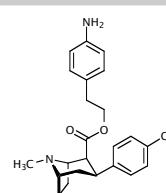
**Catalog number :** NOCD-029

**Name :** (-)-3β-(4-Chlorophenyl)tropan-2β-carboxylic acid (4'-aminophenyl)ethyl ester dihydrochloride; RTI-75

**Mol. formula :** C<sub>23</sub>H<sub>29</sub>Cl<sub>3</sub>N<sub>2</sub>O<sub>2</sub>

**FW :** 471.86    **DEA schedule :** 0

**References :** Carroll, FI; et al. *J Med Chem* 1992, 35, 1813-7.



**Catalog number :** NOCD-030

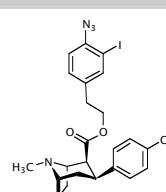
**Name :** (-)-3β-(4-Chlorophenyl)tropan-2β-carboxylic acid (4'-Azido-3'-iodophenyl)ethyl ester hydrochloride; RTI-82

**Mol. formula :** C<sub>23</sub>H<sub>25</sub>Cl<sub>2</sub>IN<sub>4</sub>O<sub>2</sub>

**FW :** 587.29    **DEA schedule :** 0

**Notes :** Dopamine transporter photoaffinity ligand.

**References :** Carroll, FI; et al. *J Med Chem* 1992, 35, 1813-7.



**Catalog number :** NOCD-031

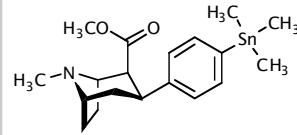
**Name :** 3 $\beta$ -[4-(Trimethylstannylyl)phenyl]tropan-2 $\beta$ -carboxylic acid methyl ester; RTI-89

**Mol. formula :** C<sub>19</sub>H<sub>29</sub>NO<sub>2</sub>Sn

**FW :** 422.12    **DEA schedule :** 0

**Notes :** Precursor for the synthesis of [<sup>125</sup>I]- and [<sup>123</sup>I]-RTI-55.

**References :** Carroll, FI; et al. *Med Chem Res* 1991, 1, 289–294.

**Catalog number :** NOCD-028

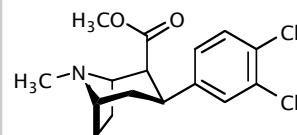
**Name :** (-)-3 $\beta$ -(3,4-Dichlorophenyl)tropan-2 $\beta$ -carboxylic acid methyl ester hydrochloride; RTI-111

**Mol. formula :** C<sub>16</sub>H<sub>20</sub>Cl<sub>2</sub>NO<sub>2</sub>

**FW :** 364.70    **DEA schedule :** 0

**Notes :** Nonselective monoamine uptake inhibitor.

**References :** Carroll, FI; et al. *J Med Chem* 1995, 38, 379–88.

**Catalog number :** NOCD-026

**CASRN :** 316790-73-5

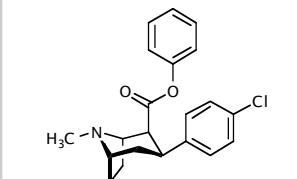
**Name :** (-)-3 $\beta$ -(4-Chlorophenyl)tropan-2 $\beta$ -carboxylic acid phenyl ester hydrochloride; RTI-113

**Mol. formula :** C<sub>21</sub>H<sub>25</sub>Cl<sub>2</sub>NO<sub>3</sub>

**FW :** 410.32    **DEA schedule :** 0

**Notes :** Selective dopamine uptake inhibitor.

**References :** Carroll, FI; et al. *J Med Chem* 1995, 38, 379–88.

**Catalog number :** NOCD-027

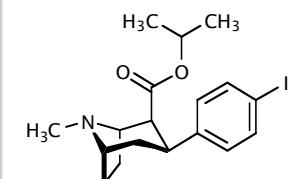
**CASRN :** 146145-21-3

**Name :** (-)-3 $\beta$ -(4-Iodophenyl)tropan-2 $\beta$ -carboxylic acid isopropyl ester hydrochloride; RTI-121; IPCIT

**Mol. formula :** C<sub>18</sub>H<sub>25</sub>ClINO<sub>4</sub>

**FW :** 449.74    **DEA schedule :** 0

**References :** Carroll, FI; et al. *J Med Chem* 1995, 38, 379–88.

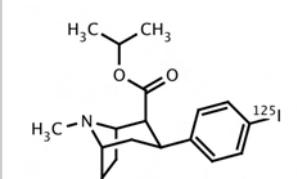
**Catalog number :** NOCD-077

**Name :** [<sup>125</sup>I]RTI-121

**Mol. formula :** C<sub>18</sub>H<sub>24</sub>INO<sub>2</sub>

**FW :** 413.29    **DEA schedule :** 0

**References :** Scheffel, U; et al. *Neuroreport* 1992, 3, 969–72.  
Carroll, FI; et al. *J Med Chem* 1995, 38, 379–88.

**Catalog number :** NOCD-032

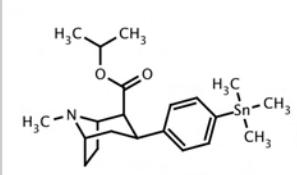
**Name :** (-)-3 $\beta$ -[4-(Trimethylstannylyl)phenyl]tropan-2 $\beta$ -carboxylic acid isopropyl ester; RTI-136

**Mol. formula :** C<sub>21</sub>H<sub>33</sub>NO<sub>2</sub>Sn

**FW :** 450.19    **DEA schedule :** 0

**Notes :** Precursor for the synthesis of [<sup>125</sup>I]- and [<sup>123</sup>I]-RTI-121.

**References :** Carroll, FI; et al. *Med Chem Res* 1991, 1, 289–294.

**Catalog number :** 9041-016

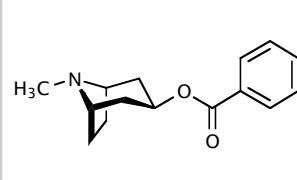
**CASRN :** 637-23-0

**Name :** Tropacocaine hydrochloride

**Mol. formula :** C<sub>15</sub>H<sub>20</sub>CINO<sub>2</sub>

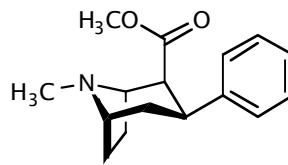
**FW :** 281.79    **DEA schedule :** 2

**References :** Novak, M; Salemink, CA; Khan, I *J Ethnopharmacol* 1984, 10, 261–74.  
Meyer, EM; et al. *J Pharmacol Exp Ther* 1990, 254, 584–90.

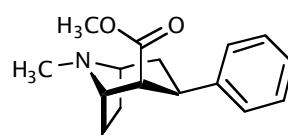


**Catalog number :** NOCD-023**CASRN :** 50372-80-0

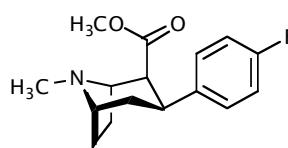
**Name :** (-)-3 $\beta$ -Phenyltropan-2 $\beta$ -carboxylic acid methyl ester tartrate; WIN 35,065-2

**Mol. formula :** C<sub>20</sub>H<sub>27</sub>NO<sub>8</sub>**FW :** 409.43    **DEA schedule :** 0**Notes :** Nonselective monoamine uptake inhibitor.**References :** Carroll, FI; et al. *J Med Chem* 1995, 38, 379-88.**Catalog number :** NOCD-024

**Name :** (+)-3 $\beta$ -Phenyltropan-2 $\beta$ -carboxylic acid methyl ester tartrate; WIN 35,065-3

**Mol. formula :** C<sub>20</sub>H<sub>27</sub>NO<sub>8</sub>**FW :** 409.43    **DEA schedule :** 0**Catalog number :** NOCD-022**CASRN :** 50370-56-4

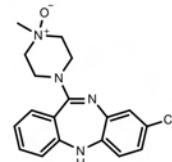
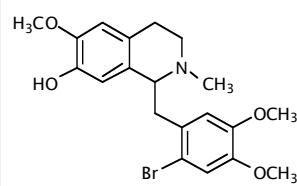
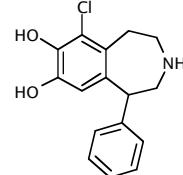
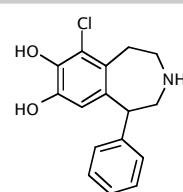
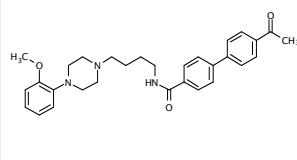
**Name :** (-)-3 $\beta$ -(4-Fluorophenyl)tropan-2 $\beta$ -carboxylic acid methyl ester tartrate; WIN 35,428

**Mol. formula :** C<sub>20</sub>H<sub>26</sub>FNO<sub>8</sub>**FW :** 427.42    **DEA schedule :** 0**Notes :** Nonselective monoamine uptake inhibitor.**References :** Carroll, FI; et al. *J Med Chem* 1995, 38, 379-88.**Stimulants (dosage form): Stock Solutions****Catalog number :** 9041-022**Name :** Injectable cocaine hydrochloride (10 mg/mL and 20 mg/mL)**DEA schedule :** 2**Notes :** Not for human use.

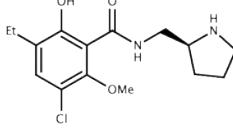
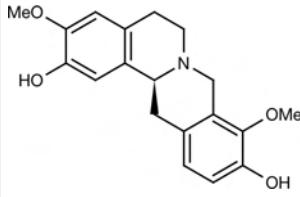
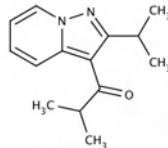
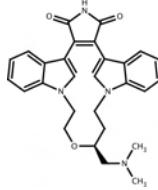
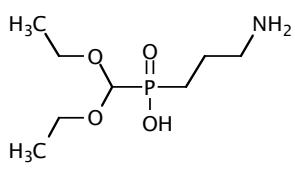
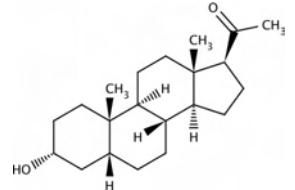
Dosage Form

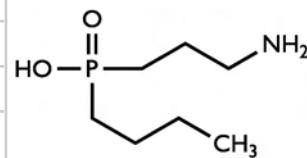
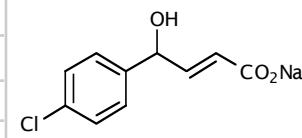
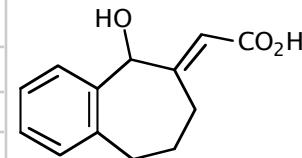
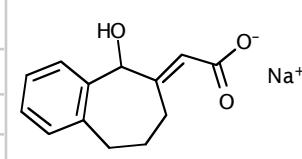
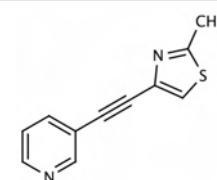
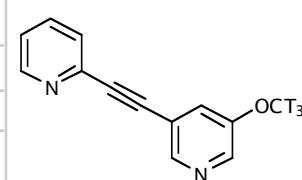
**Miscellaneous: Dopaminergic****Catalog number :** NOCD-135

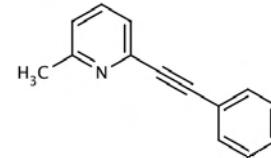
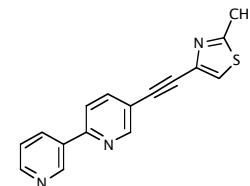
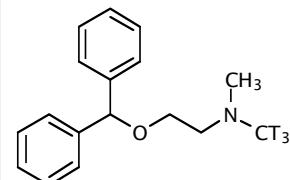
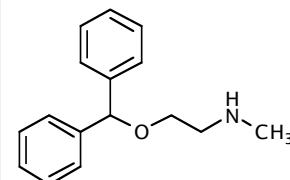
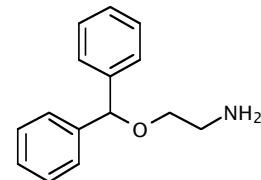
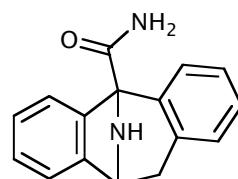
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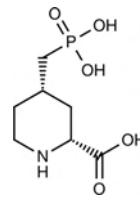
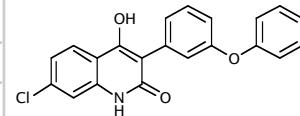
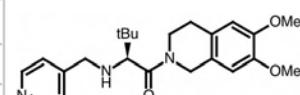
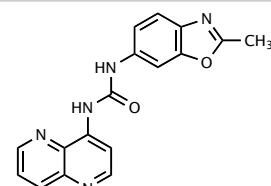
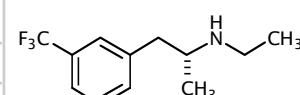
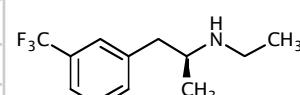
**CASRN :** 34233-69-7**Name :** Clozapine N-oxide**Mol. formula :** C<sub>18</sub>H<sub>19</sub>ClN<sub>4</sub>O**FW :** 342.82    **DEA schedule :** 0**Notes :** Clozapine metabolite.**References :** Jann, MW; et al., *Clin Pharmacokinet* 1993, 24, 161–76.  
Nawaratne, V; et al., *Mol Pharmacol* 2008, 74, 1119–31.  
Becnel, J; et al., *Cell Rep* 2013, 4, 1049–59.**Catalog number :** MEDD-002**Name :** (±)-1-(2-Bromo-4,5-dimethoxybenzyl)-7-hydroxy-6-methoxy-2-methyl-1,2,3,4-tetrahydroisoquinoline hydrobromide; A69024 HBr**Mol. formula :** C<sub>20</sub>H<sub>25</sub>Br<sub>2</sub>NO<sub>4</sub>**FW :** 503.23    **DEA schedule :** 0**Notes :** Dopamine D1 receptor antagonist**References :** Caine, SB; Koob, GF., *J Pharmacol Exp Ther* 1994, 270, 209–18.**Catalog number :** MEDD-004**Name :** (±)-6-Chloro-7,8-dihydroxy-1-phenyl-2,3,4,5-tetrahydro[1H]-3-benzazepine hydrobromide**Mol. formula :** C<sub>16</sub>H<sub>17</sub>BrClNO<sub>2</sub>**FW :** 370.67    **DEA schedule :** 0**Catalog number :** MEDD-005**Name :** (±)-6-Chloro-7,8-dihydroxy-1-phenyl-2,3,4,5-tetrahydro[1H]-3-benzazepine hydrochloride**Mol. formula :** C<sub>16</sub>H<sub>17</sub>Cl<sub>2</sub>NO<sub>2</sub>**FW :** 326.22    **DEA schedule :** 0**Catalog number :** NOCD-047**CASRN :** 162408-66-4**Name :** GR103691**Mol. formula :** C<sub>30</sub>H<sub>37</sub>N<sub>3</sub>O<sub>3</sub>**FW :** 566.57    **DEA schedule :** 0**Notes :** Selective dopamine D3 receptor antagonist**References :** Audinot, V; et al. *J Pharmacol Exp Ther* 1998, 287, 187–97.

