

Preparations

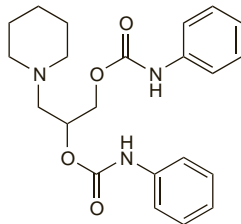
BP 2008: Cocaine Eye Drops;
USP 31: Cocaine and Tetracaine Hydrochlorides and Epinephrine Topical Solution; Cocaine Hydrochloride Tablets for Topical Solution.

Diperodon Hydrochloride (BANM, rINNM)

Diperocaine Hydrochloride; Dipérodón, Chlorhydrate de; Diperodoni Hydrochloridum; Hidrocloruro de diperodón. 3-Piperidinopropylene bis(phenylcarbamate) hydrochloride.

Диперодона Гидрохлорид

$C_{22}H_{27}N_3O_4 \cdot HCl = 433.9$.
 CAS — 101-08-6 (anhydrous diperodon); 51552-99-9 (diperodon monohydrate); 537-12-2 (diperodon hydrochloride).



(diperodon)

Profile

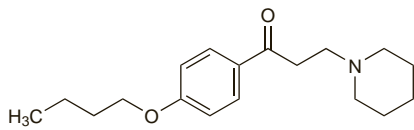
Diperodon is a local anaesthetic (p.1850) that has been used as the base or the hydrochloride for surface anaesthesia.

Dyclonine Hydrochloride (BANM, rINNM)

Dyclocaine Hydrochloride; Dyclocaini Chloridum; Dyclonine, Chlorhydrate de; Dyclonini Hydrochloridum; Hidrocloruro de dyclonina. 4'-Butoxy-3-piperidinopropiophenone hydrochloride.

Диклонина Гидрохлорид

$C_{18}H_{27}NO_2 \cdot HCl = 325.9$.
 CAS — 586-60-7 (dyclonine); 536-43-6 (dyclonine hydrochloride).
 ATC — N01BX02; R02AD04.
 ATC Vet — QN01BX02; QR02AD04.



(dyclonine)

Pharmacopoeias. In *US*.

USP 31 (Dyclonine Hydrochloride). White crystals or white crystalline powder, with a slight odour. Soluble 1 in 60 of water, 1 in 24 of alcohol, and 1 in 2.3 of chloroform; soluble in acetone; practically insoluble in ether and in hexane. A 1% solution in water has a pH of 4.0 to 7.0. Store in airtight containers. Protect from light.

Profile

Dyclonine hydrochloride is a local anaesthetic (p.1850) used topically for surface anaesthesia of the skin and mucous membranes. Lozenges containing up to 3 mg and throat sprays containing 0.1% of dyclonine hydrochloride have been used for the temporary relief of pain associated with sore throats or mouth irritation; a 1% gel has also been used. A concentration of 0.75% has been used on the skin. It may cause irritation at the site of application.

Preparations

USP 31: Dyclonine Hydrochloride Gel; Dyclonine Hydrochloride Topical Solution.

Proprietary Preparations (details are given in Part 3)

Canad.: Cepacol Spray; Surets; Surets for Kids; **Israel:** Childrens Cherry Surets†; Surets Children's Formula†; Surets Maximum Strength†; **USA:** Dyclone†; Surets Childrens Formula; Surets Original Formula Sore Throat Wild Cherry; Surets Throat Spray.

Multi-ingredient: Canad.: Tanac†; **USA:** Cepacol Maximum Strength Sore Throat; Skin Shield; Surets Complete; Surets Maximum Strength Sore Throat; Tanac.

Ethyl Chloride

Aethylum Chloratum; Chlorethyl; Cloruro de etilo; Ethyli Chloridum; Ethylis Chloridum; Etylklorid; Etylu chlorek; Etylchlorid; Hydrochloric Ether; Monochlorethane. Chloroethane.

$C_2H_5Cl = 64.51$.
 CAS — 75-00-3.
 ATC — N01BX01.
 ATC Vet — QN01BX01.

**Pharmacopoeias.** In *Pol.* and *US*.

USP 31 (Ethyl Chloride). A colourless, mobile, very volatile liquid at low temperatures or under pressure, with a characteristic ethereal odour. B.p. 12° to 13°. Slightly soluble in water; freely soluble in alcohol and in ether. Store in airtight containers, preferably hermetically sealed.

Stability. Ethyl chloride is highly flammable and mixtures of the gas with 5 to 15% of air are explosive.

Adverse Effects and Precautions

As for Chloroform, p.1781.

Cutaneous sensitisation can occur rarely. Thawing of frozen tissue following surgery may be painful and prolonged spraying onto the skin can cause chemical frostbite. Freezing may also distort the histological structure of biopsy specimens. Ethyl chloride should not be applied to broken skin or mucous membranes.

Uses and Administration

Owing to its low boiling-point and the intense cold produced by evaporation, ethyl chloride has been used as a local anaesthetic in minor surgery but such use is not generally recommended. It has also been used topically for the relief of pain and to test the effectiveness of regional anaesthesia. Ethyl chloride was formerly used as an inhalational anaesthetic but has no place in modern anaesthetic practice.

Preparations**Proprietary Preparations** (details are given in Part 3)

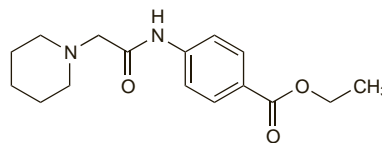
Ger.: Chloraethyl Dr Henning; **WariActive;** **Hong Kong:** WariActive; **Hung.:** Chloraethyl†; **Israel:** Chloraethyl Dr Henning; **Mex.:** Traumazol; **Spain:** Cloretilo Chemirosa; **Switz.:** Chlorethyl; **UK:** Cryogestic.

