

Preparations

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: **Cz.**: Klosterfrau Melisana; **India:** Happy/tizer; Tummy Ease; **Philipp.**: Vo-D-Fense; **Pol.**: Melisana Klosterfrau; **Rus.**: Maraslavin (Мараславин); Tentex (Тентек).

Pepsin

Pepsiini; Pepsiinijauhe; Pepsin práškový; Pepsin, pulver; Pepsina; Pepsine; Pepsini Pulvis; Pepsino mitelai; Pepsinum; Pepszin-por: CAS — 9001-75-6.
ATC — A09AA03.
ATC Vet — QA09AA03.

Pharmacopoeias. In *Chin.*, *Eur.* (see p.vii), and *Viet.* In *Jpn* as Saccharated Pepsin.

Ph. Eur. 6.2 (Pepsin Powder; Pepsin BP 2008). It is prepared from the gastric mucosa of pigs, cattle, or sheep. It contains gastric proteinases active in acid medium (pH 1 to 5). It has an activity of not less than 0.5 Ph. Eur. units/mg, calculated with reference to the dried substance. A hygroscopic, white or slightly yellow, crystalline or amorphous powder. Soluble in water; practically insoluble in alcohol. A solution in water may be slightly opalescent with a weak acidic reaction. Store at 2° to 8° in airtight containers. Protect from light.

Uses and Administration

Pepsin contains proteolytic enzymes secreted by the stomach, which control the degradation of proteins into proteoses and peptones. It hydrolyses polypeptides including those with bonds adjacent to aromatic or dicarboxylic L-amino-acid residues.

Pepsin has been given with dilute hydrochloric acid, or with substances such as glutamic acid hydrochloride, or betaine hydrochloride, as an adjunct in the treatment of gastric hypochlorhydria, or to treat deficiencies of digestive enzyme secretion. It has also been given for its supposed benefit as an ingredient of mixtures for dyspepsia and other gastrointestinal disorders.

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Canad.: Fermentol; **Ger.**: Hettral N†; **Pol.**: Mixture Pepsini.

Multi-ingredient: **Arg.**: Docechol; Gastridin-E; Opoenterol†; Tridigestivo Soubeiran; **Austral.**: Betaine Digestive Aid; Bioglan Digestive Zyme; Digestaid; Enzyme; Prozyme†; **Austria:** Helo-acid; Helopanym; Oroacid; **Belg.**: Digestomen; **Braz.**: Digeplus; Hesso; Filogast†; Hepatoregiust†; Pantopept†; Peptopancreasi; Primeral; **Chile:** Flapex E; **Ger.**: Citropepsin†; Pepzitrat; **Hung.**: Betacid; **India:** Aristozyme; Digelex; Digelex-T; Dipep; Lupizyme; Nutrozyme; Papytazyme; **Indon.**: Librozim; Librozim Plus; **Israel:** Babyzim; Betazim; **Pol.**: Citropepsin†; Essen Enzimatic†; Eudigestio†; Gastro-Pepsin; Pepto-Pancreasi†; **Mex.**: Ochozim; Zimotris; **Philipp.**: Spasmo-Canulase; **Port.**: Espasmo Canulase; Modulanzime; **S.Afr.**: Sentinel Ulcer Mixture; Spasmo-Canulase; **Spain:** Digestomen Complex; Euzymina Lisina I; Euzymina Lisina II; Troforex Pepsico; **Switz.**: Peps-Chlor†; Spasmo-Canulase; Stomacine; **Thai:** Papytazyme†; Pepsitase; **UK:** Enzyme Plus; **USA:** Digepepsin.

Perflubron (USAN, rINN) ⊗

Perflubron; Perflubronum; Perfluorooctylbromide; PFOB. 1-Bromoheptadecafluorooctane.

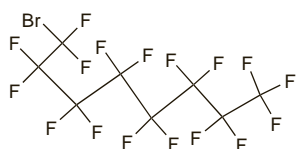
Перфлуброн

C₈BrF₁₇ = 499.0.

CAS — 423-55-2.

ATC — V08CX01.

ATC Vet — QV08CX01.



Pharmacopoeias. In *US*.

USP 31 (Perflubron). A clear, colourless, practically odourless liquid. Store in airtight containers. Protect from light.

Profile

Perfluorocarbons can absorb, transport, and release oxygen and carbon dioxide. Perflubron is a perfluorocarbon tried as an alternative to red blood cell preparations to improve gaseous transport, in particular oxygen supply, to the tissues. It may also be instilled directly to the lungs for use in partial liquid ventilation as an adjunct to mechanical ventilation in patients with respiratory failure.

Perflubron is being studied for use as an intravenous contrast medium in computed tomography and ultrasound. It has also been given orally to enhance delineation of the bowel during magnetic resonance imaging.