## 10 – Miscellaneous Compounds

Catalog number : NOCD-120	CASRN : 101536-82-7
Name : (+)-(S)-Noreticlopride HCl	
Mol. formula : C <sub>15</sub> H <sub>22</sub> Cl <sub>2</sub> N <sub>2</sub> O <sub>3</sub>	FW : 349.26    DEA schedule : 0
Notes : Dopamine D <sub>2</sub> receptor antagonist.	
References : de Paulis, T; Hall H; Ogren SO, <i>European Journal of Medicinal Chemistry</i> 1985, 20, 273–276.	
Catalog number : NOCD-014	CASRN : 16562-13-3
Name : L-Stepholidine	
Mol. formula : C <sub>19</sub> H <sub>21</sub> NO <sub>4</sub>	FW : 327.37    DEA schedule : 0
Notes : D <sub>1</sub> agonist / D <sub>2</sub> antagonist	
References : Mo, J; et al. <i>Curr Med Chem</i> 2007, 14, 2996–3002. Wang, W; et al. <i>Neuropharmacology</i> 2007, 52, 355–61.	
<b>Miscellaneous: Enzyme Inhibitors</b>	
Catalog number : NOCD-104	CASRN : 50847-11-5
Name : Ibudilast	
Mol. formula : C <sub>14</sub> H <sub>18</sub> N <sub>2</sub> O	FW : 230.31    DEA schedule : 0
Notes : Orally-available phosphodiesterase inhibitor. Induces cerebral vasodilation.	
References : (1) Nishino, K; et al., <i>Jpn J Pharmacol</i> 1983, 33, 267–78; (2) Souness, JE; et al., <i>Br J Pharmacol</i> 1994, 111, 1081–8.	
Catalog number : NOCD-127	CASRN : 169939-94-0
Name : Ruboxistaurin; LY-333,531	
Mol. formula : C <sub>28</sub> H <sub>28</sub> N <sub>4</sub> O <sub>3</sub>	FW : 468.55    DEA schedule : 0
Notes : PKC $\beta$ inhibitor.	
References : Gani O, Engh RA, <i>Nat Prod Rep</i> , 2010, 27, 489.	
<b>Miscellaneous: GABA Receptor Related</b>	
Catalog number : NOCD-045	CASRN : 123690-79-9
Name : (3-Aminopropyl)(diethoxymethyl)phosphinic acid; CGP-35348	
Mol. formula : C <sub>8</sub> H <sub>20</sub> NO <sub>4</sub> P	FW : 225.23    DEA schedule : 0
Notes : GABAB receptor antagonist.	
References : Olpe, HR; et al. <i>Eur J Pharmacol</i> 1990, 187, 27–38.	
Catalog number : NOCD-102	CASRN : 128-20-1
Name : Pregnanolone	
Mol. formula : C <sub>21</sub> H <sub>34</sub> O <sub>2</sub>	FW : 318.49    DEA schedule : 0
Notes : Progesterone metabolite and barbiturate-like modulator of GABA <sub>A</sub> receptors.	
References : Quinton, MS; et al. <i>Pharmacol Biochem Behav</i> 2006, 85, 385–92. Kaminski, RM; et al. <i>Eur J Pharmacol</i> 2003, 474, 217–22. Leskiewicz, M; et al. <i>Pol J Pharmacol</i> 2003, 55, 1131–6.	

**Catalog number :** NOCD-103**CASRN :** 145537-81-1**Name :** SGS-742; CGP-36742**Mol. formula :** C<sub>7</sub>H<sub>18</sub>NO<sub>2</sub>P**FW :** 179.19    **DEA schedule :** 0**Notes :** GABA<sub>B</sub> receptor antagonist.**References :** Bullock, R *Curr Opin Investig Drugs* 2005, 6, 108–13.Froestl, W; et al. *Biochem Pharmacol* 2004, 68, 1479–87.**Miscellaneous: GHB Receptor Related****Catalog number :** NOCD-044**Name :** trans-4-(4-Chlorophenyl)-4-hydroxy-2-butenoic acid sodium salt; NCS 356**Mol. formula :** C<sub>10</sub>H<sub>8</sub>ClO<sub>3</sub>Na**FW :** 234.61    **DEA schedule :** 0**Notes :** γ-Hydroxybutyrate receptor agonist.**References :** Gobaille, S; et al. *J Pharmacol Exp Ther* 1999, 290, 303–9.**Catalog number :** NOCD-042**Name :** 6,7,8,9-Tetrahydro-5-[H]benzocycloheptene-5-ol-4-ylideneacetic acid; NCS 382**Mol. formula :** C<sub>13</sub>H<sub>14</sub>O<sub>3</sub>**FW :** 218.25    **DEA schedule :** 0**Notes :** γ-Hydroxybutyrate receptor antagonist; anticonvulsant.**References :** Maitre, M; et al. *J Pharmacol Exp Ther* 1990, 255, 657–63.**Catalog number :** NOCD-043**CASRN :** 131733-92-1**Name :** 6,7,8,9-Tetrahydro-5-[H]benzocycloheptene-5-ol-4-ylideneacetic acid, sodium salt; NCS 382 sodium salt**Mol. formula :** C<sub>13</sub>H<sub>13</sub>O<sub>3</sub>Na**FW :** 240.24    **DEA schedule :** 0**Notes :** γ-Hydroxybutyrate receptor antagonist; anticonvulsant.**References :** Maitre, M; et al. *J Pharmacol Exp Ther* 1990, 255, 657–63.**Miscellaneous: Glutamate Receptor Related****Catalog number :** MEDD-026**CASRN :** 329205-68-7**Name :** 3-[(2-Methyl-4-thiazolyl)ethynyl]pyridine; MTEP**Mol. formula :** C<sub>11</sub>H<sub>8</sub>N<sub>2</sub>S**FW :** 200.26    **DEA schedule :** 0**References :** Bradbury, MJ; et al. *J Pharmacol Exp Ther* 2005, 313, 395–402. Kłodzinska, A; et al. *Neuropharmacology* 2004, 47, 342–50. Busse, CS; et al. *Neuropsychopharmacology* 2004, 29, 1971–9.**Catalog number :** NOCD-058**Name :** 3-[<sup>3</sup>H]Methoxy-5-(pyridin-2-yl-ethynyl)pyridine**Mol. formula :** C<sub>13</sub>H<sub>10</sub>N<sub>2</sub>O**FW :** 216.26    **DEA schedule :** 0**Notes :** Tritium-labeled MPEP analog

**Catalog number :** MEDD-018**CASRN :** 219911-35-0**Name :** 6-Methyl-2-(phenylethynyl)pyridine hydrochloride; MPEP**Mol. formula :** C<sub>14</sub>H<sub>12</sub>ClN**FW :** 229.71    **DEA schedule :** 0**Notes :** mGlu5 antagonist**References :** Gasparini, F; et al. *Neuropharmacology* 1999, 38, 1493–503.  
Alagille, D; et al. *Bioorg Med Chem* 2005, 13, 197–209.**Catalog number :** NOCD-033**CASRN :** 329204-25-3**Name :** 5-[(2-Methyl-4-thiazolyl)ethynyl]-2,3'-bipyridine; MTEb**Mol. formula :** C<sub>16</sub>H<sub>11</sub>N<sub>3</sub>S**FW :** 277.34    **DEA schedule :** 0**References :** Roppe, JR; et al. *Bioorg Med Chem Lett* 2004, 14, 3993–3996.**Miscellaneous: Histamine Receptor Related****Catalog number :** NOCD-063**Name :** [N-C<sup>3</sup>H<sub>3</sub>]Diphenhydramine**Mol. formula :** C<sub>17</sub>H<sub>21</sub>NO**FW :** 261.38    **DEA schedule :** 0**Catalog number :** NOCD-060**Name :** Nordiphenhydramine hydrochloride**Mol. formula :** C<sub>16</sub>H<sub>20</sub>CINO**FW :** 277.80    **DEA schedule :** 0**Notes :** Diphenhydramine metabolite**Catalog number :** NOCD-061**Name :** Dinordiphenhydramine hydrochloride**Mol. formula :** C<sub>15</sub>H<sub>18</sub>CINO**FW :** 263.76    **DEA schedule :** 0**Notes :** Diphenhydramine metabolite**Miscellaneous: NMDA Receptor Related****Catalog number :** MEDD-003**Name :** (±)-5-(Aminocarbonyl)-10,11-dihydro-5H-dibenzo[a,d]cyclohepten-5,10-imine hydrochloride; ADCI HCl**Mol. formula :** C<sub>16</sub>H<sub>15</sub>CIN<sub>2</sub>O**FW :** 286.76    **DEA schedule :** 0**Notes :** NMDA channel blocker

**Catalog number :** NOCD-019**CASRN :** 110347-85-8**Name :** CGS 19755; Selfotel**Mol. formula :** C<sub>7</sub>H<sub>14</sub>NO<sub>5</sub>P**FW :** 223.16    **DEA schedule :** 0**Notes :** NMDA receptor antagonist.**References :** Hutchison, AJ; et al. *J Med Chem* 1989, 32, 2171–8.**Catalog number :** NOCD-010**CASRN :** 142326-59-8**Name :** 7-Chloro-4-hydroxy-3-(3-phenoxyphenyl)-2(1H)quinoline; L 701,324**Mol. formula :** C<sub>21</sub>H<sub>14</sub>ClNO<sub>3</sub>**FW :** 363.79    **DEA schedule :** 0**Notes :** Glycine/NMDA receptor antagonist.**References :** Bristow, LJ; et al. *Psychopharmacology (Berl)* 1995, 118, 230–2.  
Bristow, LJ; et al. *J Pharmacol Exp Ther* 1996, 279, 492–501.**Miscellaneous: Orexin Receptor Related****Catalog number :** NOCD-111**CASRN :** 372523-75-6**Name :** Cp-5**Mol. formula :** C<sub>23</sub>H<sub>33</sub>ClN<sub>3</sub>O<sub>3</sub>**FW :** 470.44    **DEA schedule :** 0**Notes :** Non-peptidic orexin-2 receptor selective antagonist.**References :** Hirose, M, et al., *Bioorg Med Chem Letters*, 2003, 13, 4497–4499.**Catalog number :** NOCD-006**CASRN :** 249889-64-3**Name :** SB-334867 (base)**Mol. formula :** C<sub>17</sub>H<sub>13</sub>N<sub>5</sub>O<sub>2</sub>**FW :** 392.24    **DEA schedule :** 0**Notes :** Orexin (hypocretin) antagonist**References :** Coe, JW; et al., *Bioorg Med Chem Lett*, 2005, 15, 4889–4897.  
McElhinny, CJ, Jr.; et al., *Bioorg Med Chem Lett*, 2012, 22, 6661–6664.**Miscellaneous: Serotonergic****Catalog number :** 1670-002**CASRN :** 3616-78-2**Name :** (–)-Fenfluramine hydrochloride**Mol. formula :** C<sub>12</sub>H<sub>17</sub>ClF<sub>3</sub>N**FW :** 267.72    **DEA schedule :** 4**Notes :** CNS stimulant**References :** Merck Index, 14th ed., Monograph 3973.**Catalog number :** 1670-001**CASRN :** 3239-45-0**Name :** (+)-Fenfluramine hydrochloride**Mol. formula :** C<sub>12</sub>H<sub>17</sub>ClF<sub>3</sub>N**FW :** 267.72    **DEA schedule :** 4**Notes :** CNS stimulant; serotonin releaser**References :** Merck Index, 14th ed., Monograph 3973.

## 10 – Miscellaneous Compounds

Catalog number : NOCD-015

CASRN : 139290-65-6

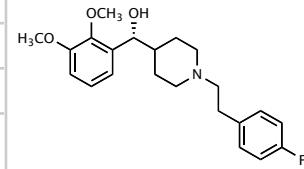
Name : MDL-100907; Volinanserin

Mol. formula : C<sub>22</sub>H<sub>29</sub>ClFNO<sub>3</sub>

FW : 418.94    DEA schedule : 0

Notes : 5-HT<sub>2A</sub> antagonist

References : Ullrich, T; Rice KCBioorg Med Chem 2000, 8, 2427-32.



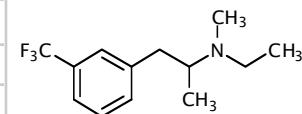
Catalog number : 1670-003

Name : (±)-N-Methylfenfluramine hydrochloride

Mol. formula : C<sub>13</sub>H<sub>19</sub>ClF<sub>3</sub>N

FW : 281.75    DEA schedule : 0

Notes : CNS stimulant



Catalog number : NOCD-048

CASRN : 2565-01-7

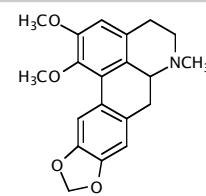
Name : Nantenine

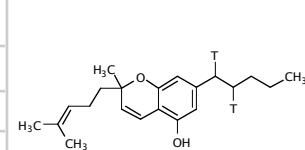
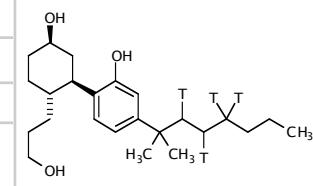
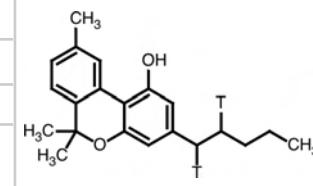
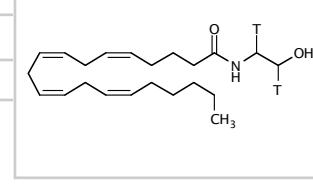
Mol. formula : C<sub>20</sub>H<sub>21</sub>NO<sub>4</sub>

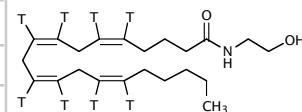
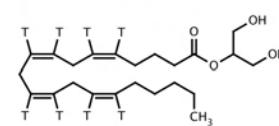
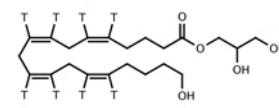
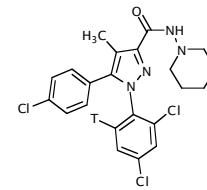
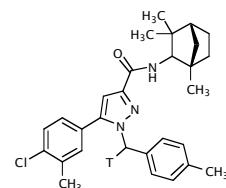
FW : 339.39    DEA schedule : 0

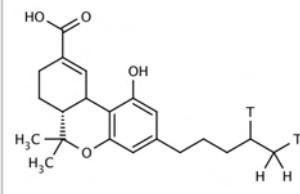
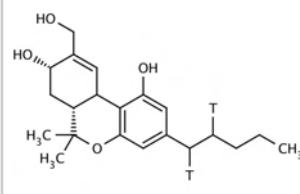
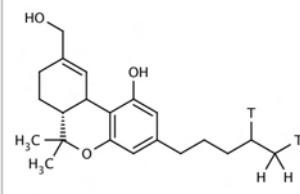
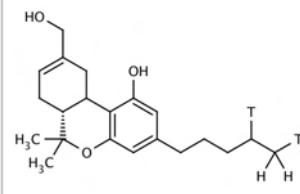
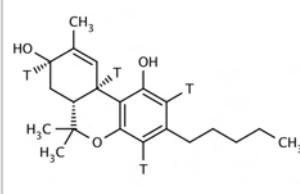
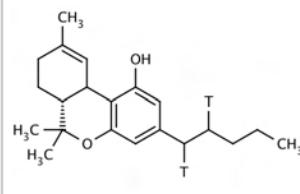
Notes : Serotonergic receptor antagonist.

