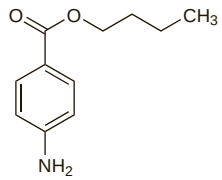
Butyl Aminobenzoate

Butamben *(USAN)*; Butilaminobenzoato; Butoforme. Butyl 4-aminobenzoate.

$C_{11}H_{15}NO_2$ = 193.2.
CAS — 94-25-7.



Pharmacopoeias. In *Fr.* and *US*.
USP 31 (Butamben). A white, odourless, crystalline powder. M.p. 57° to 59°. Soluble 1 in 7000 of water; soluble in alcohol, in ether, in chloroform, in fixed oils, and in dilute acids. It slowly hydrolyses when boiled with water.

Butyl Aminobenzoate Picrate

Abbott-34842; Butamben Picrate *(USAN)*; Butilaminobenzoato, picrato de.

$(C_{11}H_{15}NO_2)_2,C_6H_3N_3O_7$ = 615.6.
CAS — 577-48-0.

Profile

Butyl aminobenzoate, a para-aminobenzoic acid ester, is a local anaesthetic (p.1850) that has been used for surface anaesthesia of the skin and mucous membranes. It has also been used for relief of pain and pruritus associated with anorectal disorders. A suspension of butyl aminobenzoate 5 or 10% has been given epidurally.

Butyl aminobenzoate picrate has been applied to the skin as an ointment.

◊ References.

1. Korsten HH, *et al.* Long-lasting epidural sensory blockade by n-butyl-p-aminobenzoate in the terminally ill intractable cancer pain patient. *Anesthesiology* 1991; **75:** 950–60.
2. Armstrong DG, Kanat IO. Analgesic efficacy of topical butamben picrate. *J Am Podiatr Med Assoc* 1995; **85:** 738–40.
3. Shulman M, *et al.* Nerve blocks with 5% butamben suspension for the treatment of chronic pain syndromes. *Reg Anesth Pain Med* 1998; **23:** 395–401.

Preparations

USP 31: Benzocaine, Butamben, and Tetracaine Hydrochloride Gel; Benzocaine, Butamben, and Tetracaine Hydrochloride Ointment; Benzocaine, Butamben, and Tetracaine Hydrochloride Topical Aerosol; Benzocaine, Butamben, and Tetracaine Hydrochloride Topical Solution; Erythromycin Ethylsuccinate Injection.

Proprietary Preparations (details are given in Part 3)
Braz.: Unguento Picrato de Butesin.

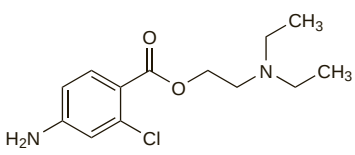
Multi-ingredient: ***Austral.:*** Butesin Picrate†; ***Chile:*** Butesin; ***Fr.:*** Nestosyl; Preparation H; ***India:*** Proctosedyl; ***Ital.:*** Prurex; ***Spain:*** Alvogil; Topicaina†; ***Switz.:*** Alvogyl; ***USA:*** Cetacaine.

Chloroprocaine Hydrochloride *(rINNM)*

Chloroprocaïne, Chlorhydrate de; Chloroprocaini Hydrochloridum; Hidrocloruro de cloroprocaína. 2-Diethylaminoethyl 4-amino-2-chlorobenzoate hydrochloride.

Хлоропрокаина Гидрохлорид

$C_{13}H_{19}ClN_2O_2,HCl$ = 307.2.
CAS — 133-16-4 (chloroprocaine); 3858-89-7 (chloroprocaine hydrochloride).
ATC — N01BA04.
ATC Vet — QN01BA04.



(chloroprocaine)

Pharmacopoeias. In *US*.
USP 31 (Chloroprocaine Hydrochloride). A white odourless crystalline powder. Soluble 1 in 20 of water and 1 in 100 of alcohol; very slightly soluble in chloroform; practically insoluble in ether. Solutions are acid to litmus.

pH of solutions. For a discussion of the effect that pH has on the stability of local anaesthetic solutions and the pain associated with their injection, see p.1852.

Adverse Effects, Treatment, and Precautions

As for Local Anaesthetics in general, p.1850. Chloroprocaine is said to be unsuitable for intravenous regional anaesthesia (Bier's block) because of a high incidence of thrombophlebitis associated with such use. It is also contra-indicated in spinal anaesthesia due to potential neurotoxicity.

Interactions

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

Pharmacokinetics

Chloroprocaine is hydrolysed rapidly in the circulation by plasma cholinesterase. It has a half-life of 19 to 26 seconds in adults. It is excreted in the urine mainly as metabolites.

See also under Local Anaesthetics, p.1852.

Uses and Administration

Chloroprocaine, a para-aminobenzoic acid ester, is a local anaesthetic with actions and uses similar to those described on p.1852. It has properties similar to those of procaine (p.1869). It has a rapid onset (6 to 12 minutes) and short duration (one hour) of action.

