

Oral pimecrolimus is also under investigation and has reduced disease severity in dose-finding studies in patients with chronic plaque psoriasis.<sup>5,6</sup>

1. Gribetz C, *et al.* Pimecrolimus cream 1% in the treatment of intertriginous psoriasis: a double-blind, randomized study. *J Am Acad Dermatol* 2004; **51**: 731–8.
2. Mrowietz U, *et al.* The novel ascomycin derivative SDZ ASM 981 is effective for psoriasis when used topically under occlusion. *Br J Dermatol* 1998; **139**: 992–6.
3. Mrowietz U, *et al.* An experimental ointment formulation of pimecrolimus is effective in psoriasis without occlusion. *Acta Derm Venereol* 2003; **83**: 351–3.
4. Kreuter A, *et al.* 1% Pimecrolimus, 0.005% calcipotriol, and 0.1% betamethasone in the treatment of intertriginous psoriasis: a double-blind, randomized controlled study. *Arch Dermatol* 2006; **142**: 1138–43.
5. Rappersberger K, *et al.* Pimecrolimus identifies a common genomic anti-inflammatory profile, is clinically highly effective in psoriasis and is well tolerated. *J Invest Dermatol* 2002; **119**: 876–87.
6. Gottlieb AB, *et al.* Oral pimecrolimus in the treatment of moderate to severe chronic plaque-type psoriasis: a double-blind, multicentre, randomized, dose-finding trial. *Br J Dermatol* 2005; **152**: 1219–27.

**Seborrhoeic dermatitis.** Small studies<sup>1,2</sup> suggest that topical pimecrolimus has a similar efficacy to topical corticosteroids in the treatment of seborrhoeic dermatitis (p.1584). It has also been effective in a few cases that had not responded to topical corticosteroids.<sup>3</sup>

1. Rigopoulos D, *et al.* Pimecrolimus cream 1% vs. betamethasone 17-valerate 0.1% cream in the treatment of seborrhoeic dermatitis: a randomized open-label clinical trial. *Br J Dermatol* 2004; **151**: 1071–5.
2. Firooz A, *et al.* Pimecrolimus cream, 1%, vs hydrocortisone acetate cream, 1%, in the treatment of facial seborrhoeic dermatitis: a randomized, investigator-blind, clinical trial. *Arch Dermatol* 2006; **142**: 1066–7.
3. Cunha PR. Pimecrolimus cream 1% is effective in seborrhoeic dermatitis refractory to treatment with topical corticosteroids. *Acta Derm Venereol* 2006; **86**: 69–70.

## Preparations

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

**Arg.:** Elidel; **Austral.:** Elidel; **Austria:** Elidel; **Belg.:** Elidel; **Braz.:** Elidel; **Canada:** Elidel; **Chile:** Elidel; **Cz.:** Elidel; **Denm.:** Elidel; **Fin.:** Elidel; **Fr.:** Elidel; **Ger.:** Douglan; **Elidel; Gr.:** Aregin; **Elidel; Hong Kong:** Elidel; **Hung.:** Elidel; **Indon.:** Elidel; **Israel:** Elidel; **Ital.:** Elidel; **Malaysia:** Elidel; **Mex.:** Elidel; **Neth.:** Elidel; **Norw.:** Elidel; **NZ:** Elidel; **Philipp.:** Elidel; **Pol.:** Elidel; **Port.:** Aregin; **Elidel; Rus.:** Elidel (Элидел); **S.Afr.:** Elidel; **Singapore:** Elidel; **Spain:** Elidel; **Isapic; Rizan; Swed.:** Elidel; **Switz.:** Elidel; **Thai.:** Elidel; **Turk.:** Elidel; **UK:** Elidel; **USA:** Elidel; **Venez.:** Elidel.

