

Analgesic, Antitussive

TAJ PHARMACEUTICALS LIMITED

CODEINE BASE

Formula C₁₈H₂₁NO₃

Cas No. **76-57-3**

PRODUCT CODE- CDNT113



Codeine base

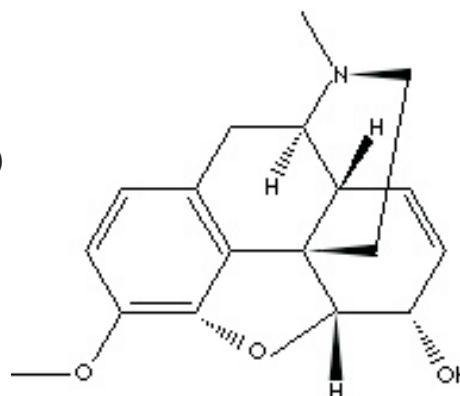
PRODUCT IDENTIFICATION

CAS NO. : 76-57-3 (Base) 1422-07-7 (Hydrochloride)
FORMULA: C₁₈H₂₁NO₃
MOL WT. : 317.38

DERIVATION TOXICITY: Oral rat LD₅₀: 427 mg/kg

SYNONYMS

Methyl morphine monohydrate;
7,8-Didehydro-4,5- α -epoxy-3-methoxy-17-methylmorphinan- 6- α -ol; 3-o-methylmorphine Monohydrate; 7,8-Didehydro-4,5- α -epoxy-3-methoxy- 17-methyl-(5 α , 6 α)-morphinan 6-ol; Actacode; Calcidrine; Codicept; Codalgin Forte Codate; (-)-Codeine; Codeinum; Coducept; Metilmorfina; Morphine-3-methyl ether; Morphine monomethyl ether; N-Methyl Norcodine;



CLASSIFICATION

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE : white crystalline powder
MELTING POINT : 154 - 156 C
BOILING POINT : 250 C
SPECIFIC GRAVITY : 1.32
SOLUBILITY IN WATER : pH
VAPOR DENSITY : AUTOIGNITION
NFPA RATINGS : Health: 3 Flammability: 1 Reactivity: 1
FLASH POINT : 75 C
STABILITY : Stable under ordinary conditions
Odor : None found
Taste : None found

DESCRIPTION

Codeine is an alkaloid found naturally in opium in concentrations ranging from 0.7 to 2.5 percent. It is commercially synthesized from morphine. It is the most widely used drug among the morphine class of compounds used in a variety of pharmaceuticals including analgesics, antiperistaltics, antitussive agents, hypnotics, and sedatives. Codeine is an opioid analgesic related to morphine but with less potential analgesic property and mild sedative effect. Dihydrocodeine, called also drocode, is a similar opioid analgesic with pharmaceutical action with codeine. It is known it has approximately twice potentiality.

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CODEINE BASEFormula C₁₈H₂₁NO₃Cas No. **76-57-3****Analgesic, Antitussive****SPECIFICATION :**

APPEARANCE white crystalline needles

PURITY 99.0% min (Dry Basis)

OPTICAL ROTATION -106° ~ -110° (C=1 in water)

WATER

10.0% max

TRANSPORTATION PACKING

HAZARD CLASS UN NO.

OTHER INFORMATION

Hazard Symbols: , Risk Phrases: 20/21/22, Safety Phrases: 26-36

Codeine is an alkaloid found in opium and other poppy saps like Papaver bracteatum, the Iranian poppy, in concentrations ranging from 0.3 to 3.0 percent. While codeine can be extracted from opium, most codeine is synthesized from morphine through the process of O-methylation. It was first isolated in 1832 in France by Jean-Pierre Robiquet.

The effects of the Nixon War On Drugs by 1972 or so had caused across-the-board shortages of illicit and licit opiates because of a scarcity of natural opium, poppy straw and other sources of opium alkaloids, and the geopolitical situation was getting less helpful for the United States. After a large percentage of the opium and morphine in the US National Stockpile of Strategic & Critical Materials had to be tapped in order to ease severe shortages of medicinal opiates—the codeine-based antitussives in particular—in late 1973, researchers were tasked with and quickly succeeded in finding a way to synthesize codeine and its derivatives and precursors from scratch from petroleum or coal tar using a process developed at the United States' National Institutes of Health.