Chloroprocaine is used as the hydrochloride for infiltration, peripheral nerve block, and central nerve block including lumbar and caudal epidural blocks. It may be given, if necessary, with adrenaline 1 in 200 000 to delay absorption and reduce toxicity. Chloroprocaine is not an effective surface anaesthetic. It should not be used for spinal anaesthesia. (Local anaesthetic techniques are discussed on p.1853.)

The dosage of chloroprocaine used depends on the site of injection and the procedure used. In adults the **maximum single dose** of chloroprocaine hydrochloride without adrenaline should not exceed 800 mg; when given with adrenaline 1 in 200 000 the maximum single dose should not exceed 1 g. A test dose of chloroprocaine, preferably with adrenaline, should be given before starting epidural block to detect inadvertent intravascular injection. Doses for various procedures include:

- *mandibular nerve block*: 40 to 60 mg (2 to 3 mL) as a 2% solution
- *infra-orbital nerve block*: 10 to 20 mg (0.5 to 1 mL) as a 2% solution
- *brachial plexus block*: 600 to 800 mg (30 to 40 mL) as a 2% solution
- *digital nerve block*: 30 to 40 mg (3 to 4 mL) as a 1% solution without adrenaline
- in obstetrics a dose of 200 mg (10 mL) per side as a 2% solution is suggested for *pudendal block* and for a *paracervical block* a 1% solution in a dose of 30 mg (3 mL) at each of 4 sites
- *lumbar epidural block*: 40 to 50 mg (2 to 2.5 mL) as a 2% solution or 60 to 75 mg (2 to 2.5 mL) as a 3% solution for each segment to be anaesthetised, the usual total dose being 300 to 750 mg with smaller repeat doses being given at intervals of 40 to 50 minutes
- *caudal block*: 300 to 500 mg (15 to 25 mL) as a 2% solution or 450 to 750 mg (15 to 25 mL) as a 3% solution may be given and repeated at intervals of 40 to 60 minutes

Dosages should be reduced in children, elderly or debilitated patients, and those with cardiac or liver disease. For children concentrations of 0.5 to 1% are suggested for infiltration and 1 to 1.5% for nerve block procedures.

Preparations

USP 31: Chloroprocaine Hydrochloride Injection.

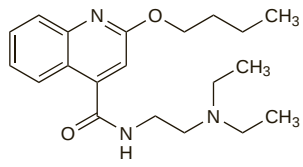
Proprietary Preparations (details are given in Part 3)
Canad.: Nesacaine; ***Switz.:*** Ivracain; Nesacain; ***USA:*** Nesacaine.

Cinchocaine *(BAN, rINN)*

Cincainum; Cinchocaïne; Cinchocainum; Cincocaína; Cinkokain; Dibucaine; Sinkokaiini. 2-Butoxy-*N*-(2-diethylaminoethyl)cinchoninamide; 2-Butoxy-*N*-(2-diethylaminoethyl)quinoline-4-carboxamide.

Цинхокаин

$C_{20}H_{29}N_3O_2$ = 343.5.
CAS — 85-79-0.
ATC — C05AD04; D04AB02; N01BB06; S01HA06.
ATC Vet — QC05AD04; QD04AB02; QN01BB06; QS01HA06.



Pharmacopoeias. In *US*.
USP 31 (Dibucaine). A white to off-white powder, with a slight characteristic odour. M.p. 62.5° to 66°. Soluble 1 in 4600 of water, 1 in 0.7 of alcohol, 1 in 0.5 of chloroform, and 1 in 1.4 of ether; soluble in 1N hydrochloric acid. It darkens on exposure to light. Store in airtight containers. Protect from light.

Cinchocaine Hydrochloride *(BANM, rINNM)*

Cincaini Chloridum; Cinchocaïne, chlorhydrate de; Cinchocaini hydrochloridum; Cinchokain-hidroklorid; Cinchokain-hydrochlorid; Cinchokaino hidrochloridas; Cinkokainhydroklorid; Dibucaine Hydrochloride; Dibucainium Chloride; Hidrocloruro de cincocaína; Percainum; Sinkokaiinihydrokloridi; Sinkokain Hidroklorür; Sovcainum.

Цинхокаина Гидрохлорид

$C_{20}H_{29}N_3O_2,HCl$ = 379.9.
CAS — 61-12-1.
ATC — C05AD04; D04AB02; N01BB06; S01HA06.
ATC Vet — QC05AD04; QD04AB02; QN01BB06; QS01HA06.

NOTE. This compound was originally marketed under the name Percaine, but accidents occurred owing to the confusion of this name with procaine.

Pharmacopoeias. In *Eur.* (see p.vii), *Jpn*, and *US*.
Ph. Eur. 6.2 (Cinchocaine Hydrochloride). A white or almost white, crystalline powder or colourless crystals; it is hygroscopic. It agglomerates very easily. Very soluble in water; freely soluble in alcohol, in acetone, and in dichloromethane. A 2% solution in water has a pH of 5.0 to 6.0. Store in airtight containers. Protect from light.
USP 31 (Dibucaine Hydrochloride). Colourless or white to off-white crystals or white to off-white, crystalline powder. It is odourless, somewhat hygroscopic, and darkens on exposure to light. Freely soluble in water, in alcohol, in acetone, and in chloroform. Its solutions have a pH of about 5.5. Store in airtight containers. Protect from light.