Other perfluorocarbons have also been used. A mixture of perfluoramine (perfluorotripropylamine) and perfluorane (p.2365) has

been used to prevent myocardial ischaemia during percutaneous transluminal coronary angioplasty.

Perfluorocarbons such as perflunafene and perfluorooctane (p.2365) have been used in eye surgery.

Blood substitutes. References to the use of perflubron and other perfluorocarbons as oxygen carriers.

- Garrelts JC. Fluosol: an oxygen-delivery fluid for use in percutaneous transluminal coronary angioplasty. *Drugs Ann Pharmacother* 1990; **24**: 1105-12.
- Ravis WR, *et al.* Perfluorochemical erythrocyte substitutes: disposition and effects on drug distribution and elimination. *Drug Metab Rev* 1991; **23**: 375-411.
- Urbanak SJ. Artificial blood. *BMJ* 1991; **303**: 1348-50.
- Jones JA. Red blood cell substitutes: current status. *Br J Anaesth* 1995; **74**: 697-703.
- Remy B, *et al.* Red blood cell substitutes: fluorocarbon emulsions and haemoglobin solutions. *Br Med Bull* 1999; **55**: 277-98.
- Lowe KC. Perfluorinated blood substitutes and artificial oxygen carriers. *Blood Rev* 1999; **13**: 171-84.
- Prowse CV. Alternatives to standard blood transfusion: availability and promise. *Transfus Med* 1999; **9**: 287-99.
- Matsumoto S, Kuroda Y. Perfluorocarbon for organ preservation before transplantation. *Transplantation* 2002; **74**: 1804-9.
- Jahr JS, *et al.* Blood substitutes and oxygen therapeutics: an overview and current status. *Am J Ther* 2002; **9**: 437-43.
- Kim HW, Greenburg AG. Artificial oxygen carriers as red blood cell substitutes: a selected review and current status. *Artif Organs* 2004; **28**: 813-28.
- Spahn DR, Kocian R. Artificial O₂ carriers: status in 2005. *Curr Pharm Des* 2005; **11**: 4099-4114.
- Riess JG. Perfluorocarbon-based oxygen delivery. *Artif Cells Blood Substit Immobil Biotechnol* 2006; **34**: 567-80.

Respiratory distress syndrome. References to the use of perfluorocarbons, including perflubron, for partial liquid ventilation in neonatal respiratory distress syndrome (p.1508) and acute respiratory distress syndrome (p.1498).

- Hirsch RB, *et al.* Liquid ventilation in adults, children, and full-term neonates. *Lancet* 1995; **346**: 1201-2.
- Leach CL, *et al.* Partial liquid ventilation with perflubron in premature infants with severe respiratory distress syndrome. *N Engl J Med* 1996; **335**: 761-7.
- Hirsch RB, *et al.* Initial experience with partial liquid ventilation in adult patients with acute respiratory distress syndrome. *JAMA* 1996; **275**: 383-9.
- Wolfson MR, Shaffer TH. Liquid assisted ventilation update. *Eur J Pediatr* 1999; **158**: S27-S31.
- Davies M. Liquid ventilation. *J Paediatr Child Health* 1999; **35**: 434-7.
- Weis CM, Fox WW. Current status of liquid ventilation. *Curr Opin Pediatr* 1999; **11**: 126-32.
- Kacmarek RM. Liquid ventilation. *Respir Care Clin N Am* 2002; **8**: 187-209.
- Davies MW, Fraser JF. Partial liquid ventilation for preventing death and morbidity in adults with acute lung injury and acute respiratory distress syndrome. Available in The Cochrane Database of Systematic Reviews; Issue 4. Chichester: John Wiley; 2004 (accessed 28/04/05).

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USA: Imagent G; LiquiVent.

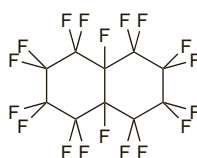
Perflunafene (BAN, rINN) ⊗

Perflunafene; Perflunafeno; Perflunafenum; Perfluorodecahydronaphthalene; Perfluorodecalin; Perfluorodekalin.

Перфлунафен

C₁₀F₁₈ = 462.1.

CAS — 306-94-5.



Profile

Perflunafene is a perfluorocarbon with similar properties to perflubron (above). Intra-ocular injection of perflunafene is used to provide temporary tamponade in ophthalmic procedures such as retinal re-attachment. Perflunafene and perfluamine have been used together for their oxygen-carrying properties in blood substitute preparations and to prevent myocardial ischaemia during percutaneous transluminal coronary angioplasty.