References : Fantegrossi, WE; et al. Psychopharmacology (Berl) 2004, 173, 270-7.



**Cannabinoids: Cannabichromene Class****Catalog number :** 7360-008**CASRN :** 20675-51-8 (parent cmpd)**Name :** [1',2'-<sup>3</sup>H<sub>2</sub>]Cannabichromene**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>**FW :** 314.46    **DEA schedule :** 1**Notes :** Non-psychoactive constituent of cannabis (tritium-labeled).**References :** Instrumental Data for Drug Analysis, 2nd Ed., 1996, Volume 1, p304.**Cannabinoids: Cannabicyclohexanol Class****Catalog number :** NOCD-092**CASRN :** 119095-48-6**Name :** [2,3,4,4-<sup>3</sup>H<sub>4</sub>](-)-CP 55,940**Mol. formula :** C<sub>24</sub>H<sub>40</sub>O<sub>3</sub>**FW :** 376.58    **DEA schedule :** 0**Notes :** High affinity CB1 and CB2 receptor radioligand (tritium-labeled).**Cannabinoids: Cannabinol Class****Catalog number :** 7360-023**Name :** [1',2'-<sup>3</sup>H<sub>2</sub>]Cannabinol**Mol. formula :** C<sub>21</sub>H<sub>26</sub>O<sub>2</sub>**FW :** 310.43    **DEA schedule :** 1**Cannabinoids: Fatty Acid Derivatives (Anandamides)****Catalog number :** NOCD-008**Name :** Arachidonyl[1,2-<sup>3</sup>H]ethanolamide; Tritiated Anandamide**Mol. formula :** C<sub>22</sub>H<sub>37</sub>NO<sub>2</sub>**FW :** 347.54    **DEA schedule :** 0

**Catalog number :** NOCD-078**Name :** Tritium-labeled Arachidonylethanamide; Tritiated Anandamide**Mol. formula :** C<sub>22</sub>H<sub>37</sub>NO<sub>2</sub>**FW :** 347.54    **DEA schedule :** 0**Notes :** *Cannabinoid CB1 and CB2 receptor radioligand.***Cannabinoids: Fatty Acid Derivatives (Arachidonyl esters)****Catalog number :** NOCD-018**Name :** [<sup>3</sup>H]-2-Arachidonylglycerol; [<sup>3</sup>H]-2-AG**Mol. formula :** C<sub>23</sub>H<sub>38</sub>O<sub>4</sub>**FW :** 378.55    **DEA schedule :** 0**Notes :** *Cannabinoid CB1 receptor agonist (tritium-labeled).***References :** Stella, N; Schweitzer, P; Piomelli, D *Nature* 1997, 388, 773–8.**Catalog number :** NOCD-035**Name :** Tritium-labeled 1-Arachidonylglycerol; [<sup>3</sup>H]-1-AG**Mol. formula :** C<sub>23</sub>H<sub>38</sub>O<sub>4</sub>**FW :** 378.55    **DEA schedule :** 0**Notes :** *Cannabinoid CB1 receptor agonist (tritium-labeled).***References :** Stella, N; Schweitzer, P; Piomelli D *Nature* 1997, 388, 773–8.**Cannabinoids: Pyrazole Class****Catalog number :** NOCD-083**CASRN :** 170937-38-9**Name :** [2,4-Dichlorophenyl-6-<sup>3</sup>H]SR141716**Mol. formula :** C<sub>22</sub>H<sub>21</sub>Cl<sub>3</sub>N<sub>4</sub>O**FW :** 465.80    **DEA schedule :** 0**Notes :** *Cannabinoid CB1 receptor radioligand (tritium-labeled).***References :** Seltzman, H; et al. *J Chem Soc, Chem Commun* 1995, 1549–1550.**Catalog number :** NOCD-086**CASRN :** 475471-24-0**Name :** Tritium-labeled SR144528**Mol. formula :** C<sub>29</sub>H<sub>34</sub>N<sub>3</sub>OCl**FW :** 478.05    **DEA schedule :** 0**Notes :** *Cannabinoid CB2 receptor radioligand (tritium-labeled).***References :** Portier, M; et al. *J Pharmacol Exp Ther* 1999, 288, 582–9.  
Rinaldi-Carmona, M; et al. *J Pharmacol Exp Ther* 1998, 284, 644–50.

**Cannabinoids: Tetrahydrocannabinol Class****Catalog number :** 7370-017**Name :** [4',5'-<sup>3</sup>H<sub>2</sub>]9-Carboxy-11-nor-Δ<sup>9</sup>-THC**Mol. formula :** C<sub>21</sub>H<sub>28</sub>O<sub>4</sub>**FW :** 348.46**DEA schedule :** 1**Notes :** Urinary metabolite of THC (tritium-labeled).**Catalog number :** 7370-026**Name :** [1',2'-<sup>3</sup>H<sub>2</sub>]-8α,11-Dihydroxy-Δ<sup>9</sup>-THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>4</sub>**FW :** 350.48**DEA schedule :** 1**Catalog number :** 7370-024**Name :** [4',5'-<sup>3</sup>H<sub>2</sub>]-11-Hydroxy-Δ<sup>9</sup>-THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>**FW :** 318.48**DEA schedule :** 1**Catalog number :** 7370-035**Name :** [4',5'-<sup>3</sup>H<sub>2</sub>]-11-Hydroxy-Δ<sup>8</sup>-THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>**FW :** 318.48**DEA schedule :** 1**Catalog number :** 7370-021**Name :** [2,4,8,10a-<sup>3</sup>H<sub>4</sub>]-8β-Hydroxy-Δ<sup>9</sup>-THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>3</sub>**FW :** 338.49**DEA schedule :** 1**Catalog number :** 7370-004**Name :** [1',2'-<sup>3</sup>H<sub>2</sub>]Δ<sup>9</sup>-THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>**FW :** 318.48**DEA schedule :** 1**Notes :** Hallucinogen; psychotropic; analgesic (tritium-labeled).

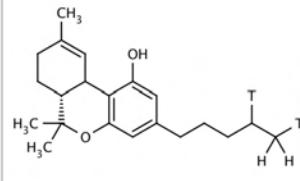
## 11 – Tritium Labeled

Catalog number : 7370-009

Name : [4',5'-<sup>3</sup>H] $\Delta^9$ -THC

Mol. formula : C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>

FW : 318.48    DEA schedule : 1



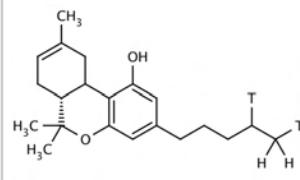
Catalog number : 7370-027

Name : [4',5'-<sup>3</sup>H<sub>2</sub>] $\Delta^8$ -THC

Mol. formula : C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>

FW : 318.48    DEA schedule : 1

Notes : Hallucinogen; psychotropic; analgesic (tritium-labeled).

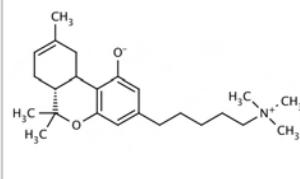


Catalog number : 7370-052

Name : [<sup>3</sup>H<sub>3</sub>]-5'-Trimethylammonium- $\Delta^8$ -THC phenolate

Mol. formula : C<sub>24</sub>H<sub>37</sub>NO<sub>2</sub>

FW : 371.56    DEA schedule : 1



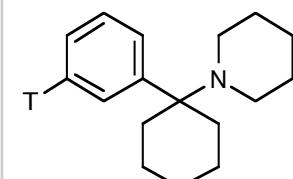
### Dissociatives: Phencyclidine Class

Catalog number : 7471-001

Name : [Phenyl-3-<sup>3</sup>H(n)]Phencyclidine; [Phenyl-3-<sup>3</sup>H(n)]PCP

Mol. formula : C<sub>17</sub>H<sub>25</sub>N

FW : 245.40    DEA schedule : 2

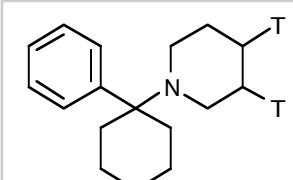


Catalog number : 7471-043

Name : [3',4'-<sup>3</sup>H]Phencyclidine; [3,4-<sup>3</sup>H]PCP

Mol. formula : C<sub>17</sub>H<sub>25</sub>N

FW : 247.4    DEA schedule : 2



### Hallucinogens: Amphetamine Class

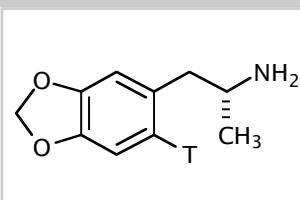
Catalog number : 7400-006

CASRN : 6292-91-7

Name : (–)-[6'-<sup>3</sup>H<sub>2</sub>(n)]-3',4'-Methylenedioxymethamphetamine hydrochloride;  
(–)-[6'-<sup>3</sup>H<sub>2</sub>(n)]MDA

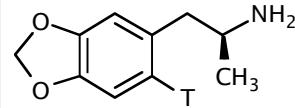
Mol. formula : C<sub>10</sub>H<sub>14</sub>ClNO<sub>2</sub>

FW : 217.68    DEA schedule : 1

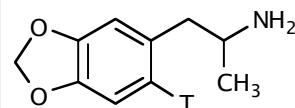


**Catalog number :** 7400-004

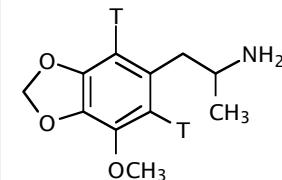
**Name :** (+)-[6'-<sup>3</sup>H(n)-3',4'-Methylenedioxyamphetamine hydrochloride;  
(+)-[6'-<sup>3</sup>H(n)]MDA

**Mol. formula :** C<sub>10</sub>H<sub>14</sub>CINO<sub>2</sub>**FW :** 215.68    **DEA schedule :** 1**Notes :** Hallucinogen (tritium-labeled).**Catalog number :** 7400-005

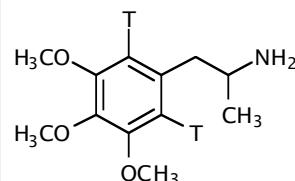
**Name :** [6-<sup>3</sup>H<sub>2</sub>(n)]-3,4-Methylenedioxyamphetamine hydrochloride;  
[6-<sup>3</sup>H<sub>2</sub>(n)]MDA

**Mol. formula :** C<sub>10</sub>H<sub>14</sub>CINO<sub>2</sub>**FW :** 217.68    **DEA schedule :** 1**Catalog number :** 7401-002

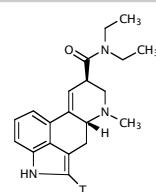
**Name :** [2',6'-<sup>3</sup>H(n)]-3-Methoxy-4,5-methylenedioxyamphetamine hydrochloride; [2,6-<sup>3</sup>H(n)]MMDA

**Mol. formula :** C<sub>11</sub>H<sub>16</sub>CINO<sub>3</sub>**FW :** 249.72    **DEA schedule :** 1**Catalog number :** 7390-002

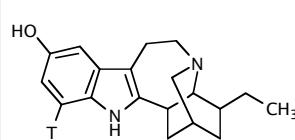
**Name :** (±)-[2,6-<sup>3</sup>H<sub>2</sub>(n)]-3,4,5-Trimethoxyamphetamine hydrochloride

**Mol. formula :** C<sub>12</sub>H<sub>20</sub>CINO<sub>3</sub>**FW :** 265.76    **DEA schedule :** 1**Hallucinogens: Ergot alkaloids****Catalog number :** 7315-007**CASRN :** 377756-22-4

**Name :** [2-<sup>3</sup>H]-(+)-Lysergic acid diethylamide; (+)-[3H]-LSD

**Mol. formula :** C<sub>20</sub>H<sub>25</sub>N<sub>3</sub>O**FW :** 323.42    **DEA schedule :** 1**Hallucinogens: Ibogaine Class****Catalog number :** 7260-005

**Name :** [12-<sup>3</sup>H]-Noribogaine

**Mol. formula :** C<sub>19</sub>H<sub>24</sub>N<sub>2</sub>O**FW :** 296.41    **DEA schedule :** 0**Notes :** Ibogaine-like effect without tremors (tritium-labeled).

## 11 – Tritium Labeled

Catalog number : 7260-002

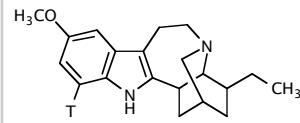
CASRN : 146560-35-2

Name : Tritium-labeled Ibogaine; [12-<sup>3</sup>H]Ibogaine

Mol. formula : C<sub>20</sub>H<sub>26</sub>N<sub>2</sub>O

FW : 312.44    DEA schedule : 1

Notes : Hallucinogen (tritium-labeled).



### Hallucinogens: Methamphetamine Class

Catalog number : 7405-005

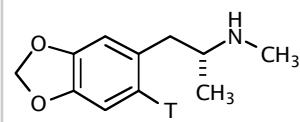
CASRN : 4764-17-4

Name : (-)-[6'-<sup>3</sup>H(n)]-3',4'-Methylenedioxymethamphetamine hydrochloride;  
(-)-[<sup>3</sup>H]MDMA

Mol. formula : C<sub>11</sub>H<sub>16</sub>CINO<sub>2</sub>

FW : 231.71    DEA schedule : 1

Notes : CNS stimulant; hallucinogen (tritium-labeled).



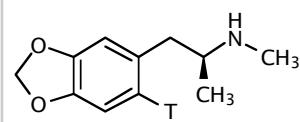
Catalog number : 7405-006

Name : (+)-[6'-<sup>3</sup>H(n)]-3',4'-Methylenedioxymethamphetamine hydrochloride;  
(+)-[<sup>3</sup>H]MDMA

Mol. formula : C<sub>11</sub>H<sub>16</sub>CINO<sub>2</sub>

FW : 231.71    DEA schedule : 1

Notes : CNS stimulant; hallucinogen (tritium-labeled).



