

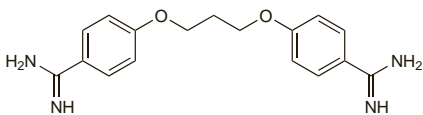
an; Betaseptic; Braunol; Braunovidon; Wundesin; **Belg.:** Braunol; Iodex; Iso-Betadine; **Braz.:** Asteriodine†; Laboriodine; Marcodine; PVP†; Sabofen†; **Canad.:** Betadine; Providine; **Chile:** Difexon; Neoyod†; **Cz.:** Betadine; Braunol; Braunovidon; Jodisol; Jodobac†; **Fin.:** Betadine; **Fr.:** Betadine; Poliodine; **Ger.:** Betaisodona; Braunol; Braunovidon; Freka-cid; Inadine†; Jodobac†; Mercurochrom-Jod; Polydona; Polysept; Sepso; J; Traumasept; **Gr.:** Betadine; Drapix; Eva; Povi†; Lombocid†; Oxisept; Tinsole; **Hong Kong:** Betadine; Freka-cid; Providine; Videne; **Hung.:** Betadine; Colpo-Cleaner; Gyneiod†; **India:** Alphadine†; Betadine; Betadine-AD; Cipladine; Povidine; Wokadine; **Indon.:** Abodine; Aseptia; Betadine; Corsasept; Duvodine; For-infect; Isodine; Molexidone; Mugsept; Neo Iodine; Scarssept; Septadine; Vidisept; **Irl.:** Betadine; Inadine; Savlon Dry; **Israel:** Iodovit; Iodiflor; Iodispray; Iodo-Vit; Massengill Medicated†; Polydine; Polysept; Yodon; **Ital.:** Asepsan; Betadine; Betaseptic; Braunol; Citro Jod; Destrobac; Eso-Jod; Esoform Jod 35 and 75; Gammadin; Golasept; Inadine; Iodosteril; Iodoten; Jodocur†; Jodogard; Oftastent; Paniodal†; Paniodine†; Povidem; **Jpn.:** Finish; **Malaysia:** Betadine; Freka-cid; Povidem; **Mex.:** Betadine; Freka-cid; Povidem; **Neth.:** Betadine; Braunol; **NZ:** Betadine; Isodine; Solvin†; Yodaca; Yodine; **Philipp.:** Bacticide; Betadine; Povidine; Zigmadone; **Pol.:** Betadine; Braunovidon; Jodi; Polodina-R; Polseptol; PV Jod; **Port.:** Betadine; Braunol; Dinasept†; Ginoseptil; Iodolab; Isodine; Septil; **Rus.:** Betadine (Бетадин); Iodoxyd (Иодоксила); Wokadine (Вокадин); **S.Afr.:** Betadine; Dermadine; Drygel; Podine; Septadine; Septisooth; Steridine; Zedchem PVP-I; **Singapore:** Betadine; **Spain:** Acydona; Betadine; Betatul; Curadona; Iodina; Orto Dermo P; Sanoyodo; Topionic; **Switz.:** Betadine; Braunol; Braunosan; Braunosan H Plus; Braunovidon; Destrobac; Intersept; Jodoplex; **Thai.:** Annadine; Bactedene; Bernadine†; Betadine; Cavodine†; Eprodine†; Freka-cid; Isodine; Movidone; P-Vidine†; Povadine; Sepfadine†; Septidine; Upodine; Videne; X-Tardine; **Turk.:** Batticon; Betakon; Biokadin; Isosol; Povidem; **UK:** Betadine; Inadine; Savlon Dry; Videne; **USA:** ACU-dyne; Betadine; Biodine; Efodine; Iodex; Massengill Medicated; Minidyne; Operand; Polydine; Summers Eve Medicated; **Venez.:** Betadine; Etyyodix†; Intradine; Intradyn; Iopovidona†; Jabodine†; Norlidine; Podival†; Povidine†; Yodasept†.

Multi-ingredient: **Arg.:** Merthiolate Iodopovidona; Pervinox D; **Austria:** Braunoderim; **Belg.:** Braunoderim; **Braz.:** Iodocaine†; **Cz.:** Jox; **Ger.:** Betaseptic; Braunoderim; Repithel; **Hung.:** Eczil†; Jox†; **India:** Eczo-Wokadine; **Indon.:** Kalpanax; Kopamex; **Ital.:** Braunoderim; Jodiec; **Jpn.:** U-Pasta; **Mex.:** Bano Coloides; Riban; **Port.:** Braunoderim; **Rus.:** Jox (Южк); **Switz.:** Betaseptic; Braunoderim; **Turk.:** Batiodin; **USA:** Anbesol; Orasol; ProTech.

Propamidine Isetionate (BAN, rINN)

Isetionate de propamidina; M&B-782; Propamidine Isethionate; Propamidine, Isetionate de; Propamidini Isetionas. 4,4'-Trimethylenedioxydibenzamidine bis(2-hydroxyethanesulphonate).

