

Analgesic

TAJ PHARMACEUTICALS LIMITED

PRODUCT CODE- MOPHT486

Morphine Hcl

Formula C₁₇H₁₉NO₃Cas No. **57-27-2**

Morphine HCl Analgesic BP / EP

Molecular Formula : C₁₇H₁₉NO₃

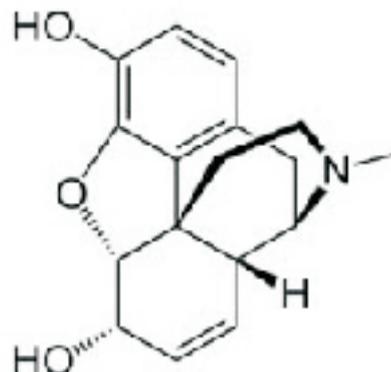
Molecular Weight : 285.34

CAS No. : 57-27-2

Chemical Name : alchemists of Byzantine

Specifications :

Morphine (INN) is a highly potent opiate analgesic psychoactive drug, is the principal active ingredient in *Papaver somniferum* (opium poppy, or simply opium), is considered to be the prototypical opioid. Like other opioids, e.g. oxycodone (OxyContin, Percocet, Percodan), hydromorphone (Dilaudid, Palladone), and diacetylmorphine (Heroin), morphine acts directly on the central nervous system (CNS) to relieve pain. Morphine has a high potential for addiction; tolerance and both physical and psychological dependence develop rapidly.



Morphine hydrochloride, or Muriate of Morphia, C₁₇H₁₉NO₃, HCl, 3H₂O, may be prepared by neutralising pure morphine, suspended in hot water, with diluted hydrochloric acid, concentrating the solution, cooling, and setting it aside to crystallise. It is also official in the U.S.P. It occurs in white, acicular crystals, or as a white, odourless, micro-crystalline powder, having a bitter taste. Its aqueous solution is neutral to litmus. At 100° it loses its water of crystallisation, at 250° it becomes brown, then chars, but does not melt. On complete ignition it usually leaves a visible, but not weighable, residue. On adding ammonia to an aqueous solution of morphine, the base forms a crystalline precipitate which, when collected, washed, and dried, should respond to the tests given under Morphina. The precipitate formed in this way should not yield more than traces to benzene (absence of other alkaloids). It is an open question whether morphine hydrochloride dissolves in sulphuric acid with or without colour, some authorities maintaining that a pale rose colouration is produced. The method of applying the test may account for the conflicting statements, as experiments have shown that, though a faint pink colouration occurs at first, the solution becomes colourless on shaking. An aqueous solution (1 in 30) to which potassium carbonate has been added should not impart any colour to chloroform (absence of apomorphine). Assayed gravimetrically, the hydrochloride should yield 75.5 per cent. of anhydrous morphine.

Soluble in water (1 in 24), boiling water (1 in 1), alcohol (1 in 50), glycerin (1 in 8); insoluble in ether or chloroform.

Action and Uses—Morphine hydrochloride has the general medicinal properties of the salts of morphine (see Morphina). It is one of the most permanent salts of the alkaloid, and where its solubility admits, it is preferred to the salts of the organic acids. The official *Liquor Morphinae Hydrochloridi* is the most convenient preparation for general administration,

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1 minims containing 1/10 grain of morphine hydrochloride. For use as mildly sedative and expectorant lozenges, Trochiscus Morphinae and Trochiscus Morphinae et Ipecacuanhae are suitable. Pastilles of morphine, morphine and cocaine, and morphine and bismuth are also prepared. Suppositoria Morphinae contain 1/4 grain of morphine hydrochloride in each; they are also used two, three, or four times this strength. Morphine hydrochloride is sometimes given in pills, prepared by triturating the alkaloidal salt with sugar of milk, and massing with syrup of glucose. Linctus Sedativus is a convenient preparation to allay incessant cough and produce sleep. Insufflations of morphine (1/4 grain), with 1 grain of bismuth oxychloride or 1 1/2 grains of starch are used for the throat and larynx: it is also a constituent of Insufflatio Bismuthi et Morphinae (Ferrier's Snuff), for use in nasal catarrh. Tablets of morphine hydrochloride are made in all strengths for the preparation of solutions for hypodermic use; the B.P. Injectio Morphinae Hypodermica is, however, prepared with morphine tartrate. Morphine hydrochloride is incompatible with alkalies, alkali earths, vegetable astringents, and salts of the heavy metals. In cases of poisoning by morphine hydrochloride the antidotes are those of morphine.