### Miscellaneous: Glutamate Receptor Related

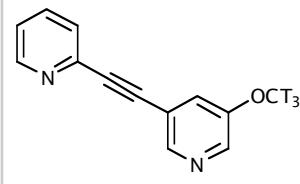
Catalog number : NOCD-058

Name : 3-[<sup>3</sup>H<sub>3</sub>]Methoxy-5-(pyridin-2-yl-ethynyl)pyridine

Mol. formula : C<sub>13</sub>H<sub>10</sub>N<sub>2</sub>O

FW : 216.26    DEA schedule : 0

Notes : Tritium-labeled MPEP analog



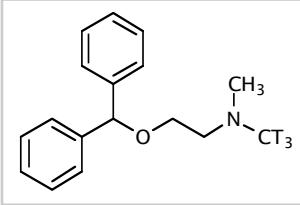
### Miscellaneous: Histamine Receptor Related

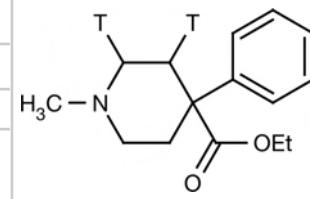
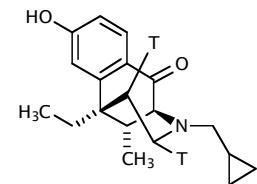
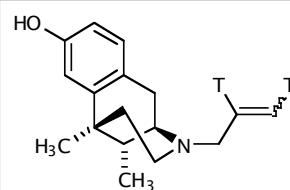
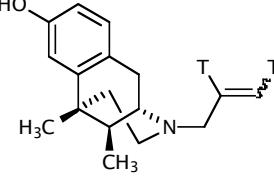
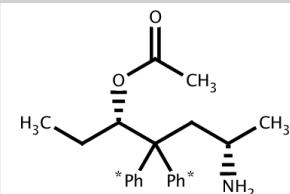
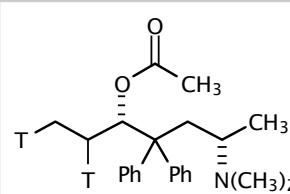
Catalog number : NOCD-063

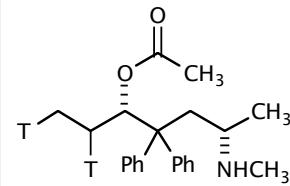
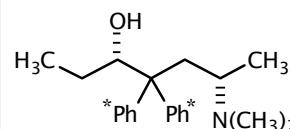
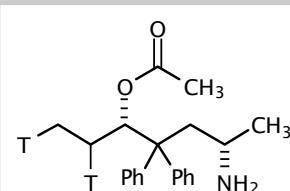
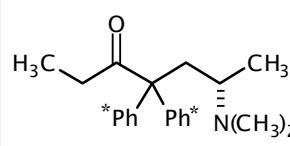
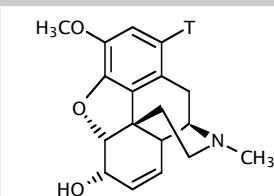
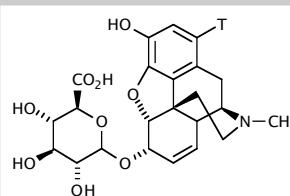
Name : [N-C<sup>3</sup>H<sub>3</sub>]Diphenhydramine

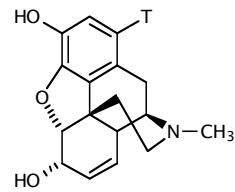
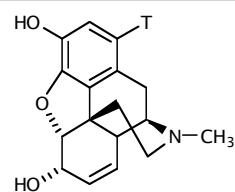
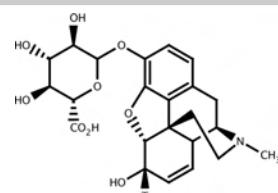
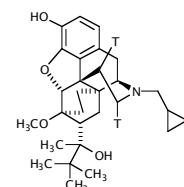
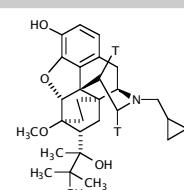
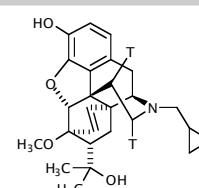
Mol. formula : C<sub>17</sub>H<sub>21</sub>NO

FW : 261.38    DEA schedule : 0



**Opioids: Meperidine Class****Catalog number :** 9230-003**Name :** [2,3-<sup>3</sup>H<sub>2</sub>]Meperidine hydrochloride**Mol. formula :** C<sub>15</sub>H<sub>22</sub>ClNO<sub>2</sub>**FW :** 287.81    **DEA schedule :** 2**Opioids: Metazocine Class****Catalog number :** 9240-003**Name :** [11,12-<sup>3</sup>H<sub>2</sub>](-)-Ethylketazocine**Mol. formula :** C<sub>19</sub>H<sub>25</sub>NO<sub>2</sub>**FW :** 303.42    **DEA schedule :** 1**Catalog number :** 9240-019**Name :** (-)-[17,18-<sup>3</sup>H]N-Allylnormetazocine**Mol. formula :** C<sub>17</sub>H<sub>23</sub>NO**FW :** 261.39    **DEA schedule :** 0**Catalog number :** 9240-040**Name :** (+)-[17,18-<sup>3</sup>H]N-Allylnormetazocine**Mol. formula :** C<sub>17</sub>H<sub>23</sub>NO**FW :** 261.39    **DEA schedule :** 0**Opioids: Methadone Class****Catalog number :** 9633-011**Name :** (-)-[o,o'-<sup>3</sup>H<sub>2</sub>(n)]-α-Acetyl-N,N-dinormethadol hydrochloride**Mol. formula :** C<sub>21</sub>H<sub>28</sub>ClNO<sub>2</sub>**FW :** 389.97    **DEA schedule :** 0**Catalog number :** 9648-012**Name :** (-)-[1,2-<sup>3</sup>H<sub>2</sub>]α-Acetylmethadol**Mol. formula :** C<sub>23</sub>H<sub>32</sub>ClNO<sub>2</sub>**FW :** 353.50    **DEA schedule :** 2

**Catalog number :** 9633-006**Name :**  $(-)[1,2-^3\text{H}]\alpha\text{-Acetylnormethadol hydrochloride}$ **Mol. formula :**  $\text{C}_{23}\text{H}_{32}\text{ClNO}_2$ **FW :** 375.94    **DEA schedule :** 1**Catalog number :** 9605-003**Name :**  $(-)[o,o'-^3\text{H}_2(\text{n})]\alpha\text{-Methadol hydrochloride}$ **Mol. formula :**  $\text{C}_{21}\text{H}_{29}\text{NO}$ **FW :** 347.93    **DEA schedule :** 1**References :** Portoghesi, PS; Williams DA *J Med Chem* 1969, 12, 839–44.**Catalog number :** 9633-015**Name :**  $(-)[1,2-^3\text{H}_2]\alpha\text{-Acetyl-N,N-dinormethadol hydrochloride}$ **Mol. formula :**  $\text{C}_{21}\text{H}_{28}\text{ClNO}_2$ **FW :** 361.9–2    **DEA schedule :** 0**Catalog number :** 9250-006**Name :**  $(\pm)[o,o'-^3\text{H}_2(\text{n})]\text{Methadone}$ **Mol. formula :**  $\text{C}_{21}\text{H}_{27}\text{NO}$ **FW :** 313.46    **DEA schedule :** 2**Opioids: Morphine Class****Catalog number :** 9050-011**Name :**  $[1-^3\text{H}]\text{Codeine}$ **Mol. formula :**  $\text{C}_{18}\text{H}_{21}\text{NO}_3$ **FW :** 301.37    **DEA schedule :** 2**Catalog number :** 9300-014**Name :**  $[1-^3\text{H}]\text{Morphine-6-glucuronide}$ **Mol. formula :**  $\text{C}_{23}\text{H}_{27}\text{NO}_9$ **FW :** 463.47    **DEA schedule :** 2

**Catalog number :** 9300-002**Name :** Tritium-labeled Morphine sulfate**Mol. formula :** C<sub>17</sub>H<sub>19</sub>NO<sub>3</sub>**FW :** 475.50    **DEA schedule :** 2**Catalog number :** 9300-006**CASRN :** 80573-75-7**Name :** [1-<sup>3</sup>H(n)]Morphine**Mol. formula :** C<sub>17</sub>H<sub>19</sub>NO<sub>3</sub>**FW :** 287.35    **DEA schedule :** 2**Catalog number :** 9300-011**Name :** Morphine-(6-<sup>3</sup>H)-3-glucuronide**Mol. formula :** C<sub>23</sub>H<sub>27</sub>NO<sub>9</sub>**FW :** 463.47    **DEA schedule :** 2**Opioids: Orvinol Class****Catalog number :** 9064-002**CASRN :** 161772-95-8**Name :** [15,16-<sup>3</sup>H<sub>2</sub>]Buprenorphine hydrochloride**Mol. formula :** C<sub>26</sub>H<sub>38</sub>ClNO<sub>4</sub>**FW :** 508.11    **DEA schedule :** 5**Notes :** Narcotic analgesic (tritium-labeled).**References :** Robinson, SE *CNS Drug Rev* 2002, 8, 377–90.**Catalog number :** 9064-003**CASRN :** 161772-95-8**Name :** [15,16-<sup>3</sup>H<sub>2</sub>]Buprenorphine**Mol. formula :** C<sub>29</sub>H<sub>41</sub>NO<sub>4</sub>**FW :** 508.11    **DEA schedule :** 3**Notes :** Narcotic analgesic (tritium-labeled).**References :** Robinson, SE *CNS Drug Rev* 2002, 8, 377–90.**Catalog number :** 9058-002**Name :** [15,16-<sup>3</sup>H<sub>2</sub>]Diprenorphine**Mol. formula :** C<sub>26</sub>H<sub>36</sub>ClNO<sub>4</sub>**FW :** 429.58    **DEA schedule :** 2**Notes :** (see footnotes 1 & 2 in Section C)

## 11 – Tritium Labeled

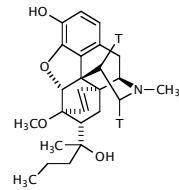
Catalog number : 9056-001

Name : [15,16-<sup>3</sup>H<sub>2</sub>]Etorphine

Mol. formula : C<sub>25</sub>H<sub>33</sub>NO<sub>4</sub>

FW : 429.58 DEA schedule : 1

Notes : (see footnotes 1 & 2 in Section C)



### Opioids: Oxymorphone Class

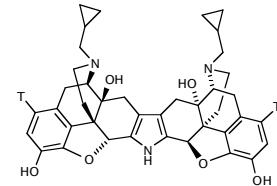
Catalog number : NOCD-084

Name : [1,1'-<sup>3</sup>H(n)]Norbinaltorphimine; [<sup>3</sup>H]norBNI

Mol. formula : C<sub>40</sub>H<sub>43</sub>N<sub>3</sub>O<sub>6</sub>

FW : 665.80 DEA schedule : 0

References : Birch, PJ; et al. *Eur J Pharmacol* 1987, 144, 405-8.  
Portoghesi, PS; Lipkowski, AW; Takemori, AE *Life Sci* 1987, 40, 1287-92.

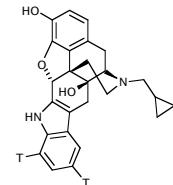


Catalog number : 9652-061

Name : [5',7'-<sup>3</sup>H<sub>2</sub>]Naltrindole

Mol. formula : C<sub>26</sub>H<sub>26</sub>N<sub>2</sub>O<sub>3</sub>

FW : 418.51 DEA schedule : 0

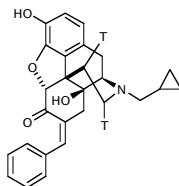


Catalog number : 9652-068

Name : [15,16-<sup>3</sup>H]-7-Benzylidine-7-dehydronaltrexone; [<sup>3</sup>H]BNTX

Mol. formula : C<sub>27</sub>H<sub>28</sub>CINO<sub>4</sub>

FW : 433.52 DEA schedule : 0



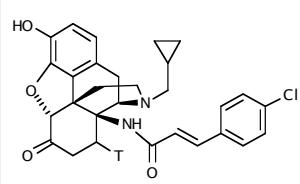
Catalog number : NOCD-079

Name : Tritium-labeled Clorcinnamox

Mol. formula : C<sub>29</sub>H<sub>29</sub>CIN<sub>2</sub>O<sub>4</sub>

FW : 507.01 DEA schedule : 0

References : Comer, SD; Burke, TF; Lewis, JW; Woods, JH *J Pharmacol Exp Ther* 1992, 262, 1051-6.



Catalog number : 9333-012

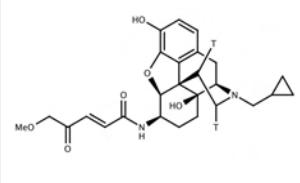
Name : [15,16-<sup>3</sup>H<sub>2</sub>]-6β-Funaltrexamine

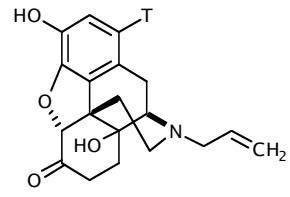
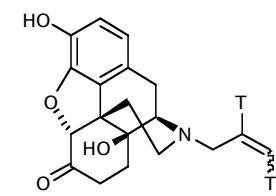
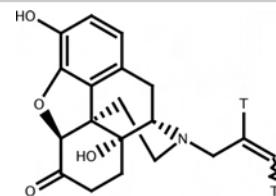
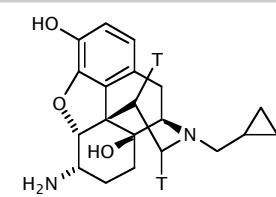
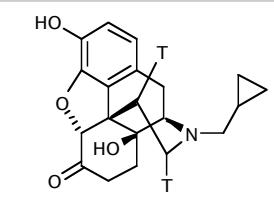
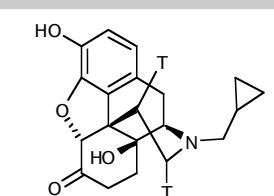
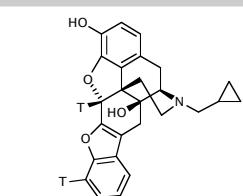
Mol. formula : C<sub>26</sub>H<sub>33</sub>CIN<sub>2</sub>O<sub>6</sub>

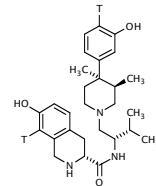
FW : 458.53 DEA schedule : 2

Notes : Irreversible  $\mu$ -opioid receptor antagonist (tritium-labeled).

References : Portoghesi, PS; el Kouhen, R; Law, PY; Loh, HH; Le Bourdonnec, B *Farmaco* 2001, 56, 191-6.



**Catalog number :** 9652-031**Name :**  $(-)[1-^3\text{H}(\text{n})]\text{Naloxone}$ **Mol. formula :**  $\text{C}_{19}\text{H}_{21}\text{NO}_4$ **FW :** 329.38    **DEA schedule :** 0**Catalog number :** 9652-035**Name :**  $(-)[19,20-^3\text{H}_2]\text{Naloxone}$ **Mol. formula :**  $\text{C}_{19}\text{H}_{21}\text{NO}_4$ **FW :** 331.39    **DEA schedule :** 0**Catalog number :** 9652-039**Name :**  $(+)[19,20-^3\text{H}_2]\text{Naloxone}$ **Mol. formula :**  $\text{C}_{19}\text{H}_{21}\text{NO}_4$ **FW :** 331.39    **DEA schedule :** 0**Catalog number :** 9333-009**Name :**  $[15,16-^3\text{H}_2]-6\beta\text{-Naltrexamine}$ **Mol. formula :**  $\text{C}_{20}\text{H}_{26}\text{N}_2\text{O}_3$ **FW :** 346.45    **DEA schedule :** 2**Catalog number :** 9652-012**Name :**  $[15,16-^3\text{H}_2]\text{Naltrexone}$ **Mol. formula :**  $\text{C}_{20}\text{H}_{23}\text{NO}_4$ **FW :** 345.42    **DEA schedule :** 0**Catalog number :** 9652-013**Name :**  $[15,16-^3\text{H}_2]\text{Naltrexone hydrochloride}$ **Mol. formula :**  $\text{C}_{20}\text{H}_{24}\text{ClNO}_4$ **FW :** 381.88    **DEA schedule :** 0**Catalog number :** 9652-065**Name :** Tritium-labeled Naltriben**Mol. formula :**  $\text{C}_{26}\text{H}_{25}\text{NO}_4$ **FW :** 419.50    **DEA schedule :** 0**Notes :** Selective  $\delta$ -opioid receptor antagonist (tritium-labeled).**References :** Sofuooglu, M; Portoghese, PS; Takemori, AE *J Pharmacol Exp Ther* 1991, 257, 676–80.