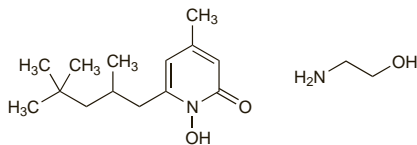
## Piroctone Olamine (USAN, rINNM)

Piroctona olamina; Piroctoni Olaminum. 1-Hydroxy-4-methyl-6-(2,4,4-trimethylpentyl)-2(1*H*)-pyridone compound with 2-aminoethanol (1:1).

Пироктон Оламин

C<sub>14</sub>H<sub>23</sub>NO<sub>2</sub>·C<sub>2</sub>H<sub>7</sub>NO = 298.4.

CAS — 50650-76-5 (piroctone); 68890-66-4 (piroctone olamine).



## Profile

Piroctone olamine has been used in shampoos for the treatment of dandruff.

## Preparations

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

**Arg.:** Lovilia; Megacistin G; Octopit; Plusgel; **Austral.:** Neocuticals Therapeutic Shampoo; **Braz.:** Soapex; **Fr.:** Charlieu Antipelliculaire; Cystel Antipelliculaire; Evolith DS; Topicrem Traitement PV; Traitement PV; **Irl.:** Saliker; **Ital.:** Olamin P; **Mex.:** Betapirox; **Venez.:** Betapirox; Hair Stabil; Sante Vitej.

**Multi-ingredient:** **Arg.:** Aspergun; Micocert; Micodual; Pitirax; Pityval; Saliker; Tersoderm Anticasp; **Braz.:** Ortosol P; Pityval; Saliker; **Chile:** Eucerin Shampoo Anticasp; Foltene Research Anticasp; KPL; Neostrata; Node DS; Shampoo Anticasp; **Fr.:** Alpha 5 DS; Epiphane; Hyfac soin keratolytique; Ionax P; Item Alphakeptol; Kelual DS; Kerium Intensive; Liperol; Mela'aura; Node DS; Node P; Phytheol; Phytosquame; Pityker; Pityval; PSO; Saliker; Seborheane; T/Gel; **Irl.:** Effaclar AI; **Ital.:** Biophase Shampoo; Biorthymus DS; Genisol; Nonak; Prurex; Shamday Antiforfora; Tricoderm F; **Port.:** Alpha Septol; Alphakeptol; Bioclin Sebo Care; Ionil P; **Spain:** Ionax P; **UK:** Atopiclair; **USA:** Atopiclair; **Venez.:** Kertyol; Node DS; Sensibio DS.

## Podophyllum

American Mandrake; May Apple Root; Podófilo; Podofilum; Podoph; Podophyllum Rhizome; Rizoma de podófilo.

Пододифилл цитовидный (*Podophyllum peltatum*)

**Pharmacopoeias.** In *US*.

**USP 31** (*Podophyllum*). The dried rhizomes and roots of *Podophyllum peltatum* (Berberidaceae). It yields not less than 5% of resin. It has a slight odour.

## Indian Podophyllum

Ind. Podoph; Indian Podophyllum Rhizome; Podófilo indio.

Пододифилл гималайский (*Podophyllum emodi*)

**Description.** The dried fruits or rhizomes and roots of *Podophyllum hexandrum* (*P. emodi*) (Berberidaceae).

## Podophyllum Resin

Podofilino; Podoph. Resin; Podophylli Resina; Podophyllin; Resina de podófilo.

Пододифиллин

CAS — 8050-60-0.

**Pharmacopoeias.** In *Int.* and *US* (both from podophyllum only). In *Br.* from Indian podophyllum.

**BP 2008** (*Podophyllum Resin*). The resin obtained from the rhizomes and roots of *Podophyllum hexandrum* (*P. emodi*). It contains not less than 50% of total aryltetralin lignans, calculated as podophyllotoxin.

An amorphous powder, varying in colour from light brown to greenish-yellow or brownish-grey masses, with a characteristic odour; caustic. On exposure to light or to temperatures above 25° it becomes darker in colour.

Partly soluble in hot water but precipitated again on cooling; partly soluble in chloroform, in ether, and in dilute ammonia solution. Protect from light.