Dose.—8 to 30 milligrams (1/8 to 1/2 grain).

PREPARATIONS.

Linctus Sedativus, B.P.C.—**SEDATIVE LINCTUS**. Syn.—Linctus Morphinae Acidus. Each fluid drachm contains about 1/32 grain of morphine hydrochloride, with lemon juice, emulsion of chloroform, and glycerin. Dose.—2 to 4 mls (1/2 to 1 fluid drachm).
Liquor Morphinae Bimeconatis, B.P., 1885.—**SOLUTION OF MORPHINE BIMECONATE**.

Morphine hydrochloride, 9 grains; solution of ammonia, a sufficient quantity; meconic acid, 6 grains; alcohol, 1/2 fluid ounce; distilled water, a sufficient quantity. Dissolve the morphine hydrochloride in 2 or 3 fluid drachms of the distilled water, warming if necessary; then add sufficient solution of ammonia to precipitate the morphine entirely. Cool, filter, wash the precipitate with distilled water until free from chloride; then drain and mix with sufficient water to produce 1 1/2 ounces. Finally, add the alcohol and meconic acid, and dissolve. This preparation contains about 1 1/4 per cent. of morphine bimeconate, and is about the same strength in this respect as tincture of opium. It is sometimes used in place of the official solutions of morphine, over which, however, it presents no advantages. Dose.—1/4 to 2 1/2 mls (5 to 40 minims),

Liquor Morphinae Hydrochloridi, B.P.—**SOLUTION OF HYDROCHLORIDE**. Syn.—Liquor Morphinae; Solution of Hydrochlorate of Morphine.

Morphine hydrochloride, 1; diluted hydrochloric acid, 2; alcohol, distilled water, sufficient to produce 100. Dissolve the morphine hydrochloride in the alcohol, previously mixed with 25 of distilled water and the acid, and add sufficient distilled water to make up to the required volume. This solution provides a convenient means of administering, morphine, and is commonly used when "Liquor Morphinae" is ordered, unless there is some obvious objection to the presence of hydrochloric acid. Dose.—1/2 to 4 mls (10 to 60 minims).

Suppositoria Morphinae, B.P.—**MORPHINE SUPPOSITORIES**.

Morphine hydrochloride, 1.7; oil of theobroma, sufficient to produce 100. Mix the morphine hydrochloride thoroughly with a small quantity of the melted oil of theobroma, add the mixture to the remainder of the oil, stir well together, and divide

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into suppositories each weighing about 1 gramme (15 grains). Each suppository contains 1/4 grain of morphine hydrochloride. Morphine suppositories are employed as a sedative to allay pain. The action of the morphine is exerted only after absorption.

Trochisci Morphinae et Ipecacuanhae Compressi, B.P.C.—COMPRESSED MORPHINE AND IPECACUANHA LOZENGES.

Each lozenge contains morphine hydrochloride, about 1/36 grain; ipecacuanha root, in powder, 1/12 grain; with a sufficient quantity of refined sugar, gum acacia, tincture of tolu, and theobroma emulsion. They are used similarly to morphine and ipecacuanha lozenges.

Trochiscus Morphinae B.P.—MORPHINE LOZENGE.

Each lozenge contains morphine hydrochloride, 1/36 grain; with a sufficient quantity of tolu basis. Morphine lozenges are used as a sedative in cough. They act after absorption.

Trochiscus Morphinae et Ipecacuanhae, B.P.—MORPHINE AND IPECACUANHA LOZENGE.

Each lozenge contains morphine hydrochloride, 1/36 grain; ipecacuanha root, in powder, 1/12 grain; with a sufficient quantity of tolu basis. Morphine and ipecacuanha lozenges are used as a sedative and expectorant in cough.

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.

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MOPHT486

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