**Opioids: Phenylpiperidine Class****Catalog number :** NOCD-059**Name :** [<sup>3</sup>H]JDTic**Mol. formula :** C<sub>28</sub>H<sub>39</sub>N<sub>3</sub>O<sub>3</sub>**FW :** 469.64    **DEA schedule :** 0**Notes :** Selective kappa-opioid antagonist (tritium-labeled).**References :** Thomas, JB; et al. J Med Chem 2001, 44, 2687-90.**Peptides: Cannabinoid-related****Catalog number :** MPSP-096**Name :** [<sup>3</sup>H<sub>2</sub>]Hemopressin**Mol. formula :** C<sub>53</sub>H<sub>77</sub>N<sub>13</sub>O<sub>12</sub>**FW :** 1092.3**Notes :** Radiolabeled hemopressin (MPSP-90; PEPT-053).

H-Pro-Val-Asn-[3H]Phe-Lys-[3H]Phe-Leu-Ser-His-OH

**Catalog number :** MPSP-091**Name :** [<sup>3</sup>H<sub>4</sub>]Hemopressin**Mol. formula :** C<sub>53</sub>H<sub>77</sub>N<sub>13</sub>O<sub>12</sub>**FW :** 1096.3**Notes :** Radiolabeled hemopressin (MPSP-90; PEPT-053).H-[3H<sub>2</sub>]Pro-Val-Asn-[3H]Phe-Lys-[3H]Phe-Leu-Ser-His-OH**Catalog number :** MPSP-097**Name :** [<sup>3</sup>H]Leu<sup>6</sup>-Hemopressin**Mol. formula :** C<sub>50</sub>H<sub>79</sub>N<sub>13</sub>O<sub>12</sub>**FW :** 1056.3**Notes :** Radiolabeled Leu<sup>6</sup>-Hemopressin (PEPT-054).

H-Pro-Val-Asn-[3H]Phe-Lys-Leu-Leu-Ser-His-OH

**Catalog number :** MPSP-093**Name :** [<sup>3</sup>H<sub>2</sub>]Tyr<sup>7</sup>-Hemopressin (1-6)**Mol. formula :** C<sub>47</sub>H<sub>61</sub>N<sub>9</sub>O<sub>10</sub>H<sub>2</sub>**FW :** 918.1**Notes :** Radioligand for MPSP-092.H-Pro-Val-Asn-Phe-Lys-Phe-[3H<sub>2</sub>]Tyr-OH

**Peptides: Opioid****Catalog number :** MPSP-014**Name :** [<sup>3</sup>H]CTAP**Mol. formula :** C<sub>51</sub>H<sub>68</sub>N<sub>13</sub>O<sub>11</sub>S<sub>23</sub>H**FW :** 1105.0**Notes :** Radioactive ligand for MPSP-013**References :** Abbruscato, TJ; et al. *J Pharmacol Exp Ther* 1997, 280, 402–9.

H-d-Phe[3H]-c[Cys-Tyr-d-Trp-Arg-Thr-Pen]-Thr-NH<sub>2</sub>

**Catalog number :** MPSP-007**Name :** [<sup>3</sup>H<sub>2</sub>]DADLE**Mol. formula :** C<sub>29</sub>H<sub>37</sub>N<sub>5</sub>O<sub>7</sub><sub>3</sub>H<sub>2</sub>**FW :** 573.7**Notes :** Tritiated DADLE**References :** Luciano, MG; et al. *Brain Res Bull* 1981, 7, 677–82.

H-Tyr[3H<sub>2</sub>]-d-Ala-Gly-Phe-d-Leu-OH

**Catalog number :** MPSP-035**Name :** [<sup>3</sup>H<sub>2</sub>]DALCE**Mol. formula :** C<sub>33</sub>H<sub>44</sub>N<sub>6</sub>O<sub>10</sub>S<sub>3</sub>H<sub>2</sub>**FW :** 677.0**Notes :** Radioactive ligand for MPSP-034

H-Tyr[3H<sub>2</sub>]-d-Ala-Gly-Phe-Leu-Cys-OH

**Catalog number :** MPSP-028**Name :** [<sup>3</sup>H<sub>2</sub>]DALDA**Mol. formula :** C<sub>30</sub>H<sub>43</sub>N<sub>9</sub>O<sub>5</sub><sub>3</sub>H<sub>2</sub>**FW :** 615.8**Notes :** Radioactive ligand for MPSP-027

H-Tyr[3H<sub>2</sub>]-d-Arg-Phe-Lys-NH<sub>2</sub>

**Catalog number :** MPSP-012**Name :** [<sup>3</sup>H<sub>2</sub>]DAMGO**Mol. formula :** C<sub>26</sub>H<sub>33</sub>N<sub>5</sub>O<sub>6</sub><sub>3</sub>H<sub>2</sub>**FW :** 517.7**Notes :** Radioactive ligand for MPSP-011**References :** Zajac, JM; Roques BP *Life Sci* 1983, 33 Suppl 1, 155–8.

H-Tyr[3H<sub>2</sub>]-d-Ala-Gly-N $\alpha$ -Me-Phe-Gly-ol

**Catalog number :** MPSP-031**Name :** [<sup>3</sup>H<sub>2</sub>]Deltorphin I**Mol. formula :** C<sub>37</sub>H<sub>50</sub>N<sub>8</sub>O<sub>10</sub><sub>3</sub>H<sub>2</sub>**FW :** 772.9**Notes :** Radioactive ligand for MPSP-030**References :** Erspamer, V; et al. *Proc Natl Acad Sci USA* 1989, 86, 5188.

H-Tyr[3H<sub>2</sub>]-d-Ala-Phe-Asp-Val-Val-Gly-NH<sub>2</sub>

## 11 – Tritium Labeled

**Catalog number :** MPSP-037

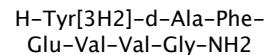
**Name :** [<sup>3</sup>H<sub>2</sub>]Deltorphin II

**Mol. formula :** C<sub>38</sub>H<sub>52</sub>N<sub>8</sub>O<sub>103</sub>H<sub>2</sub>

**FW :** 786.9

**Notes :** Radioactive ligand for MPSP-036

**References :** Erspamer, V; et al. *Proc Natl Acad Sci USA* 1989, 86, 5188.



**Catalog number :** MPSP-002

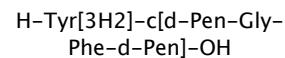
**Name :** [<sup>3</sup>H<sub>2</sub>]DPDPE

**Mol. formula :** C<sub>30</sub>H<sub>37</sub>N<sub>7</sub>O<sub>5</sub>S<sub>23</sub>H<sub>2</sub>

**FW :** 649.8

**Notes :** Radioactive ligand for MPSP-001

**References :** Cotton, R; et al. *Eur J Pharmacol* 1984, 97, 331-2.



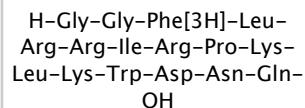
**Catalog number :** MPSP-045

**Name :** [<sup>3</sup>H<sub>2</sub>]p-Cl-Phe-DPDPE

**Mol. formula :** C<sub>30</sub>H<sub>36</sub>ClN<sub>5</sub>O<sub>7</sub>S<sub>23</sub>H<sub>2</sub>

**FW :** 684.4

**Notes :** Radioactive ligand for MPSP-044



**Catalog number :** MPSP-004

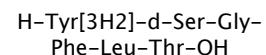
**Name :** [<sup>3</sup>H<sub>2</sub>]DSLET

**Mol. formula :** C<sub>33</sub>H<sub>44</sub>N<sub>6</sub>O<sub>103</sub>H<sub>2</sub>

**FW :** 690.9

**Notes :** Radioactive ligand for MPSP-003

**References :** David, M; et al. *Eur J Pharmacol* 1982, 78, 385-7.



**Catalog number :** MPSP-033

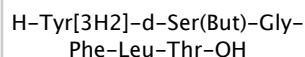
**Name :** [<sup>3</sup>H<sub>2</sub>]DSTBULET

**Mol. formula :** C<sub>33</sub>H<sub>44</sub>N<sub>6</sub>O<sub>103</sub>H<sub>2</sub>

**FW :** 746.9

**Notes :** Radioactive ligand for MPSP-032

**References :** Delay-Goyet, P *NIDA Res Mono* 1986, 75, 197-200.



**Catalog number :** MPSP-020

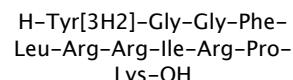
**Name :** [<sup>3</sup>H<sub>2</sub>]Dynorphin (1-11)

**Mol. formula :** C<sub>63</sub>H<sub>101</sub>N<sub>21</sub>O<sub>133</sub>H<sub>2</sub>

**FW :** 1366.7

**Notes :** Radioactive ligand for MPSP-019

**References :** Chavkin, C; Goldstein, A *Proc Natl Acad Sci USA* 1981, 78, 6543-7.



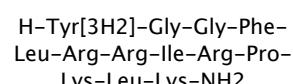
**Catalog number :** MPSP-018

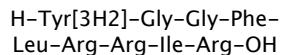
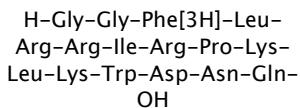
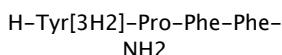
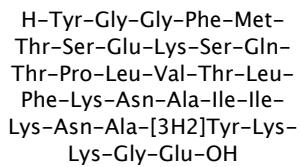
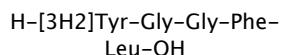
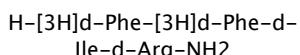
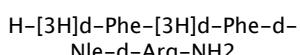
**Name :** [<sup>3</sup>H<sub>2</sub>]Dynorphin (1-13) amide

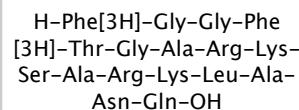
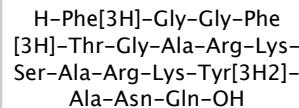
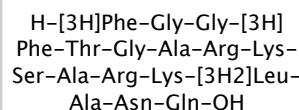
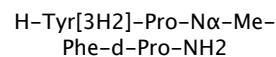
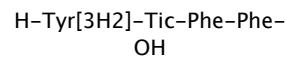
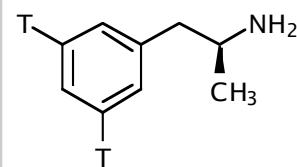
**Mol. formula :** C<sub>75</sub>H<sub>125</sub>N<sub>25</sub>O<sub>143</sub>H<sub>2</sub>

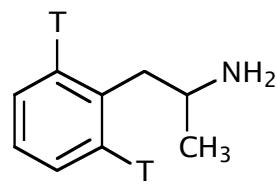
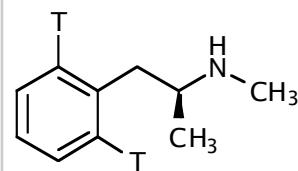
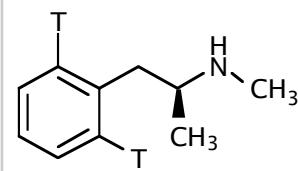
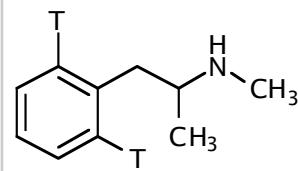
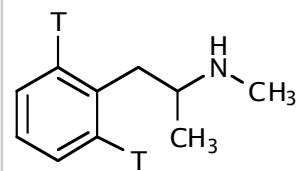
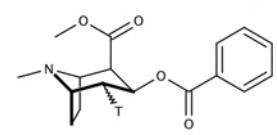
**FW :** 1607.2

**Notes :** Radioactive ligand for MPSP-017



**Catalog number :** MPSP-022**Name :** [<sup>3</sup>H<sub>2</sub>]Dynorphin (1-9)**Mol. formula :** C<sub>52</sub>H<sub>82</sub>N<sub>18</sub>O<sub>113</sub>H<sub>2</sub>**FW :** 1141.5**Notes :** Radioactive ligand for MPSP-021**References :** Robson, LE; et al. *Life Sci* 1983, 33 Suppl 1, 283-6.  
Wood, MS; Rodriguez FD; Traynor JR *Neuropharmacology* 1989, 28, 1041-6.**Catalog number :** MPSP-041**Name :** [<sup>3</sup>H]Dynorphin (2-17)**Mol. formula :** C<sub>90</sub>H<sub>155</sub>N<sub>30</sub>O<sub>213</sub>H**FW :** 1986.8**Notes :** Radioactive ligand for MPSP-040**Catalog number :** MPSP-074**Name :** [<sup>3</sup>H<sub>2</sub>]Endomorphin-2**Mol. formula :** C<sub>32</sub>H<sub>35</sub>N<sub>5</sub>O<sub>53</sub>H<sub>2</sub>**FW :** 575.7**Notes :** Radioactive ligand for MPSP-073**References :** Spetea, M; et al. *Biochem Biophys Res Commun* 1998, 250, 720-5.**Catalog number :** MPSP-025**Name :** [<sup>3</sup>H<sub>2</sub>]β-Endorphin**Mol. formula :** C<sub>158</sub>H<sub>249</sub>N<sub>39</sub>O<sub>46</sub>S<sub>3</sub>H<sub>2</sub>**FW :** 3469.6**Notes :** Radioactive ligand for MPSP-024**References :** Li, CH; et al. *Proc Natl Acad Sci USA* 1980, 77, 2303-4.**Catalog number :** MPSP-081**Name :** [<sup>3</sup>H<sub>2</sub>]Leu-Enkephalin-acid**Mol. formula :** C<sub>28</sub>H<sub>37</sub>N<sub>5</sub>O<sub>7</sub>**FW :** 559.3**Notes :** Radioactive ligand for MPSP-080.**Catalog number :** MPSP-079**Name :** [<sup>3</sup>H<sub>2</sub>]Kaffiralin-1**Mol. formula :** C<sub>30</sub>H<sub>42</sub>N<sub>8</sub>O<sub>43</sub>H<sub>2</sub>**FW :** 584.7**Notes :** Radioactive ligand for MPSP-076**References :** Dooley, CT; et al. *J Biol Chem* 1998, 273, 18848-56.**Catalog number :** MPSP-077**Name :** [<sup>3</sup>H<sub>2</sub>]Kaffiralin-2**Mol. formula :** C<sub>30</sub>H<sub>42</sub>N<sub>8</sub>O<sub>43</sub>H<sub>2</sub>**FW :** 584.7**Notes :** Radioactive ligand for MPSP-076.