**USP 31** (*Podophyllum Resin*). The powdered mixture of resins extracted from podophyllum (the rhizomes and roots of *Podophyllum peltatum*) by percolation with alcohol and subsequent precipitation with acidified water. It contains not less than 40% and not more than 50% of hexane-insoluble matter.

An amorphous caustic powder, varying in colour from light brown to greenish-yellow. On exposure to light or to temperatures above 25° it becomes darker in colour.

Soluble in alcohol with a slight opalescence; partially soluble in chloroform and in ether. A solution in alcohol is acid to litmus. Store in airtight containers. Protect from light.

## Podophyllotoxin (BAN)

Podofilotoxina; Podofilox (USAN); Podofyllotoksiini; Podofyllotoxin; Podophyllotoxinum. (5*R*,5*A*,8*R*,9*R*)-5,5*A*,6,8,8*A*,9-Hexahydro-9-hydroxy-5-(3,4,5-trimethoxyphenyl)furo[3',4':6,7]naphtho[2,3-*d*]-1,3-dioxol-6-one.

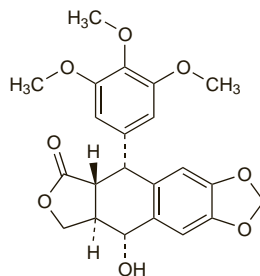
Пододифиллотоксин

C<sub>22</sub>H<sub>22</sub>O<sub>8</sub> = 414.4.

CAS — 518-28-5.

ATC — D06BB04.

ATC Vet — QD06BB04.



## Adverse Effects

Podophyllum is very irritant, especially to the eyes and mucous membranes. It can also cause severe systemic toxicity after ingestion or topical application, which is usually reversible but has been fatal. Symptoms of toxicity include nausea, vomiting, abdominal pain, and diarrhoea; there may be thrombocytopenia, leucopenia, renal failure, and hepatotoxicity. Central effects are delayed in onset and prolonged in duration and include acute psychotic reactions, hallucinations, confusion, dizziness, stupor, ataxia, hypotonia, seizures, and coma. EEG changes may persist for several days. Peripheral and autonomic neuropathies develop later and may result in paraesthesiae, reduced reflexes, muscle weakness, tachycardia, apnoea, orthostatic hypoten-

sion, paralytic ileus, and urinary retention. Neuropathy may persist for several months.

**Poisoning.** Reports and reviews of podophyllum toxicity.<sup>1-7</sup> A few of the cases followed consumption of herbal preparations containing podophyllum or the related plant bajaolian (*Dysosma pleianthum*). Death has occurred after ingestion of 10 g of podophyllum.

1. Cassidy DE, *et al.* Podophyllum toxicity: a report of a fatal case and a review of the literature. *J Toxicol Clin Toxicol* 1982; **19**: 35–44.
2. Dobb GJ, Edis RH. Coma and neuropathy after ingestion of herbal laxative containing podophyllin. *Med J Aust* 1984; **140**: 495–6.
3. Holdright DR, Jahangiri M. Accidental poisoning with podophyllin. *Hum Exp Toxicol* 1990; **9**: 55–6.
4. Tomczak RL, Hake DH. Near fatal systemic toxicity from local injection of podophyllin for pedal verrucae treatment. *J Foot Surg* 1992; **31**: 36–42.
5. Kao W-F, *et al.* Podophyllotoxin intoxication: toxic effect of bajaolian in herbal therapeutics. *Hum Exp Toxicol* 1992; **11**: 480–7.
6. Chan TYK, Critchley JAJH. Usage and adverse effects of Chinese herbal medicines. *Hum Exp Toxicol* 1996; **15**: 5–12.
7. Chu CC, *et al.* Sensory neuropathy due to bajaolian (podophyllotoxin) intoxication. *Eur Neurol* 2000; **44**: 121–3.