Profile

Cinchocaine is an amide local anaesthetic (p.1850) that is now generally only used for surface anaesthesia. It is one of the most potent and toxic of the long-acting local anaesthetics and its parenteral use was restricted to spinal anaesthesia.

For surface anaesthesia cinchocaine has been used, as the base or hydrochloride, in creams and ointments containing up to 1% and in suppositories for the temporary relief of pain and itching associated with skin and anorectal conditions. Cinchocaine benzoate has also been used topically.

Action. For a comparison of the vasoactivity of cinchocaine and some other local anaesthetics, see p.1852.

Plasma cholinesterase deficiency. For mention of the use of cinchocaine in the determination of plasma cholinesterase activity, see under Precautions of Suxamethonium Chloride, p.1911.

Preparations

USP 31: Dibucaine Cream; Dibucaine Hydrochloride Injection; Dibucaine Ointment.

Proprietary Preparations (details are given in Part 3)
Braz.: Nupercainal; ***Canad.:*** Nupercainal; ***Denm.:*** Cincain; ***Ger.:*** Dolo-Posterine N; ***India:*** Nupercainal; ***Port.:*** Nupercainal; ***Swed.:*** Cincain; ***UK:*** Nupercainal; ***USA:*** Nupercainal.

Multi-ingredient: ***Arg.:*** Procto Venart; Proctyl; Scheriproct; Ultraproct; ***Austral.:*** Proctosedyl; Rectinol HC; Scheriproct; Ultraproct; ***Austria:*** Ciloprin cum Anaestheticoٹ; Scheriproct; Ultraproct; ***Belg.:*** Scheriproct; Trihistalex; Ultraproct; ***Braz.:*** Proctyl; Senol†; Ultraproct; ***Canad.:*** Nupercainal; Proctol; Proctomyxin HC; Proctosedyl; ratio-Proctosone; ***Chile:*** Scheriproct; Ultraproct; ***Cz.:*** Aviril H†; Faktu; Otobacid N; Proctosedyl†; Proctospre†; Spofax; ***Denm.:*** Proctosedyl; ***Fin.:*** Ciloprin cum Anaestheticoٹ; Faktu†; Proctosedyl; Scheriproct; ***Fr.:*** Deliproct; Ultraproct; ***Ger.:*** Anumedin†; Faktu; Otobacid N; Procto-Kaban†; Proctospre†; Scheriproct†; Ultraproct†; ***Gr.:*** Scheriproct Neo; ***Hong Kong:*** Borraginol-N; Decatylen; Faktu; Proctosedyl†; Proctosone†; Ultraproct†; ***India:*** Otogesic; ***Indon.:*** Borraginol-N; Faktu; Ultraproct; ***Irl.:*** Proctosedyl; Scheriproct; Ultraproct; ***Ital.:*** Ultraproct; ***Jpn:*** Una A Gel; ***Malaysia:*** Decatylen; Proctosedyl; Proctosone†; ***Mex.:*** Proctoacid; Scheriproct; Ultraproct; ***Neth.:*** Proctosedyl; ***Norw.:*** Proctosedyl; Scheriproct; ***NZ:*** Proctosedyl; Ultraproct; ***Philipp.:*** Faktu; Proctosedyl; Ultraproct; ***Pol.:*** Proctosone; ***Port.:*** Decatyleno; Faktu; Scheriproct; ***Rus.:*** Ultraproct (Ультрапрокт); ***S.Afr.:*** Cepacaine†; Medi-Keel A; Proctosedyl; Scheriproct; ***Singapore:*** Decatylen; Faktu†; Proctosedyl; ***Spain:*** Anestesia Loc Braun S/A; Ruscus; Scheriproct; ***Swed.:*** Proctosedyl†; Scheriproct N; ***Switz.:*** Ciloprin caٹ; Decatylene Neo; Faktu; Locaseptil-Neo; Scheriproct; ***Thai.:*** Proctosedyl; Scheriproct†; ***Turk.:*** Ultraproct; ***UAE:*** Supraproct-S; ***UK:*** Proctosedyl; Scheriproct; Ultraproct; Uniroid-HC; ***USA:*** Corticaine; ***Venez.:*** Scheriproct.

Coca ⊗

Coca Leaves; Hoja de Coca.

Profile

Coca is the dried leaves of *Erythroxylum coca* (Bolivian or Huanuco leaf) or of *E. truxillense* (Peruvian or Truxillo leaf) (Erythroxylaceae), indigenous to Bolivia and Peru and cultivated in Colombia and Indonesia.

Coca leaves contain about 0.7 to 1.5% of total alkaloids, of which cocaine, cinnamyl-cocaine, and α-truxilline are the most important.

Coca was formerly used for its stimulant action and for the relief of gastric pain, nausea, and vomiting, but it has no place in modern medicine. The practice of coca leaf chewing still continues in South America.