**Catalog number :** MPSP-059**Name :** [<sup>3</sup>H<sub>2</sub>]Orphanin FQ; [<sup>3</sup>H<sub>2</sub>]Nociceptin**Mol. formula :** C<sub>79</sub>H<sub>127</sub>N<sub>27</sub>O<sub>223</sub>H<sub>2</sub>**FW :** 1813.4**Notes :** Radioactive ligand for MPSP-058**References :** Dooley, CT; Houghten RA *Life Sci* 1996, 59, PL23–9.**Catalog number :** MPSP-082**Name :** [<sup>3</sup>H<sub>4</sub>]Tyr<sup>14</sup>Orphanin FQ**Mol. formula :** C<sub>82</sub>H<sub>123</sub>N<sub>27</sub>O<sub>233</sub>H<sub>4</sub>**FW :** 1867.1**Notes :** Radioactive ligand for MPSP-058**References :** Dooley, CT; et al. *Life Science* 1996, 59, PL23–PL29.**Catalog number :** MPSP-095**Name :** [<sup>3</sup>H<sub>4</sub>]Orphanin FQ**Mol. formula :** C<sub>79</sub>H<sub>125</sub>N<sub>27</sub>O<sub>223</sub>H<sub>4</sub>**FW :** 1817.4**Notes :** Radioactive ligand for MPSP-058.**Catalog number :** MPSP-010**Name :** [<sup>3</sup>H<sub>2</sub>]PLO17**Mol. formula :** C<sub>29</sub>H<sub>35</sub>N<sub>5</sub>O<sub>53</sub>H<sub>2</sub>**FW :** 539.6**Notes :** Radioactive ligand for MPSP-009.**References :** Hawkins, KN; et al. *Eur J Pharmacol* 1987, 133, 351–2.**Catalog number :** MPSP-039**Name :** [<sup>3</sup>H<sub>2</sub>]Tipp-Enkephalin**Mol. formula :** C<sub>37</sub>H<sub>36</sub>N<sub>4</sub>O<sub>63</sub>H<sub>2</sub>**FW :** 638.8**Notes :** Radioactive ligand for MPSP-038**References :** Nevin, ST; et al. *Life Sci* 1993, 53, PL57–62.**Stimulants: Amphetamine Class****Catalog number :** 1100-009**Name :** (+)-(S)-[3,5-<sup>3</sup>H(n)]Amphetamine**Mol. formula :** C<sub>9</sub>H<sub>13</sub>N**FW :** 139.22    **DEA schedule :** 2**Notes :** CNS stimulant (tritium-labeled).

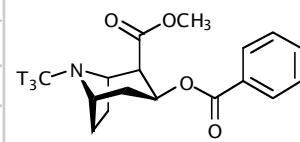
**Catalog number :** 1100-005**Name :** ( $\pm$ )-[2',6'- $^3\text{H}_2$ ]Amphetamine; 2,6-Tritioamphetamine**Mol. formula :** C<sub>9</sub>H<sub>13</sub>N**FW :** 135.21    **DEA schedule :** 2**Stimulants: Methamphetamine Class****Catalog number :** 1105-004**Name :** (+)-[2',6'- $^3\text{H}(n)$ ]Methamphetamine hydrochloride**Mol. formula :** C<sub>10</sub>H<sub>16</sub>CIN**FW :** 185.69    **DEA schedule :** 2**Notes :** CNS stimulant (tritium-labeled).**Catalog number :** 1105-008**Name :** (+)-[2,6- $^3\text{H}(n)$ ]Methamphetamine**Mol. formula :** C<sub>10</sub>H<sub>15</sub>N**FW :** 153.25    **DEA schedule :** 2**Notes :** CNS stimulant (tritium-labeled).**Catalog number :** 1105-006**Name :** ( $\pm$ )-[2',6'- $^3\text{H}(n)$ ]Methamphetamine hydrochloride**Mol. formula :** C<sub>10</sub>H<sub>16</sub>CIN**FW :** 189.71    **DEA schedule :** 2**Notes :** CNS stimulant (tritium-labeled).**Catalog number :** 1105-007**Name :** ( $\pm$ )-[2,6- $^3\text{H}(n)$ ]Methamphetamine**Mol. formula :** C<sub>10</sub>H<sub>15</sub>N**FW :** 153.25    **DEA schedule :** 2**Notes :** CNS stimulant (tritium-labeled).**Stimulants: Tropane Class****Catalog number :** 9041-004**CASRN :** 85438-94-4**Name :** (-)-[4- $^3\text{H}$ ]Cocaine**Mol. formula :** C<sub>17</sub>H<sub>21</sub>NO<sub>4</sub>**FW :** 303.35    **DEA schedule :** 2

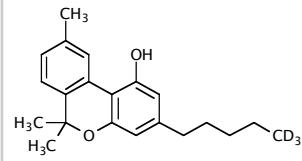
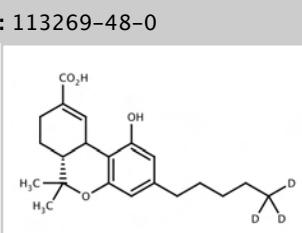
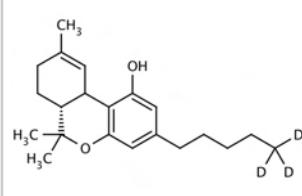
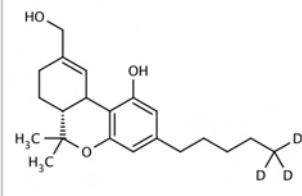
Catalog number : 9041-003

Name : (-)-[N-C<sup>3</sup>H<sub>3</sub>]Cocaine

Mol. formula : C<sub>17</sub>H<sub>21</sub>NO<sub>4</sub>

FW : 309.38    DEA schedule : 2



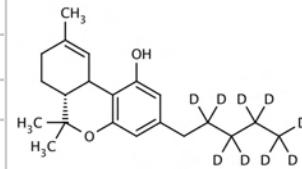
**Cannabinoids: Tetrahydrocannabinol Class****Catalog number :** 7360-014**Name :** [5'-<sup>2</sup>H<sub>3</sub>]Cannabinol**Mol. formula :** C<sub>21</sub>H<sub>26</sub>O<sub>2</sub>**FW :** 310.43    **DEA schedule :** 1**Notes :** *Inactive constituent of cannabis (deuterium-labeled).***Catalog number :** 7370-038**Name :** [5'-<sup>2</sup>H<sub>3</sub>]-11-nor- $\Delta^8$ -THC-9-carboxylic acid**Mol. formula :** C<sub>21</sub>H<sub>28</sub>O<sub>4</sub>**FW :** 347.46    **DEA schedule :** 1**Catalog number :** 7370-003**CASRN :** 113269-48-0**Name :** [5'-<sup>2</sup>H<sub>3</sub>]9-Carboxy-11-nor- $\Delta^9$ -THC**Mol. formula :** C<sub>21</sub>H<sub>28</sub>O<sub>4</sub>**FW :** 347.46    **DEA schedule :** 1**Notes :** *Urinary metabolite of THC (deuterium-labeled).***Catalog number :** 7370-005**CASRN :** 81586-39-2**Name :** Deuterium-labeled  $\Delta^9$ -THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>**FW :** 317    **DEA schedule :** 1**Notes :** *Hallucinogen; psychotropic; analgesic (deuterium-labeled).***Catalog number :** 7370-010**CASRN :** 130410-26-3**Name :** [5'-<sup>2</sup>H<sub>3</sub>]-11-Hydroxy- $\Delta^9$ -THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>3</sub>**FW :** 333    **DEA schedule :** 1

Catalog number : 7370-025

Name : [2',2',3',3',4',4',5',5',5'-<sup>2</sup>H<sub>9</sub>] $\Delta^9$ -THCMol. formula : C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>

FW : 323.52    DEA schedule : 1

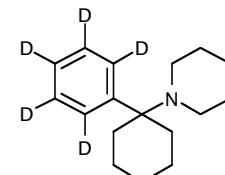
Notes : Hallucinogen; psychotropic; analgesic (deuterium-labeled).

**Dissociatives: Phencyclidine Class**

Catalog number : 7471-003

Name : [Phenyl-2,3,4,5,6-<sup>2</sup>H<sub>5</sub>]Phencyclidine; [Phenyl-2,3,4,5,6-<sup>2</sup>H<sub>5</sub>]PCPMol. formula : C<sub>17</sub>H<sub>25</sub>N

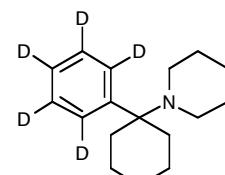
FW : 248.42    DEA schedule : 2



Catalog number : 7471-006

Name : [Phenyl-<sup>2</sup>H<sub>5</sub>]Phencyclidine hydrochloride; [Phenyl-<sup>2</sup>H<sub>5</sub>]PCP HClMol. formula : C<sub>17</sub>H<sub>26</sub>CIN

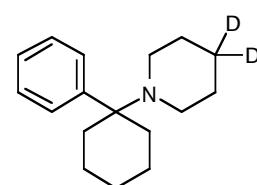
FW : 284.89    DEA schedule : 2



Catalog number : 7471-008

Name : [Piperidino-4,4-<sup>2</sup>H<sub>2</sub>]Phencyclidine hydrochloride;  
[Piperidino-4,4-<sup>2</sup>H<sub>2</sub>]PCPMol. formula : C<sub>17</sub>H<sub>26</sub>CIN

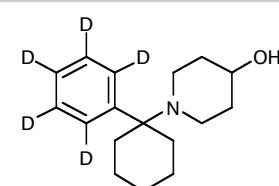
FW : 281.86    DEA schedule : 2



Catalog number : 7471-082

Name : [Phenyl-<sup>2</sup>H<sub>5</sub>]-1-(1-Phenylcyclohexyl)-4-hydroxypiperidineMol. formula : C<sub>17</sub>H<sub>25</sub>NO

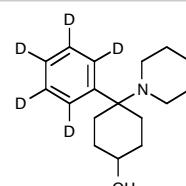
FW : 264.43    DEA schedule : 0

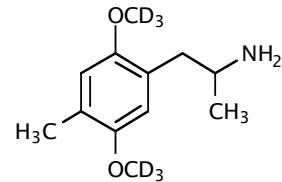
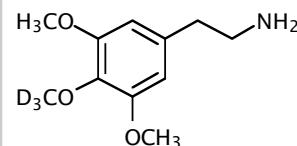
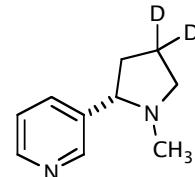
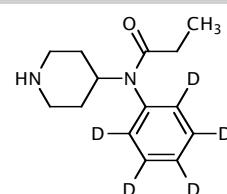
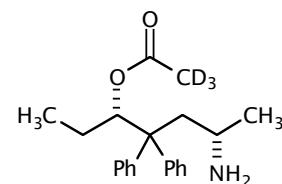


Catalog number : 7471-084

Name : [Phenyl-<sup>2</sup>H<sub>5</sub>]-1-(1-Phenyl-4-hydroxycyclohexyl)piperidine (*cis/trans*)Mol. formula : C<sub>17</sub>H<sub>25</sub>NO

FW : 264.43    DEA schedule : 0



**Hallucinogens: Amphetamine Class****Catalog number :** 7395-004**Name :** [OC<sup>2</sup>H<sub>3</sub>]-2,5-Dimethoxy-4-methylamphetamine HCl; [OC<sup>2</sup>H<sub>3</sub>]DOM**Mol. formula :** C<sub>12</sub>H<sub>20</sub>ClNO<sub>2</sub>**FW :** 251.78    **DEA schedule :** 1**Hallucinogens: Phenethylamine Class****Catalog number :** 7381-002**Name :** [4'-OC<sup>2</sup>H<sub>3</sub>]Mescaline hydrochloride**Mol. formula :** C<sub>11</sub>H<sub>18</sub>ClNO<sub>3</sub>**FW :** 247.72    **DEA schedule :** 1**Nicotinic: Nicotine Class****Catalog number :** NICT-015**CASRN :** 121949-85-7**Name :** (–)-Nicotine-4,4-d<sub>2</sub> (–)-di-p-toluoxy-L-tartrate**Mol. formula :** C<sub>30</sub>H<sub>32</sub>N<sub>2</sub>O<sub>8</sub>**FW :** 550.60    **DEA schedule :** 0**References :** Jacob, PJ *Labelled Comp Radiopharm* 1988, 25, 1117–28.**Opioids: Fentanyl Class****Catalog number :** 9801-008**Name :** [Phenyl-<sup>2</sup>H<sub>5</sub>]N-4-Piperidyl-N-phenylpropanamide**Mol. formula :** C<sub>14</sub>H<sub>20</sub>N<sub>2</sub>O**FW :** 237.36    **DEA schedule :** 0**Opioids: Methadone Class****Catalog number :** 9633-012**Name :** (–)-[Acetyl-<sup>2</sup>H<sub>3</sub>]α-Acetyl-N,N-dinormethadol hydrochloride**Mol. formula :** C<sub>21</sub>H<sub>28</sub>ClNO<sub>2</sub>**FW :** 361.92    **DEA schedule :** 0

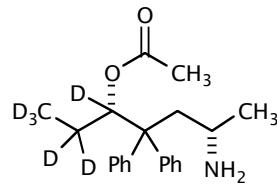
## 12 – Deuterium Labeled

**Catalog number :** 9633-014

**Name :**  $(-)[1,1,1,2,2,3-^2\text{H}_6]\alpha\text{-Acetyl-N,N-dinormethadol hydrochloride}$

**Mol. formula :**  $\text{C}_{21}\text{H}_{28}\text{ClNO}_2$

**FW :** 361.92    **DEA schedule :** 0

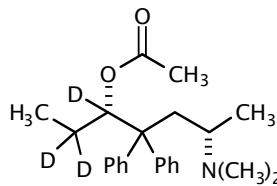


**Catalog number :** 9648-016

**Name :**  $(-)[2,2,3-^2\text{H}_3]\alpha\text{-Acetylmethadol hydrochloride}$

**Mol. formula :**  $\text{C}_{23}\text{H}_{32}\text{ClNO}_2$

**FW :** 353.50    **DEA schedule :** 2

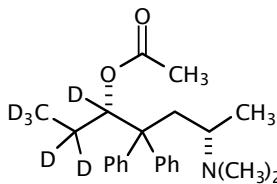


**Catalog number :** 9648-010

**Name :**  $(-)[1,1,1,2,2,3-^2\text{H}_6]\alpha\text{-Acetylmethadol hydrochloride}$

**Mol. formula :**  $\text{C}_{24}\text{H}_{34}\text{ClNO}$

**FW :** 389.97    **DEA schedule :** 2

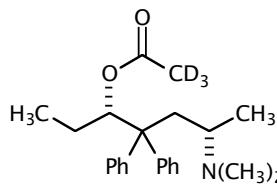


**Catalog number :** 9648-011

**Name :**  $(-)[\text{Acetyl}-^2\text{H}_3]\alpha\text{-acetylmethadol hydrochloride}$

**Mol. formula :**  $\text{C}_{21}\text{H}_{28}\text{ClNO}_2$

**FW :** 389.97    **DEA schedule :** 2



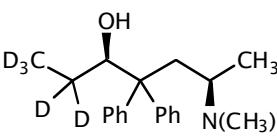
**Catalog number :** 9605-010

**Name :**  $[1,1,1,2,2-^2\text{H}_5]\alpha\text{-Methadol hydrochloride}$

**Mol. formula :**  $\text{C}_{21}\text{H}_{30}\text{ClNO}$

**FW :** 347.93    **DEA schedule :** 1

**References :** Portoghese, PS; Williams DA *J Med Chem* 1969, 12, 839–44.

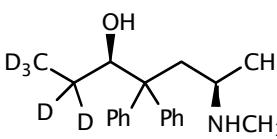


**Catalog number :** 9605-021

**Name :**  $[1,1,1,2,2-^2\text{H}_5]\alpha\text{-Normethadol perchlorate}$

**Mol. formula :**  $\text{C}_{20}\text{H}_{28}\text{ClNO}_5$

**FW :** 397.90    **DEA schedule :** 1

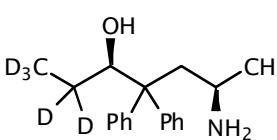


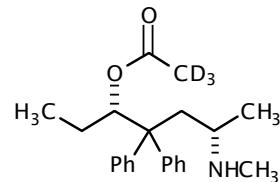
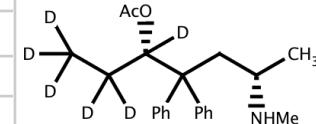
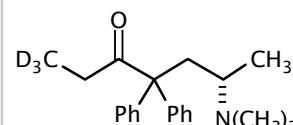
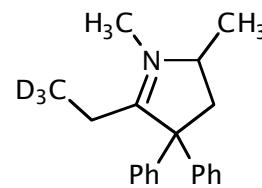
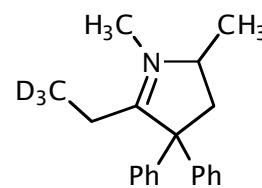
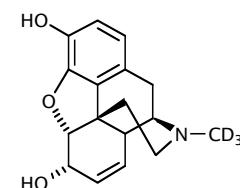
**Catalog number :** 9605-031