## Precautions

The risk of systemic toxicity after topical application of podophyllum is increased by the treatment of large areas with excessive amounts for prolonged periods, by the treatment of friable, bleeding, or recently biopsied warts, and by inadvertent application to normal skin or mucous membranes.

Podophyllum should not be used during pregnancy or breast feeding. There are few reports of use during pregnancy and a teratogenic risk cannot be ruled out. Adverse systemic effects in the mother would also be undesirable during pregnancy, and there are other non-drug treatments available for the treatment of anogenital warts. It is not known whether podophyllum is distributed into breast milk.

**Handling.** Podophyllum resin is strongly irritant to the skin, eyes, and mucous membranes and requires careful handling.

## Uses and Administration

Podophyllum resin and podophyllotoxin have an antimitotic action and are used principally as topical treatments for anogenital warts (condylomata acuminata). Podophyllum resin and podophyllotoxin may be used on external genital and perianal warts; podophyllum resin may also be used on urethral meatus warts. However, neither of these compounds should be used to treat warts on mucous membranes, including vaginal, cervical, intra-urethral, intra-anal, and rectal warts. Podophyllum resin is usually formulated in compound benzoin tincture in strengths of 15% Indian podophyllum resin or 10 to 25% American podophyllum resin. Lower concentrations of American podophyllum resin in alcoholic solutions have been used. The solution is left on the warts for 1 to 6 hours, and then washed off. Only a small area or number of warts should be treated at any one time and care must be taken to avoid application to healthy tissue. This procedure is carried out once a week for up to 3 to 6 weeks. Preparations containing podophyllotoxin 0.5% in alcohol or alcoholic gel or podophyllotoxin 0.15% cream are used similarly. They are applied twice daily for 3 days but not washed off. Treatment may be repeated at weekly intervals for up to a total of 4 or 5 weeks of treatment. Podophyllum resin is also used with other keratolytics for the removal of plantar warts.

Although podophyllum resin and podophyllotoxin preparations are generally not used in children, see below.

When taken orally podophyllum resin is highly irritant to the intestinal mucosa and produces violent peristalsis resulting in a drastic purging action. It has been superseded by less toxic laxatives.

Podophyllum has been used in homeopathic medicine.

**Administration in children.** The use of podophyllum resin and podophyllotoxin preparations in children is generally avoided because of the potential for severe local irritation and systemic toxicity. Nonetheless, podophyllotoxin has been used for the

treatment of symptomatic, persistent anogenital warts in children.<sup>1</sup> The *BNFC* suggests that, although not licensed for use in children, podophyllum resin and podophyllotoxin preparations may be used in regimens similar to those used in adults (see above) in children 2 years of age and older who are able to cooperate with treatment.

1. Bellew SG, *et al.* Childhood warts: an update. *Cutis* 2004; **73**: 379–84.

**Anogenital warts.** Podophyllum preparations are one of the treatment choices for anogenital warts caused by human papillomavirus infection (condylomata acuminata) (p.1584). Podophyllum resin preparations have traditionally been applied by a healthcare provider because of the potential local and systemic toxicity associated with inappropriate or excessive use.<sup>1</sup> However, podophyllotoxin may be more effective<sup>2,3</sup> and less toxic<sup>2</sup> than podophyllum resin, and is suitable for self-treatment by the patient.<sup>1,4</sup>

1. CDC. Sexually transmitted diseases treatment guidelines, 2006. *MMWR* 2006; **55** (RR-11): 1–94. Correction. *ibid.*: 997. Also available at: <http://www.cdc.gov/mmwr/PDF/rr/rr5511.pdf> (accessed 27/09/07)
2. von Krogh G, Longstaff E. Podophyllin office therapy against condyloma should be abandoned. *Sex Transm Infect* 2001; **77**: 409–12.
3. Lacey CJN, *et al.* Randomised controlled trial and economic evaluation of podophyllotoxin solution, podophyllotoxin cream, and podophyllin in the treatment of genital warts. *Sex Transm Infect* 2003; **79**: 270–5.
4. von Krogh G, *et al.* European Course on HPV Associated Pathology (EHPV). European guideline for the management of anogenital warts. *Int J STD AIDS* 2001; **12** (suppl 3): 40–7. Also available at: <http://www.iusti.org/sti-information/pdf/guidelines.pdf> (accessed 27/09/07)

