

Preparations

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: **USA:** Vi Rid-Ready.

Orthophenylphenol

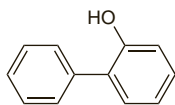
2-Biphenylol; E231; E232 (sodium-*o*-phenylphenol); 2-Hydroxy-biphenyl; *o*-Hydroxydiphenyl; Ortofenilfenol. (1,1'-Biphenyl)-2-ol.

$C_{12}H_{10}O = 170.2$.

CAS — 90-43-7.

ATC — D08AE06.

ATC Vet — QD08AE06.



Profile

Orthophenylphenol is a phenolic disinfectant with antimicrobial properties similar to those of chloroxylenol (p.1640). It is used for disinfection of skin, hands, instruments, and hard surfaces. It also has many industrial and agricultural uses as a preservative for a wide range of materials, particularly against moulds and rots. Sodium-*o*-phenylphenol has been used similarly.

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Ger: Amocid; **Ital:** Citromedics Disinfettante; Citrosteril Aspiratori; Crescom; Esafenol 60; Germozero Clean; Helix I; Higesan; Neo Esosformolo; Vcanalere; **Switz:** Manusept†.

Multi-ingredient: **Austria:** Dodesept; Dodesept Gefarbt; Kodan; **Ger:** Bomix; Desderman N†; Freka-Derm; Freka-Sept 80; Heliapur; Incidin Extra†; Kodan Tinktur Forte†; Primasept Med†; **Ital:** Bergont†; Dian†; Esafenol Ferri; Germozero Dermo; Germozero Plus; Heliapur; Hygienist†; Norica; Sangen Casa; Sterosan; **Switz:** Frekaderm†; Kodan Teinture forte; **USA:** BTK-Plus.

Oxychlorosene (USAN)

Monoxychlorosene; Oxichloroseno.

$C_{20}H_{34}O_3S.HOCl = 407.0$.

CAS — 8031-14-9.

Oxychlorosene Sodium (USAN)

Oxichloroseno sódico; Sodium Oxychlorosene.

CAS — 52906-84-0.

Profile

Oxychlorosene is the hypochlorous acid complex of a mixture of the phenyl sulfonate derivatives of aliphatic hydrocarbons. It is a chlorine-releasing antiseptic with the general properties of chlorine, p.1638.

A 0.4% solution of oxychlorosene sodium has been used for cleansing wounds (although chlorine-releasing antiseptics are generally regarded as too irritant for this purpose—see Disinfection, Wounds, under Uses and Administration of Sodium Hypochlorite, p.1662) and for pre-operative skin preparation; a 0.1 or 0.2% solution has been used in urological and ophthalmological disinfection.

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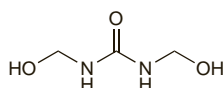
USA: Clorapactin WCS-90.

Oxymethurea

Carbamol; *N,N'*-di(hydroksimetyli)karbamidi; *N,N'*-di(hydroksimetyli)-karbamid; Dihydroxymethyl Carbamide; *N,N'*-di(hydroxymethyl)karbamidum; Oximeturea. *N,N'*-Bis(hydroxymethyl)urea.

$C_3H_8N_2O_3 = 120.1$.

CAS — 140-95-4.



Profile

Oxymethurea is an antiseptic included in multi-ingredient preparations intended for the topical treatment of ear infections.

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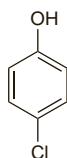
Multi-ingredient: **Austria:** Ciloprin cum Anaesthetic†; **Fin:** Ciloprin cum Anaesthetic†; **India:** Otogesis; **Switz:** Ciloprin cat†.

Parachlorophenol

Paraclorofenol. 4-Chlorophenol.

$C_6H_5ClO = 128.6$.

CAS — 106-48-9.



Pharmacopoeias. In *US*.

US also includes camphorated parachlorophenol.

USP 31 (Parachlorophenol). It consists of white or pink crystals with a characteristic phenolic odour. M.p. about 42°; congealing temperature between 42° and 44°. Sparingly soluble in water and in liquid paraffin; very soluble in alcohol, in chloroform, in ether, in glycerol, and in fixed and volatile oils; soluble in soft paraffin. A 1% solution in water is acid to litmus. Store in airtight containers. Protect from light.

USP 31 (Camphorated Parachlorophenol). It contains not less than 33% and not more than 37% of parachlorophenol and not less than 63% and not more than 67% of camphor, with the sum of the percentages of parachlorophenol and camphor not less than 97% and not more than 103%. Store in airtight containers. Protect from light.

Profile

Parachlorophenol is a chlorinated phenolic disinfectant and antiseptic with similar properties to phenol (p.1656). Camphorated parachlorophenol has been used in dentistry in the treatment of infected root canals.

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Multi-ingredient: **Ital:** Esafenol Ferri; Pasta Iodoformica Radiopaca; **Spain:** Cresophene; **Switz:** Cresophene†.

Paraformaldehyde

Paraform; Paraformaldehído; Paraformic Aldehyde; Polymerised Formaldehyde; Polyoxymethylene; Trioxyméthylène.

$(CH_2O)_n$.

CAS — 30525-89-4.

Pharmacopoeias. In *Jpn*.

Adverse Effects, Treatment, and Precautions

As for Formaldehyde Solution, p.1644. There have been reports of allergic reactions and nerve damage associated with the dental use of paraformaldehyde as a root canal sealant; it should not extrude beyond the apex.

Uses and Administration

Paraformaldehyde is a disinfectant and antiseptic with the properties and uses of formaldehyde (p.1645) and is used as a source of formaldehyde. To disinfect rooms it has been vapourised by heating. Tablets prepared for this purpose should be coloured by the addition of a suitable blue dye.