Preparations

Proprietary Preparations (details are given in Part 3)

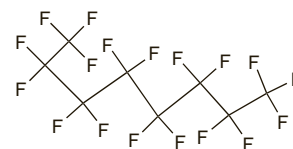
Israel: Adato-Deca†; **Neth.**: Eftiar Decalin; **Turk.**: DK-Line.

Perfluorooctane

Octadecafluorooctane; Perfluoro-n-octane; Perfluoro-octane.

C₈F₁₈ = 438.1.

CAS — 307-34-6.



Profile

Perfluorooctane is a perfluorocarbon with similar properties to perflubron (above). Intra-ocular injection of perfluorooctane is used to provide temporary tamponade in ophthalmic procedures such as retinal re-attachment.

References

- Scott IU, *et al.* Outcomes of surgery for retinal detachment associated with proliferative vitreoretinopathy using perfluoro-n-octane: a multicenter study. *Am J Ophthalmol*. 2003; **136**: 454-63.

Preparations

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Israel: Adato-Octa†; **Neth.**: Eftiar Octane; **USA:** Perfluoron.

Persic Oil

Melocotón, aceite de; Oleum Persicorum; Peach or:

Pharmacopoeias. *Chin.* and *Jpn* include Peach Kernel (Persica Semen) and also Apricot Kernel (Armeniaca Semen).

Profile

Persic oil is the fixed oil expressed from the kernels of varieties of *Prunus persica* (peach) or *P. armeniaca* (apricot) (Rosaceae). It closely resembles almond oil (p.2252) in its general characteristics and is used as an oily vehicle.

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Multi-ingredient: **Fr.**: Item Lentes.

Peru Balsam

Bals. Peruv.; Bálsamo del Perú; Balsamum peruvianum; Baume du Pérou; Baume du San Salvador; Peru balzamas; Peruánský balzám; Perubalsam; Perui balzsm; Perunpalsami; Peruvian Balsam.

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

Ph. Eur. 6.2 (Peru Balsam). The balsam obtained from the scorched and wounded trunk of *Myroxylon balsamum* var. *pereirae*. It contains not less than 45.0% w/w and not more than 70.0% w/w of esters, mainly benzyl benzoate and benzyl cinnamate.

A dark brown, viscous liquid which is not sticky, is non-drying, and does not form threads. It is transparent and yellowish-brown when viewed in a thin layer. Practically insoluble in water, freely soluble in dehydrated alcohol; not miscible with fatty oils except for castor oil. Protect from light.

Profile

Peru balsam has a very mild antiseptic action by virtue of its content of cinnamic and benzoic acids. Diluted with an equal part of castor oil, it has been used as an application to bedsores and chronic ulcers; it has also been used in topical preparations for the treatment of superficial skin lesions and pruritus. It is an ingredient of some rectal preparations used for the symptomatic relief of haemorrhoids (see p.1697).

Peru balsam is an ingredient of some preparations used in the treatment of respiratory congestion. It is also used in aromatherapy.

Skin sensitisation has been reported.

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Fr.: Tulle Gras Lumiere†; **Pol.**: Balsolan.

Multi-ingredient: **Arg.**: Anusol; Anusol Duo S; Anusol-A; **Austral.**: Anusol; Ayrton's Chiblain; **Austria:** Mamellin; Pudan-Lebertran-Zinksalbe; Pulmex; Rombay; Vulpuran; **Belg.**: Perubore; Rectovasil; **Braz.**: Anusol-HC; Balmex; Calminex H; Claudemor; **Chile:** Pulmex†; **Cz.**: Pulmex Baby†; Pulmex†; **Fr.**: Agathol; Anaxeryl; Balsolumine; Balsolumine Mentholee; Brulex; Dermophil Indien†; Oxypore†; Perubore; Pommade Lelong†; **Ger.**: Anusol†; Nasenbalsam; Nasenbalsam für Kinder; Peru-Lenicet†; **Hong Kong:** Anusol; Anusol-HC†; Haemoral; **Indon.**: Sapona; **Irl.**: Anusol-HC; Anusol; Anusol-HC; **Israel:** Anusol†; Hemol; Pulmex; **Ital.**: Anusol; Fomentil; **Malaysia:** Anucare; Anusol; **NZ:** Anusol; **Pol.**: Anusol; Depulol; Hemorectal; Pulmex Baby; Rectosec; **Port.**: Claudemor†; **Rus.**: Pulmex (Пулмекс); Pulmex Baby (Пулмекс Бэби); Theraflu Bro (Терафлю Бро); **S.Afr.**: Anusol; Heilsalbe; Ung Vermleigh; **Singapore:** Anusol; **Spain:** Antigrietun; Balsamo Kneipp†; Cicatral; Grietlagen; Linitul; Vapores Pyt; Vitamina F99 Topica; **Switz.**: Demo pommade contre les refroidissements†; Der-