## Preparations

**BP 2008:** Compound Podophyllin Paint;  
**USP 31:** Podophyllum Resin Topical Solution.

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

**Arg.:** Podoxin; **Austral.:** Condyline; Wartec; **Austria:** Condylox; **Belg.:** Wartec; **Braz.:** Wartec; **Canad.:** Condyline; Podofilin; Wartec; **Chile:** Wartec; **Cz.:** Wartec; **Denm.:** Condyline; Wartec; **Fin.:** Condyline; Wartec; **Fr.:** Condyline; Wartec; **Ger.:** Condylox; Wartec; **Gr.:** Podofilox; Wartec; **Hong Kong:** Podofilin; Wartec; **Hung.:** Condyline; Wartec; **Irl.:** Condyline; Wartec; **Israel:** Condylox; **Ital.:** Condyline; Wartec; **Mex.:** Podofilin; Vipodo; Wartec; **Neth.:** Condyline; Wartec; **Norw.:** Condyline; Wartec; **NZ:** Condyline; Wartec; **Pol.:** Condyline; Wartec; **Port.:** Condyline; **Rus.:** Condyline (Кондилин); **S.Afr.:** Wartec; **Singapore:** Wartec; **Spain:** Wartec; **Swed.:** Wartec; **Switz.:** Condyline; Wartec; **UK:** Condyline; Wartec; **USA:** Condylox; Pod-Ben-25; Podocor; Podofilin.

**Multi-ingredient:** **Arg.:** Calculina†; **Austral.:** Posafflin; **Canad.:** Canthacur-PS; Cantharone Plus; **Ger.:** Unguentum lymphaticum; **Hong Kong:** Posafflin†; **Irl.:** Posafflin; **Malaysia:** Posafflin†; **NZ:** Posafflin; **Port.:** Chologutt†; **S.Afr.:** Posafflin; **Singapore:** Posafflin†; **Spain:** Alofedina; **UK:** Posafflin; **Venez.:** Linfoderm; Podobert†.

## Polyphloroglucinol Phosphate

Polifloroglucinol, fosfato de; Polyphloroglucin Phosphate. Poly[benzene-1,3,5-triol mono(dihydrogen phosphate)].

Полифлороглюцина Фосфат

(C<sub>6</sub>H<sub>7</sub>O<sub>6</sub>P)<sub>n</sub>

CAS — 51202-77-8.

### Profile

Polyphloroglucinol phosphate has an inhibitory effect on hyaluronidase and has been applied topically in the treatment of wounds and pruritic skin disorders.

### Preparations

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

**Austria:** Dealyd.

## Polyurethane Foam (USAN)

Пенополиуретан; Полиуретановая Пена

CAS — 9009-54-5.

### Profile

Polyurethane foam is a urethane polymer that is used in wound dressings.

### Preparations

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

**Austral.:** Allevyn; Opsite; **Fr.:** Allevyn; Clip Blessures; Clip Derm; Clip Strip; Opsite; Optiskin; Permafoam; Suprasorb; Tielle; **Ger.:** Allevyn†; Opsite†; **Irl.:** Allevyn†; **Ital.:** Allevyn; Bioclusive; Cutinova Hydro; Opsite Flexigrid; **S.Afr.:** Opsite; **UK:** Allevyn; Cutinova; Lyofoam; Opsite.