Paraformaldehyde has been used in lozenges for the treatment of minor throat infections. In dentistry, it has been used as an obtundent for sensitive dentine and as an antiseptic in mummifying pastes and for root canals. Paraformaldehyde may also be used for the decontamination of equipment thought to be contaminated with the spores of *Bacillus anthracis*.

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Israel: Formalin.

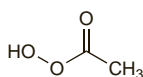
Multi-ingredient: **Ital:** Eso 70; Esoform 7 mc; Esoform 70 mc; Pasta Devitalizzante; **Switz:** Asphalinet†; Caustinerf forte†.

Peracetic Acid

Acetyl Hydroperoxide; Acidum Peraceticum; Kyselina peroctová; Peracético, ácido; Peroxyacetic Acid.

$C_2H_4O_3 = 76.05$.

CAS — 79-21-0.



Adverse Effects and Precautions

Concentrated peracetic acid is corrosive to the skin. Inhalation may produce respiratory symptoms, including pulmonary oedema, although commercial solutions are claimed to have low vapour activity.

Occupational exposure. Although corrosive and highly irritating to skin, eyes, mucous membranes and respiratory tract, solutions of peracetic acid (with hydrogen peroxide) were thought unlikely to cause sensitisation leading to hypersensitivity reactions in healthcare workers who were occupationally exposed. In contrast, *o*-phthalaldehyde, although its sensitising potential was much lower than that of glutaral, might cause respiratory and dermal sensitisation.¹

1. Rideout K, *et al*. Considering risks to healthcare workers from glutaraldehyde alternatives in high-level disinfection. *J Hosp Infect* 2005; **59**: 4–11.

Uses

Peracetic acid is a strong oxidising disinfectant. It is active against many micro-organisms including bacteria, spores, fungi, and viruses. It is used for disinfecting medical equipment including dialysers and endoscopes. It is used in the food industry and for disinfecting sewage sludge, and has been used as a spray for sterilisation of laboratories.

Reviews

1. Kitis M. Disinfection of wastewater with peracetic acid: a review. *Environ Int* 2004; **30**: 47–55.

Disinfection of dialysis equipment. For use of peracetic acid with hydrogen peroxide in the disinfection of dialysis equipment, see under Hydrogen Peroxide, p.1648.

Disinfection of endoscopes. Peracetic acid has been used to disinfect endoscopes;^{1,2} it is a possible alternative to glutaral (see p.1623).

1. Bradley CR, *et al*. Evaluation of the Steris system 1 peracetic acid endoscope processor. *J Hosp Infect* 1995; **29**: 143–51.
2. Middleton AM, *et al*. Disinfection of bronchoscopes, contaminated in vitro with *Mycobacterium tuberculosis*, *Mycobacterium avium-intracellulare* and *Mycobacterium chelonae* in sputum, using stabilized, buffered peracetic acid solution ('Nu-Cidex'). *J Hosp Infect* 1997; **37**: 137–43.

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Fr: Dynacide; Nu-Cidex†; **Ger:** Sekusept; **Ital:** Esodrox; Ferrister; Renaxid; SaniDrox; Sekusept; Sporidox Plus; **Singapore:** Pearsafe.

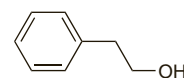
Multi-ingredient: **Fr:** Anioxyde; **Ger:** Peralsept; **Ital:** Adaspor; Esocetic Plus; Esocetic†; Peralsept; **Singapore:** Virkon.

Phenethyl Alcohol (BAN)

Alcohol feniletílico; Alcohol Phenylethylicus; Alkohol fenyletylowy; Benzyl Carbinol; Phenethanolum; Phenylethyl alcohol. 2-Phenylethanol.

$C_6H_5.CH_2.CH_2OH = 122.2$.

CAS — 60-12-8.



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

USP 31 (Phenylethyl Alcohol). A colourless liquid with a rose-like odour. Soluble 1 in 60 of water, 1 in less than 1 of alcohol, of chloroform, of ether, of benzyl benzoate, and of diethyl phthalate, and 1 in 2 of alcohol 50%; very soluble in glycerol, in propylene glycol, and in fixed oils; slightly soluble in liquid paraffin. Store in airtight containers in a cool, dry place. Protect from light.

Incompatibility. Phenethyl alcohol is incompatible with oxidising agents and proteins. Activity may be reduced by nonionic surfactants or by adsorption onto low density polyethylene containers.

Profile

Phenethyl alcohol is more active against Gram-negative than Gram-positive bacteria. It is used as a preservative in ophthalmic, nasal, and otic solutions at a concentration of 0.25 to 0.5%, with another bactericide, and up to 1% in topical preparations. It is also used as an antiseptic in topical products in concentrations of up to 7.5%. It is also used as a component of flavouring essences and perfumes.

Phenethyl alcohol may cause eye irritation.

Antimicrobial action. Antimicrobial activity may be enhanced by the addition of phenethyl alcohol to solutions preserved with benzalkonium chloride, chlorhexidine acetate, phenylmercuric nitrate, chlorocresol, or chlorobutanol.¹

1. Richards RME, McBride RJ. The preservation of ophthalmic solutions with antibacterial combinations. *J Pharm Pharmacol* 1972; **24**: 145–8.

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Multi-ingredient: **Austral:** Resolve Timea; Sebininse; **Canad:** Sclerodex; **Ger:** Imazol; **Ir:** Ceanel†; **NZ:** Sebininse; **UK:** Ceanel.