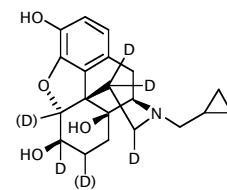
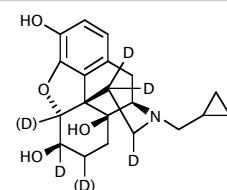
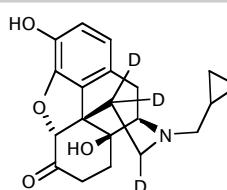
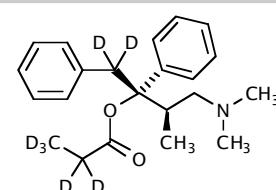
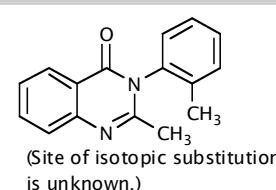
**Name :**  $[1,1,1,2,2-^2\text{H}_5]\alpha\text{-N,N-Dinormethadol maleate}$

**Mol. formula :**  $\text{C}_{19}\text{H}_{25}\text{NO}$

**FW :** 399.49    **DEA schedule :** 1

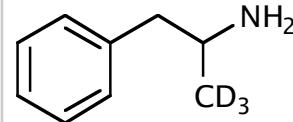
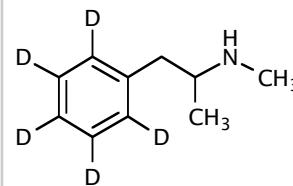
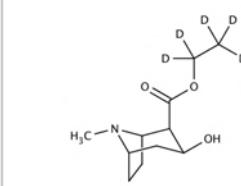
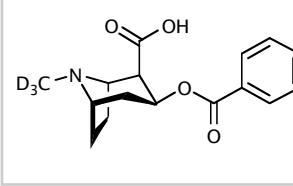
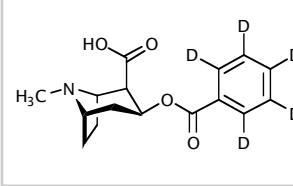
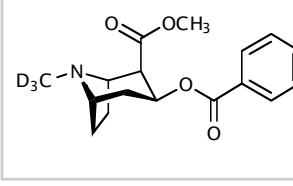


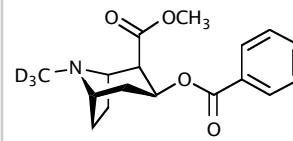
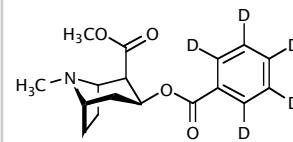
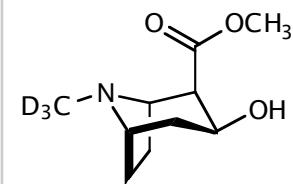
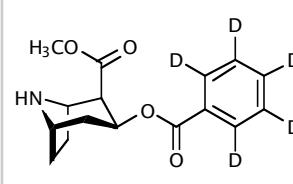
**Catalog number :** 9633-003**Name :** (–)[Acetyl–<sup>2</sup>H<sub>3</sub>]α–Acetylnormethadol hydrochloride**Mol. formula :** C<sub>22</sub>H<sub>30</sub>CINO<sub>2</sub>**FW :** 375.94    **DEA schedule :** 1**Catalog number :** 9633-004**Name :** (–)[1,1,1,2,2,3–<sup>2</sup>H<sub>6</sub>]α–Acetylnormethadol hydrochloride**Mol. formula :** C<sub>23</sub>H<sub>22</sub>CINO<sub>2</sub>**FW :** 375.94    **DEA schedule :** 1**Catalog number :** 9250-011**Name :** (+)-[1,1,1–<sup>2</sup>H<sub>3</sub>]Methadone hydrochloride**Mol. formula :** C<sub>21</sub>H<sub>28</sub>CINO**FW :** 348.92    **DEA schedule :** 2**Catalog number :** 9250-027**Name :** [Ethyl-2',2',2'-<sup>2</sup>H<sub>3</sub>]-1,5-Dimethyl-3,3-diphenyl-2-ethylpyrrolinium perchlorate**Mol. formula :** C<sub>20</sub>H<sub>25</sub>CINO<sub>4</sub>**FW :** 384.91    **DEA schedule :** 0**Catalog number :** 9250-032**Name :** [Ethyl-2',2',2'-<sup>2</sup>H<sub>3</sub>]-3,3-Diphenyl-2-ethyl-5-methyl-1-pyrroline hydrochloride**Mol. formula :** C<sub>20</sub>H<sub>25</sub>CIN**FW :** 302.86    **DEA schedule :** 0**Opioids: Morphine Class****Catalog number :** 9300-005**CASRN :** 67293-88-3**Name :** [N–C<sup>2</sup>H<sub>3</sub>]Morphine**Mol. formula :** C<sub>17</sub>H<sub>19</sub>NO<sub>3</sub>**FW :** 288.36    **DEA schedule :** 2

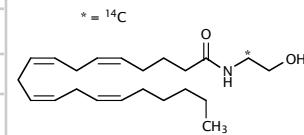
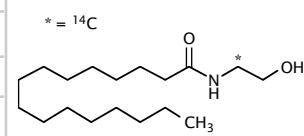
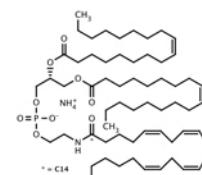
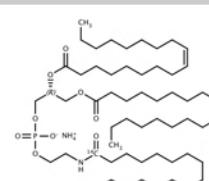
**Opioids: Oxymorphone Class****Catalog number :** 9652-057**Name :** [5,6,7,15,15,16-<sup>2</sup>H<sub>6</sub>]-6α-Naltrexol**Mol. formula :** C<sub>20</sub>H<sub>25</sub>NO<sub>4</sub>**FW :** 349.45    **DEA schedule :** 0**Catalog number :** 9652-052**Name :** [5,6,7,15,15,16-<sup>2</sup>H<sub>6</sub>]-6β-Naltrexol hydrochloride**Mol. formula :** C<sub>20</sub>H<sub>26</sub>CINO<sub>4</sub>**FW :** 385.91    **DEA schedule :** 0**Catalog number :** 9652-014**Name :** [15,15,16-<sup>2</sup>H<sub>3</sub>]Naltrexone**Mol. formula :** C<sub>20</sub>H<sub>23</sub>NO<sub>4</sub>**FW :** 344.42    **DEA schedule :** 0**Opioids: Propoxyphene Class****Catalog number :** 9273-004**Name :** [<sup>2</sup>H<sub>7</sub>]Propoxyphene hydrochloride**Mol. formula :** C<sub>22</sub>H<sub>29</sub>NO<sub>2</sub>**FW :** 346.51    **DEA schedule :** 2**Sedatives & Hypnotics: Methaqualone Class****Catalog number :** 2565-001**CASRN :** 72-44-6**Name :** [<sup>2</sup>H<sub>4</sub>]Methaqualone**Mol. formula :** C<sub>16</sub>H<sub>14</sub>N<sub>2</sub>O**FW :** 254.32    **DEA schedule :** 1

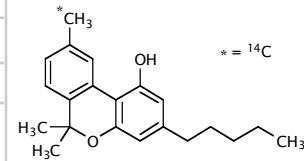
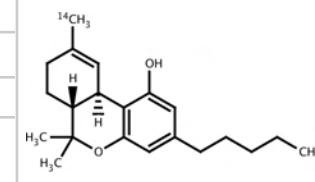
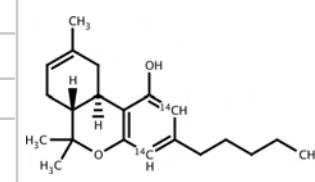
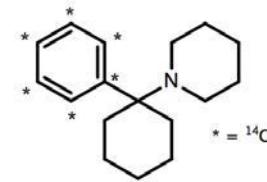
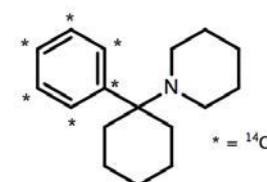
**Stimulants: Amphetamine Class****Catalog number :** 1100-004**CASRN :** 38875-35-3**Name :** ( $\pm$ )-[1,1,1-<sup>2</sup>H<sub>3</sub>]Amphetamine sulfate**Mol. formula :** C<sub>9</sub>H<sub>13</sub>N**FW :** 374.53**DEA schedule :** 2

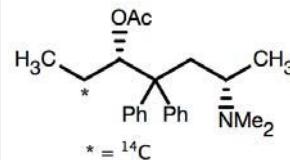
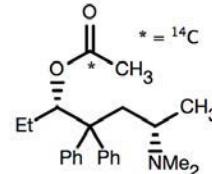
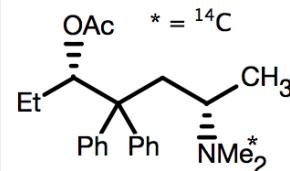
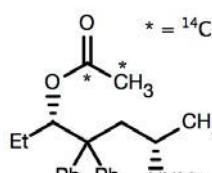
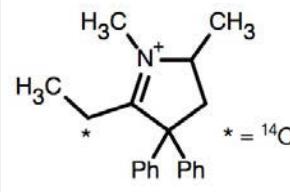
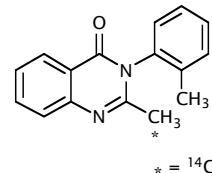
**References :** Cho, AK; *et al.*., *Anal Chem* 1973, 45, 570-4.  
Valtier, S; Cody, JT *J Anal Toxicol* 1995, 19, 375-80.

**Stimulants: Methamphetamine Class****Catalog number :** 1105-002**Name :** ( $\pm$ )-[2',3',4',5',6'-<sup>2</sup>H<sub>5</sub>]Methamphetamine hydrochloride**Mol. formula :** C<sub>10</sub>H<sub>16</sub>ClN**FW :** 190.72**DEA schedule :** 2**Stimulants: Tropane Class****Catalog number :** 9180-021**new****CASRN :** 259526-73-3**Name :** Ecgonine (1,1,2,2,2-<sup>2</sup>H<sub>5</sub>)ethyl ester perchlorate**Mol. formula :** C<sub>11</sub>H<sub>14</sub>D<sub>5</sub>NO<sub>3</sub> • HClO<sub>4</sub>**FW :** 318.76**DEA schedule :** 2**Catalog number :** 9180-003**Name :** (-)-[N-C<sup>2</sup>H<sub>3</sub>]Benzoylecgonine**Mol. formula :** C<sub>16</sub>H<sub>19</sub>NO<sub>4</sub>**FW :** 292.34**DEA schedule :** 2**Catalog number :** 9180-011**Name :** (-)-[Phenyl-<sup>2</sup>H<sub>5</sub>]Benzoylecgonine**Mol. formula :** C<sub>16</sub>H<sub>19</sub>NO<sub>4</sub>**FW :** 294.36**DEA schedule :** 2**Catalog number :** 9041-006**Name :** (-)-[N-C<sup>2</sup>H<sub>3</sub>]Cocaine**Mol. formula :** C<sub>17</sub>H<sub>21</sub>NO<sub>4</sub>**FW :** 306.37**DEA schedule :** 2

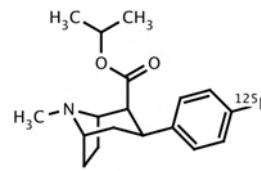
**Catalog number :** 9041-007**Name :** (-)-[N-C<sup>2</sup>H<sub>3</sub>]Cocaine hydrochloride**Mol. formula :** C<sub>17</sub>H<sub>22</sub>ClNO<sub>4</sub>**FW :** 342.83    **DEA schedule :** 2**Catalog number :** 9041-009**Name :** (-)-[Phenyl-<sup>2</sup>H<sub>5</sub>]Cocaine**Mol. formula :** C<sub>17</sub>H<sub>21</sub>NO<sub>4</sub>**FW :** 344.84    **DEA schedule :** 2**Catalog number :** 9180-007**Name :** [N-C<sup>2</sup>H<sub>3</sub>]Ecgonine methyl ester hydrochloride**Mol. formula :** C<sub>10</sub>H<sub>18</sub>ClNO<sub>3</sub>**FW :** 238.73    **DEA schedule :** 2**Catalog number :** 9041-017**Name :** (-)-[Phenyl-<sup>2</sup>H<sub>5</sub>]Norcocaine fumarate**Mol. formula :** C<sub>20</sub>H<sub>23</sub>NO<sub>8</sub>**FW :** 410.43    **DEA schedule :** 2

**Cannabinoids: Fatty Acid Derivatives (Anandamides)****Catalog number :** NOCD-007**Name :** Arachidonyl[1-<sup>14</sup>C]ethanolamide**Mol. formula :** C<sub>23</sub>H<sub>37</sub>NO<sub>2</sub>**FW :** 361.56    **DEA schedule :** 0**Cannabinoids: Fatty Acid Derivatives (Palmitoyl amides)****Catalog number :** NOCD-005**Name :** Palmitoyl[1-<sup>14</sup>C]ethanolamide**Mol. formula :** C<sub>18</sub>H<sub>37</sub>NO<sub>2</sub>**FW :** 299.49    **DEA schedule :** 0**Notes :** Cannabinoid CB2 receptor agonist (carbon-labeled).**Cannabinoids: Precursors, Biosynthetic****Catalog number :** NOCD-009**Name :** N-[1-<sup>14</sup>C]-Arachidonyl-1,2-dioleoyl-sn-glycero-3-phosphoethanolamine ammonium salt**Mol. formula :** C<sub>61</sub>H<sub>111</sub>N<sub>2</sub>O<sub>9</sub>P**FW :** 1047.52    **DEA schedule :** 0**Notes :** Putative biosynthetic precursor of endogenous cannabinoids (carbon-labeled).**References :** Morishita, J; et al. *J Neurochem* 2005, 94, 753–62.**Catalog number :** NOCD-000**Name :** N-[1-<sup>14</sup>C]-Palmitoyl-1,2-dioleoyl-sn-glycero-3-phosphoethanolamine ammonium salt**Mol. formula :** C<sub>57</sub>H<sub>111</sub>N<sub>2</sub>O<sub>9</sub>P**FW :** 999.47    **DEA schedule :** 0**Notes :** Putative biosynthetic precursor of endogenous cannabinoids (carbon-labeled).**References :** Morishita J; et al. *J Neurochem* 2005, 94, 753–62.