Пропамидина Изетионат
 $C_{17}H_{20}N_4O_2 \cdot 2C_2H_4O_4S = 564.6$
 CAS — 104-32-5 (propamidine); 140-63-6 (propamidine isetionate).
 ATC — D08AC03; S01AX15.
 ATC Vet — QD08AC03; QS01AX15.



Profile

Propamidine isetionate is an aromatic diamidine antiseptic that is active against Gram-positive bacteria, but less active against Gram-negative bacteria and spore-forming organisms. It also has antifungal properties and is active against *Acanthamoeba*. Ophthalmic solutions containing 0.1% of propamidine isetionate are used for the treatment of conjunctivitis and blepharitis.

Acanthamoeba keratitis. The optimal regimen for the treatment of *Acanthamoeba keratitis* (p.822) has yet to be determined. Propamidine isetionate applied topically was the first drug used with some success.^{1,2} It was used with an aminoglycoside such as neomycin or a neomycin-polymyxin-gramicidin preparation and a cure was achieved in about 50% of cases. Due to surface toxicity and poor *in-vitro* sensitivity of neomycin, propamidine was later used with chlorhexidine or polihexanide. However, poor cysticidal activity, chronic conjunctival infection, and resistance of some strains of *Acanthamoeba* to propamidine has prompted the suggestion that it should be replaced by another diamidine such as hexamidine.³

- Murdoch D, et al. *Acanthamoeba keratitis* in New Zealand, including two cases with *in vivo* resistance to polyhexamethylene biguanide. *Aust N Z J Ophthalmol* 1998; **26**: 231–6.
- Seal DV. *Acanthamoeba keratitis* update—incidence, molecular epidemiology and new drugs for treatment. *Eye* 2003; **17**: 893–905.
- Perrine D, et al. Amoebicidal efficiencies of various diamidines against two strains of *Acanthamoeba* polyphaga. *Antimicrob Agents Chemother* 1995; **39**: 339–42.

Preparations

Proprietary Preparations (details are given in Part 3)

Austral.: Brolene; **Irl.:** Brolene; **NZ:** Brolene; **S.Afr.:** Brolene; **UK:** Brolene; Golden Eye Drops.

Propiolactone (BAN, USAN, rINN)

BPL; NSC-21626; 2-Oxetanone; Propanolide; Propiolactona; β-Propiolactone; Propiolactonum. Propiono-3-lactone.

Пропиолактон
 $C_3H_4O_2 = 72.06$
 CAS — 57-57-8.



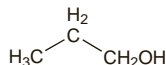
Profile

Propiolactone vapour is an irritant, mutagenic, possibly carcinogenic, disinfectant which is very active against most micro-organisms including viruses. It is rather less effective against bacterial spores.

Propiolactone vapour has been used for the gaseous sterilisation of pharmaceutical and surgical materials and for disinfecting large enclosed areas. It has low penetrating power. Propiolactone liquid has also been used.

Propyl Alcohol

Alcohol propilico; Normal Propyl Alcohol; Primary Propyl Alcohol; Propanol; Propanoli; Propanolis; Propanolum. Propan-1-ol.
 $CH_3CH_2CH_2OH = 60.10$
 CAS — 71-23-8.
 ATC — D08AX03.
 ATC Vet — QD08AX03.



Pharmacopoeias. In *Eur.* (see p.vii).

Ph. Eur. 6.2 (Propanol). A clear colourless liquid. Miscible with water and with dehydrated alcohol. Protect from light.

Adverse Effects and Treatment

As for Alcohol, p.1625; propyl alcohol is considered more toxic.

References

- WHO. 1-Propanol. *Environmental Health Criteria* 102. Geneva: WHO, 1990. Available at: <http://www.inchem.org/documents/ehc/ehc/ehc102.htm> (accessed 15/03/06)

Uses and Administration

Propyl alcohol, an antiseptic with properties similar to those of alcohol (p.1627), is used in preparations for disinfection of the hands, skin, surfaces, and instruments.

Isopropyl alcohol (p.1651) is also used as an antiseptic.

Preparations

Proprietary Preparations (details are given in Part 3)

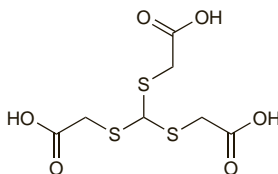
Ger.: Skinman Asept.

Multi-ingredient: **Austria:** Dodesept; Kodan; Marcocid; Octeniderm; **Fr.:** Anios DD; Sterillium†; **Ger.:** Aerodesin; Bacillo; Bacillo AF; Bacillo plus; Desmanol†; Freka-Steril; Hospisept; Incidin; Incidur Spray†; Kodan Tinktur Forte†; Meliseptol; Meliseptol Rapid; Neo Kodan†; Primasept Med†; Sargrosept†; Softa Man; St-Tissues; Sterillium; **Gr.:** Chiro Des; Octeniderm; Sterillium; **Ital.:** Softa Man; **Neth.:** Softa-Man; Sterillium; **Singapore:** Listerine Cool Mint; Listerine Fresh Burst; Listerine Tartar Control; **Switz.:** Kodan Teinture forte; Octeniderm; Softa-Man; Sterillium†.