Numerous codeine salts have been prepared since the drug was discovered. The most commonly used are the hydrochloride (freebase conversion ratio 0.805), phosphate (0.736), sulphate (0.859) and citrate (0.842). Others include a salicylate NSAID, codeine salicylate (0.686), and at least four codeine-based barbiturates, the cyclohexenylethylbarbiturate (0.559), cyclopentenylallylbarbiturate (0.561), diallylbarbiturate (0.561), and diethylbarbiturate (0.619).

Uses

Codeine is an opiate used for its analgesic, antitussive, and antidiarrheal properties.

Codeine is useful for numbing back pain, and is frequently prescribed for this purpose.

Codeine is by far the most widely used opiate in the world and probably the most commonly used drug overall according to numerous reports over the years by organizations such as the World Health Organization and its League of Nations predecessor agency and others. It is one of the most effective orally-administered opioid analgesics and has a wide safety margin.

Safety Profile

A human poison by an unspecified route. An experimental poison by ingestion, intraperitoneal, intravenous, intramuscular, and subcutaneous routes. Human reproductive effects. An experimental teratogen. Other experimental reproductive effects. An addictive drug. Flammable when exposed to heat or flame. To fight fire, use alcohol foam. When heated to decomposition it emits toxic fumes of NO_x.

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CODEINE BASEFormula C₁₈H₂₁NO₃Cas No. **76-57-3****Analgesic, Antitussive****Hazards Identification**

DANGER! MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. ALLERGEN. EXPOSURE MAY PRODUCE ALLERGIC RESPONSE. NARCOTIC.

Inhalation: Narcotic. Can irritate the respiratory passages and cause sneezing or coughing but will also have an anesthetic effect. Inhalation of appreciable quantities may produce lung edema, dizziness, and respiratory difficulties, see also Ingestion, below.

Ingestion: Toxic. Narcotic. Human lethal dose about 800 mg. In addition to its analgesic action, codeine can cause slow respiration, cyanosis, weak pulse, gastrointestinal spasm, pinpoint pupils and twitching or convulsions. Death from respiratory failure can occur.

Skin Contact: Not expected to cause health effects, although the possibility of absorption exists under conditions of skin breakage or inflammation.

Eye Contact: Mild irritant but will also have a strong narcotic effect (pupil constriction) and the eye may serve as an absorption route to the body in general.

Chronic Exposure: Can lead to habituation and addiction. Pinpoint pupils and rapid changes of mood may be observed.

Aggravation of Pre-existing Conditions: Some individuals may become sensitized from exposure and develop skin rashes, coughs, stuffy nose, asthma, and other allergic complaints. Sensitivity may develop soon after immediate contact or after years of exposure.

This document plus the full buyer / prescribing information, prepared for health professionals can be found at:

<http://www.tajapi.com>

or by contacting the sponsor, Taj Pharmaceuticals Limited., at:

91 022 30601000.

This leaflet was prepared by
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Mumbai (India).

CDNT113

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Information: The information on this web page is provided to help you to work safely, but it is intended to be an overview of hazards, not a replacement for a full Material Safety Data Sheet (MSDS). MSDS forms can be downloaded from the web sites of many chemical suppliers. Also that the information on the PTCL Safety web site, where this page was hosted, has been copied onto many other sites, often without permission. If you have any doubts about the veracity of the information that you are viewing, or have any queries, please check the URL that your web browser displays for this page. If the URL begins "www.tajapi.com/www/Denatonium Benzoate.htm/" the page is maintained by the Safety Officer in Physical Chemistry at Oxford University. If not, this page is a copy made by some other person and we have no responsibility for it.

The Controlled Substances Act (CSA) was enacted into law by the Congress of the United States as Title II of the Comprehensive Drug Abuse Prevention and Control Act of 1970.[1] The CSA is the federal U.S. drug policy under which the manufacture, importation, possession, use and distribution of certain substances is regulated. The Act also served as the national implementing legislation for the Single Convention on Narcotic Drugs.