**Cannabinoids: Tetrahydrocannabinol Class****Catalog number :** 7360-015**Name :** [11-<sup>14</sup>C]Cannabinol**Mol. formula :** C<sub>20</sub><sup>14</sup>CH<sub>26</sub>O<sub>2</sub>**FW :** 310.43    **DEA schedule :** 1**Notes :** *Inactive constituent of cannabis (carbon-labeled).***Catalog number :** 7370-033**Name :** [11-<sup>14</sup>C] $\Delta^9$ -THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>**FW :** 316.45    **DEA schedule :** 1**Notes :** *Hallucinogen; psychotropic; analgesic (carbon-labeled).***Catalog number :** 7370-032**Name :** [2,4-<sup>14</sup>C] $\Delta^8$ -THC**Mol. formula :** C<sub>21</sub>H<sub>30</sub>O<sub>2</sub>**FW :** 318.45    **DEA schedule :** 1**Notes :** *Hallucinogen; psychotropic; analgesic (carbon-labeled).***Dissociatives: Phencyclidine Class****Catalog number :** 7471-002**Name :** [<sup>14</sup>C]Phencyclidine HBr; [<sup>14</sup>C]PCP**Mol. formula :** C<sub>18</sub>H<sub>28</sub>BrN**FW :** 523.53    **DEA schedule :** 2**Catalog number :** 7471-007**Name :** [Phenyl-U-<sup>14</sup>C]-1-(1-Phenylcyclohexyl)Piperidine; [Phenyl-U-<sup>14</sup>C]PCP**Mol. formula :** C<sub>17</sub>H<sub>25</sub>N**FW :** 245.39    **DEA schedule :** 2

**Opioids: Methadone Class****Catalog number :** 9648-013**Name :**  $(-)[2-^{14}\text{C}]\text{-}\alpha\text{-Acetyl}(\text{methyl})\text{methadol}$  hydrochloride**Mol. formula :**  $\text{C}_{23}\text{H}_{32}\text{ClNO}_2$ **FW :** 353.50**DEA schedule :** 2**Catalog number :** 9648-014**Name :**  $(-)[\text{Acetyl}-^{14}\text{C}]\text{-}\alpha\text{-Acetyl}(\text{methyl})\text{methadol}$ **Mol. formula :**  $\text{C}_{23}\text{H}_{32}\text{ClNO}_2$ **FW :** 353.50**DEA schedule :** 2**Catalog number :** 9648-015**Name :**  $(-)[\text{N}-^{14}\text{CH}_3]\text{-}\alpha\text{-Acetyl}(\text{methyl})\text{methadol}$  hydrochloride**Mol. formula :**  $\text{C}_{23}\text{H}_{31}\text{NO}_2$ **FW :** 353.50**DEA schedule :** 2**Catalog number :** 9633-005**Name :**  $(-)[\text{Acetyl}-^{14}\text{C}_2]\text{-}\alpha\text{-Acetyl}(\text{methyl})\text{methadol}$  hydrochloride**Mol. formula :**  $\text{C}_{22}\text{H}_{30}\text{ClNO}_2$ **FW :** 375.94**DEA schedule :** 1**Catalog number :** 9250-026**Name :**  $[1'-^{14}\text{C}]\text{-}2\text{-Ethyl-1,5-dimethyl-3,3-diphenyl}(\text{pyrrolidin-1-yl})\text{methanol}$  perchlorate**Mol. formula :**  $\text{C}_{20}\text{H}_{25}\text{ClNO}_4$ **FW :** 536.01**DEA schedule :** 0**Sedatives & Hypnotics: Methaqualone Class****Catalog number :** 2565-002**CASRN :** 72-44-6**Name :**  $[2-^{14}\text{C}]$ Methaqualone**Mol. formula :**  $\text{C}_{16}\text{H}_{14}\text{N}_2\text{O}$ **FW :** 251.30**DEA schedule :** 1**Notes :** Sedative; hypnotic (carbon-labeled).



**Peptides: Opioid****Catalog number :** MPSP-026**Name :** [<sup>125</sup>I]β-Endorphin**Mol. formula :** C<sub>158</sub>H<sub>249</sub>N<sub>39</sub>O<sub>46</sub>S<sub>125</sub>I<sub>2</sub>**FW :** 3589.6**Notes :** Radioactive ligand for MPSP-024**References :** Deby-Dupont, G; et al. *C R Seances Soc Biol Fil* 1983, 177, 259–68.  
Schweigerer, L; et al. *J Biol Chem* 1983, 258, 12287–92.**Stimulants: Tropane Class****Catalog number :** NOCD-077**Name :** [<sup>125</sup>I]RTI-121**Mol. formula :** C<sub>18</sub>H<sub>24</sub>INO<sub>2</sub>**FW :** 413.29    **DEA schedule :** 0**References :** Scheffel, U; et al. *Neuroreport* 1992, 3, 969–72.  
Carroll, FI; et al. *J Med Chem* 1995, 38, 379–88.



Limited quantities of Nicotine Research Cigarettes (NRC)s manufactured under the NIDA DSP are available to research investigators under specified parameters such as nicotine and tar yields ,and type as reduced nicotine (RN), reduced nicotine and menthol (RN-Men), reduced nicotine and high tar (RN-HT), reduced nicotine, high tar and menthol (RN-HT-Men), and conventional nicotine (CN). The NIDA DSP will consider requests for its current inventory of NRCs from researcher investigators funded through the NIH to conduct tobacco science research.

To facilitate planning for either usage of the current inventory of NRCs, or future manufacturing needs, the NIDA DSP requests that research investigators who intend to submit requests for NRCs from the NIDA DSP send an email request with the following information: 1) anticipated total quantity (carton) of each type of NRC needed with their Tobacco Product Master File (TPMF) codes and Type, 2) the requested timeline and amounts for initial receipt, and 3) requested timeline of replenishment of each type of NRC. For those research investigators who have NIDA/NIH grants, they can submit their request according to the NIDA DSP Guidelines for Research Chemicals, Controlled Substances, and Nicotine Research Cigarettes (NRC). For more information, please email [NIDANRCSupply@mail.nih.gov](mailto:NIDANRCSupply@mail.nih.gov)

Characteristics of the NRC inventory are described in the following table:

## 15 - Nicotine Research Cigarettes (RTI)

Nicotine Research Cigarettes (RTI)								
TPMF Code	Type	Filter PD (mm H <sub>2</sub> O)	Filter Type (Mono/Dual)	Filter Type (Regular/ Menthol)	Tipping Paper Perforation	Nicotine Content (mg/g tobacco)	Specifications Nicotine Yield	Specifications Tar Yield
NRC100	RN-HV	81	Dual	Regular	800CU	0.47 ± 0.02	0.02 ± 0.01	3.0 ± 1.5
NRC101	RN-HV-Men	81	Dual	Menthol	800CU	0.47 ± 0.01	0.02 ± 0.01	3.0 ± 1.5
NRC102	RN	81	Dual	Regular	100CU	0.42 ± 0.01	0.03 ± 0.01	9.0 ± 1.5
NRC103	RN-Men	81	Dual	Menthol	100CU	0.44 ± 0.01	0.03 ± 0.01	9.0 ± 1.5
NRC104	RN-HT	56	Mono	Regular	0CU	0.51 ± 0.00	0.04 ± 0.02	13.0 ± 2.0
NRC105	RN-HT-Men	56	Mono	Menthol	0CU	0.46 ± 0.01	0.04 ± 0.02	13.0 ± 2.0
NRC200	RN	81	Dual	Regular	100CU	1.40 ± 0.03	0.07 ± 0.02	9.0 ± 1.5
NRC201	RN-Men	81	Dual	Menthol	100CU	1.34 ± 0.07	0.07 ± 0.02	9.0 ± 1.5
NRC300	RN	81	Dual	Regular	100CU	2.53 ± 0.04	0.12 ± 0.03	9.0 ± 1.5
NRC301	RN-Men	81	Dual	Menthol	100CU	2.54 ± 0.05	0.12 ± 0.03	9.0 ± 1.5
NRC302	RN-HT-Men	56	Mono	Menthol	0CU	2.50 ± 0.04	0.16 ± 0.03	13.0 ± 2.0
NRC400	RN	81	Dual	Regular	100CU	5.62 ± 0.18	0.26 ± 0.06	9.0 ± 1.5
NRC401	RN-Men	81	Dual	Menthol	100CU	5.54 ± 0.27	0.26 ± 0.06	9.0 ± 1.5
NRC402	RN-HT	81	Mono	Regular	100CU	6.03 ± 0.18	0.33 ± 0.06	13.0 ± 2.0
NRC405	RN-HT-Men	56	Mono	Menthol	0CU	5.96 ± 0.21	0.40 ± 0.08	13.0 ± 2.0
NRC404	RN-HT	56	Mono	Regular	0CU	8.08 ± 0.15	0.60 ± 0.12	13.0 ± 2.0
NRC500	RN-HT	81	Mono	Regular	100CU	12.06 ± 0.41	0.70 ± 0.15	13.0 ± 2.0
NRC501	RN-Men	81	Dual	Menthol	100CU	11.26 ± 0.11	0.60 ± 0.12	9.0 ± 1.5
NRC600	CN	81	Dual	Regular	100CU	17.36 ± 0.28	0.80 ± 0.15	10.5 ± 1.5
NRC601	CN-Men	81	Dual	Menthol	100CU	16.50 ± 0.17	0.80 ± 0.15	10.5 ± 1.5
NRC602	CN-HT-Men	56	Mono	Menthol	0CU	16.10 ± 0.52	1.10 ± 0.20	16.0 ± 2.0
NRC700	LTNR-HT	81	Mono	Regular	100CU	25.94 ± 0.65	1.60 ± 0.30	16.0 ± 2.0
NRC701	LTNR-Men	81	Dual	Menthol	100CU	25.83 ± 0.48	1.60 ± 0.30	12.0 ± 2.0

## Definitions

CN	Conventional Nicotine
CN-HT-Men	Conventional Nicotine-High Tar-Menthol
CN-Men	Conventional Nicotine-Menthol
CU	Coresta Units
	[ 0CU = Non-perforated tipping paper ]
Dual filter	Consists of 10 mm paper and 15 mm cellulose acetate segments
LTNR-HT	Low Tar Nicotine Ratio-High Tar
LTNR-Men	Low Tar Nicotine Ratio-Menthol
Mono filter	Consists of 25 mm cellulose acetate segment
PD	Pressure drop
RN	Reduced Nicotine
RN-HT	Reduced Nicotine-High Tar
RN-HT-Men	Reduced Nicotine-High Tar-Menthol
RN-HV	Reduced Nicotine-High Ventilation
RN-HV-Men	Reduced Nicotine-High Ventilation-Menthol
RN-Men	Reduced Nicotine-Menthol
TPMF	Tobacco Product Master File number

### Marijuana Plant Material

Research grade marijuana products are available in a variety of cannabinoid content specifications as shown below. For detailed information on specific batches please refer to the NIDA website (<http://www.drugabuse.gov/researchers/research-resources/nida-drug-supply-program-dsp/bulk-marijuana-plant-material-addendum-to-drug-supply-catalog>). NIDA may also be able to develop bulk marijuana of other specific THC and CBD contents by mixing batches to meet researcher needs. For further information please contact the NIDA Drug Supply Program Director, Dr Hari Singh, at [hsingh@nida.nih.gov](mailto:hsingh@nida.nih.gov).

Marijuana cigarettes and bulk marijuana plant material produced under the NIDA DSP are available at no cost to research investigators who have an NIH grant. Marijuana is also available to research investigators who are funded through non-Federal sources on a cost-reimbursement basis. Please see the Note at the end of the tables for more information on costs.

### Marijuana cigarettes

The following represents the existing stocks of manufactured marijuana cigarettes, which will be made available to the research community until depleted. For additional information on the specific cannabinoid content please see <http://www.drugabuse.gov/researchers/research-resources/nida-drug-supply-program-dsp/bulk-marijuana-plant-material-addendum-to-drug-supply-catalog>. Please note that NIDA does not plan to manufacture marijuana cigarettes in the near future. Only bulk marijuana will generally be available for research:

Placebo Marijuana Cigarettes (Placebo)	0.001% THC
Marijuana Cigarettes (Medium)	2.0% THC
Marijuana Cigarettes (Medium)	3.6% THC
Marijuana Cigarettes (High)	5.6% THC
Marijuana Cigarettes (High)	6.4% THC

### Bulk Marijuana

Bulk marijuana is currently available in the following general categories, and due to recent interest its strength is being provided for both THC and CBD as *Low* (<1%), *Medium* (1-5%), *High* (5-10%), and *Very High* (>10%). Bulk marijuana has small amounts of other cannabinoids (CBC, CBG, CBN, and THCV) which are reported in the batch specific details (<http://www.drugabuse.gov/researchers/research-resources/nida-drug-supply-program-dsp/bulk-marijuana-plant-material-addendum-to-drug-supply-catalog>).

### **Placebo marijuana (produced by solvent extraction)**

1. THC (0%) / CBD (0%)

#### **Low THC varieties**

1. Low THC (<1%) / Medium CBD (1-5%)
2. Low THC (<1%) / High CBD (5-10%)
3. Low THC (<1%) / Very High CBD (>10%)

#### **Medium THC varieties**

1. Medium THC (1-5%) / Low CBD (<1%)
2. Medium THC (1-5%) / Medium CBD (1-5%)
3. Medium THC (1-5%) / High CBD (5-10%)
4. Medium THC (1-5%) / Very High CBD (>10%)

#### **High THC varieties**

1. High THC (5-10%) / Low CBD (<1%)
2. High THC (5-10%) / High CBD (5-10%)
3. High THC (5-10%) / Very High CBD (>10%)

#### **Very high THC varieties**

1. Very High THC (>10%) / Low CBD (<1%)

#### **Important note regarding cost-reimbursement**

The services and material from the NIDA Drug Supply Program are generally free to NIH-sponsored investigators. Some requests may incur a nominal fee depending on study status, funding source, and type of material being requested. Pursuant to HHS policy published May 21, 1999 marijuana for non-Federally funded research is to be provided on a cost-reimbursement basis. NIDA intends to implement the following pricing schedule for collection of fees for marijuana once HHS and NIH develop updated policies and transactional procedures on the specifics regarding cost-reimbursement of research substances for non-Federally supported projects. These policies and procedures may significantly impact the timing, mechanisms, and recipient of any collected fees but will not impact the shipments. An update will be posted once the final Guidance is received.

#### **Marijuana Pricing Schedule**

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<u>Item</u>	<u>Price</u>
Non-placebo Cigarette	\$10.96 each
Placebo Cigarette	\$13.94 each
Bulk Marijuana	\$2,497.00 per kilogram