Ritiometan (rINN)

Ritiometán; Ritiometán; Ritiometanum. (Methyldinetrithio)triacetic acid.

Ритиометан
 $C_7H_{10}O_6S_3 = 286.3$
 CAS — 34914-39-1.
 ATC — R01AX05.
 ATC Vet — QR01AX05.



Profile

Ritiometan is used as the magnesium salt in an aerosol preparation for the treatment of infections of the nose and throat.

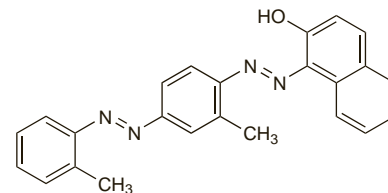
Preparations

Proprietary Preparations (details are given in Part 3)

Fr.: Necyran.

Scarlet Red

Biebrich Scarlet R Medicinal; CI Solvent Red 24; Colour Index No. 26105; Fat Ponceau R; Rojo escarlata; Rubrum Scarlatinum; Scharlachrot; Sudan IV. 1-[4-(o-Tolylazo)-o-tolylazo]naphth-2-ol.
 $C_{24}H_{20}N_4O = 380.4$
 CAS — 85-83-6.

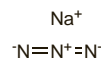


Profile

Scarlet red is an antiseptic dye that has been used topically. It can be irritant. Scarlet red is not permitted as a food colour in the EU, as it is thought to be a genotoxic carcinogen.

Sodium Azide

Azida sódica; Sodü azidek.
 $N_3Na = 65.01$
 CAS — 26628-22-8.



Adverse Effects and Precautions

Sodium azide is a potent vasodilator and the most common adverse effect, regardless of the route of exposure, is hypotension. Hypotension developing more than an hour after exposure is associated with more severe toxicity and fatality. Other severe symptoms include seizure, coma, arrhythmia, tachypnoea, pulmonary oedema, metabolic acidosis, and cardiorespiratory arrest. Milder symptoms include nausea, vomiting, diarrhoea, headache, dizziness, temporary loss of vision, palpitations, dyspnoea, temporary loss of consciousness, or decreased mental status. There is no specific antidote for sodium azide intoxication.

Solutions containing sodium azide must not be disposed of into drain pipelines containing copper, lead, or brass since highly explosive heavy metal azides may be produced.

References to acute poisoning with sodium azide.

- Edmonds OP, Bourne MS. Sodium azide poisoning in five laboratory technicians. *Br J Ind Med* 1982; **39**: 308–9.
- Klein-Schwartz W, et al. Three fatal sodium azide poisonings. *Med Toxicol Adverse Drug Exp* 1989; **4**: 219–27.
- Anonymous. Sodium azide contamination of hemodialysis water supplies. *JAMA* 1989; **261**: 2603.
- Chang S, Lamm SH. Human health effects of sodium azide exposure: a literature review and analysis. *Int J Toxicol* 2003; **22**: 175–86.

Airbag deployment. Chemical and thermal burns have occurred after accidental perforation of airbags in motor vehicles and the release of sodium azide and other byproducts. Irritant contact dermatitis usually affecting the upper chest, arms, and face, and blunt trauma have also been reported.^{1,2}

- Corazza M, et al. Effects of airbag deployment: lesions, epidemiology, and management. *Am J Clin Dermatol* 2004; **5**: 295–300.
- Suhr M, Kreuzsch T. Burn injuries resulting from (accidental) airbag inflation. *J Craniofacial Surg* 2004; **32**: 35–7.

Effects on the nervous system. A study¹ to evaluate occupational neurotoxicity to sodium azide over a period of 3 years found that the only significant chronic symptom was trembling of the hands, occurring in 15 of 41 exposed workers compared with none of 42 controls. There was no difference between the 2 groups for other psychological or neuropsychological tests. Acute adverse effects most commonly reported by the exposed workers were heart palpitations, fatigue, nausea, vertigo, and irritated or red eyes.

- Miljours S, Braun CMJ. A neuropsychotoxicological assessment of workers in a sodium azide production plant. *Int Arch Occup Environ Health* 2003; **76**: 225–32.

Haemodialysis. Of 10 investigations by the CDC¹ into outbreaks of disease caused by chemicals in haemodialysis facilities between 1979 and 1999, one was due to sodium azide. Inadequate rinsing of water filters resulted in the exposure of 9 patients to sodium azide in a dialysis centre. Patients experienced sudden hypotension, blurred vision, headache, nausea, vomiting, syncope, and 1 patient experienced cramps.

- Arduino MJ. CDC investigations of noninfectious outbreaks of adverse events in hemodialysis facilities, 1979–1999. *Semin Dial* 2000; **13**: 86–91.

Uses

Sodium azide has been used as an antimicrobial preservative in laboratory reagents, serum samples, and dialysis equipment. It is also used in car airbags; sudden impact triggers an electrical charge causing the sodium azide to explode and nitrogen gas is released.