Multi-ingredient: USA: Fluro-Ethyl.

Ethyl p-Piperidinoacetylaminobenzoate

EPAB; p-Piperidinoacetylaminobenzoate de etilo; SA-7. 4-[(1-Piperidinyloxy)amino]benzoic acid ethyl ester.

$C_{16}H_{22}N_2O_3 = 290.4$.
 CAS — 41653-21-8.

**Profile**

Ethyl p-piperidinoacetylaminobenzoate is an amide local anaesthetic (p.1850) that has been given orally for the symptomatic relief of gastritis.

Preparations**Proprietary Preparations** (details are given in Part 3)

Jpn: Sulcain.

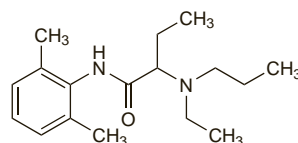
Multi-ingredient: Hong Kong: Sulcain†; **Singapore:** Sulcain†; **Thai:** Sulcain†.

Etidocaine (BAN, USAN, rINN)

Étidocaína; Étidoçaïne; Etidocainum; Etidokaiini; Etidokain. (±)-2-(N-Ethylpropylamino)-butyro-2',6'-xylylide.

Этидокаин

$C_{17}H_{28}N_2O = 276.4$.
 CAS — 36637-18-0.
 ATC — N01BB07.
 ATC Vet — QN01BB07.

**Etidocaine Hydrochloride** (BANM, rINNM)

Étidoçaïne, Chlorhydrate d'; Etidocaini Hydrochloridum; Hidrocloruro de etidocaína; W-19053.

Этидокаина Гидрохлорид

$C_{17}H_{28}N_2O \cdot HCl = 312.9$.
 CAS — 36637-19-1.
 ATC — N01BB07.
 ATC Vet — QN01BB07.

Adverse Effects, Treatment, and Precautions

As for Local Anaesthetics in general, p.1850.

Effects on the cardiovascular system. For a discussion of the cardiotoxicity of etidocaine, see under the Adverse Effects of Bupivacaine Hydrochloride, p.1855.

Porphyria. Etidocaine is considered to be unsafe in patients with porphyria because it has been shown to be porphyrinogenic in animals.

Interactions

For interactions associated with local anaesthetics, see p.1851.

Pharmacokinetics

Etidocaine is rapidly absorbed into the circulation after parenteral injection and is about 95% bound to plasma proteins. It crosses the placenta but the ratio of fetal to maternal concentrations is relatively low. It also diffuses across the blood-brain barrier. Etidocaine is metabolised in the liver and its numerous metabolites are excreted in the urine; less than 10% of the drug is excreted unchanged. The plasma elimination half-life of etidocaine is 2 to 3 hours in adults.

See also under Local Anaesthetics, p.1852.

Pregnancy. After maternal injection etidocaine rapidly crosses the placenta¹ but the degree of transfer is less than for other local anaesthetics including bupivacaine.² The ratio of fetal to maternal concentrations of etidocaine varies but values up to about 0.35 are usual.^{1,2} Some metabolites appear to be transferred to a greater degree than the parent compound¹. Etidocaine is highly protein bound but the fraction of unbound drug in plasma increases in pregnant women during delivery.¹ Protein binding of etidocaine is also reduced in fetal plasma.³ Although neonates are able to metabolise etidocaine it appears that they are less able to do so than adults; a mean elimination half-life of 6.42 hours has been reported in neonates.³

1. Morgan DJ, *et al.* Disposition and placental transfer of etidocaine in pregnancy. *Eur J Clin Pharmacol* 1977; **12**: 359-65.
2. Poppers PJ. Evaluation of local anaesthetic agents for regional anaesthesia in obstetrics. *Br J Anaesth* 1975; **47**: 322-7.
3. Morgan D, *et al.* Pharmacokinetics and metabolism of the amide local anaesthetics in neonates: 11: etidocaine. *Eur J Clin Pharmacol* 1978; **13**: 365-71.

Uses and Administration

Etidocaine hydrochloride is a local anaesthetic of the amide type with actions and uses similar to those described on p.1852. It has a rapid onset and a long duration of action. Etidocaine has been used for infiltration anaesthesia, peripheral nerve block, and epidural block, usually with adrenaline 1 in 200 000. (Local anaesthetic techniques are discussed on p.1853.)

Preparations**Proprietary Preparations** (details are given in Part 3)

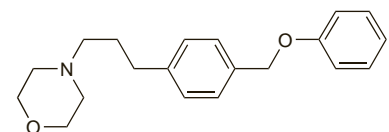
USA: Duranest†.

Fomocaine Hydrochloride (BANM, rINNM)

Fomocaïne, Chlorhydrate de; Fomocaini Hydrochloridum; Hidrocloruro de fomocaína. 4-[3-(α-Phenoxy-p-tolyl)propyl]morpholine hydrochloride.

Фомокаина Гидрохлорид

$C_{20}H_{25}NO_2 \cdot HCl = 347.9$.
 CAS — 17692-39-6 (fomocaine); 56583-43-8 (fomocaine hydrochloride).



(fomocaine)

Profile

Fomocaine is a local anaesthetic that has been included, as the hydrochloride, in mixed products intended for use in infected skin conditions.