**Multi-ingredient:** **Ital.:** Biopatch; Silverdres.

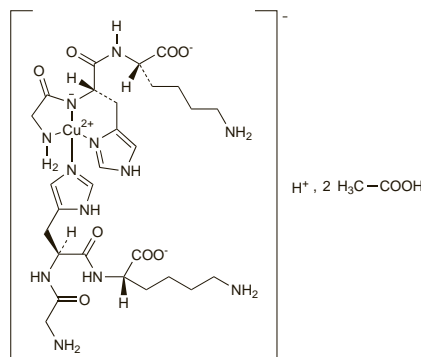
## Prezotide Copper Acetate (USAN, rINN)

Acetato de prezatida cúprica; Acetato de prezatida de cobre; PC-1020 (prezotide copper); Prézotide Cuprique, Acétate de; Prezatiði Cuprici Acetas. Hydrogen [N<sup>2</sup>-(N-glycyl-L-histidyl)-L-lysinate][N<sup>2</sup>-(N-glycyl-L-histidyl)-L-lysinate(2-)]cuprate(1-) diacetate.

Презатида Меди Ацетат

C<sub>28</sub>H<sub>46</sub>CuN<sub>12</sub>O<sub>8</sub>·2C<sub>2</sub>H<sub>4</sub>O<sub>2</sub> = 862.4.

CAS — 130120-57-9.



### Profile

Prezotide copper acetate is a copper-containing tripeptide that is used typically as a wound-healing agent.

### Preparations

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

**Braz.:** Prezati†; **Mex.:** lamin; **USA:** lamin Hydrating Gel.

## Pyrrhione Zinc (BAN, USAN, rINN)

Çinko Pitirion; Pitiriona cîncică; Pitiriona de zinc; Pyrrhione Zinc; Pyrrhionum Zincum; Zinc 2-Pyridinethiol 1-Oxide; Zinc Pyridinethione. Bis[1-hydroxypyridine-2(1H)-thionato]zinc.

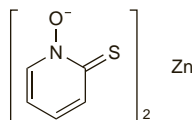
Пиритион Цинк

C<sub>10</sub>H<sub>8</sub>N<sub>2</sub>O<sub>2</sub>S<sub>2</sub>Zn = 317.7.

CAS — 13463-41-7.

ATC — D11AX12.

ATC Vet — QD11AX12.



### Profile

Pyrrhione zinc has bacteriostatic and fungistatic properties. It is used similarly to selenium sulfide (p.1613) in usual concentrations of 1 to 2% in the control of seborrhoeic dermatitis and dandruff (p.1584). It is an ingredient of some proprietary shampoos. It has also been used in the treatment of pityriasis versicolor.

Pyrrhione magnesium has also been used.

**Effects on the nervous system.** Peripheral neuritis with paraesthesia and muscle weakness in a patient was associated with the prolonged use of a shampoo containing pyrrhione zinc 2%.<sup>1</sup> The muscle weakness had disappeared 3 months after stopping the shampoo and 2 years later the paraesthesia had improved by about 75%.

Studies in *animals* had found signs of neurotoxicity after oral doses of pyrrhione zinc but whereas absorption after topical application was found to be 13% for pyrrhione sodium it was less than 1% for pyrrhione zinc.<sup>2</sup>

1. Beck JE. Zinc pyrrhione and peripheral neuritis. *Lancet* 1978; **i**: 444.

2. Parekh CK. Zinc pyrrhione and peripheral neuritis. *Lancet* 1978, **i**: 940.

### Preparations

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

**Arg.:** Aeroseb; Amentite Cap†; Antiminth; Dermazinc; Hairplus; Min Huit; Skin-Cap; ZNP†; **Austral.:** Dan-Gard; Dandruff Control Pert 2 in 1; **Austria:** Desquamant; **Canad.:** Advance†; Brylcreem Anti-Dandruff; Dan-Gard; Dandruff Shampoo plus Conditioner†; Denorex Everyday; Hair & Scalp†; Head & Shoulders; Lander Dandruff Control†; Out of Africa; Pert Plus; Satinique Anti-Dandruff†; Scott Dandruff Shampoo; Shaklee Dandruff Control†; Shampooing Anti-Pelluculaire; Solve Dandruff; Techniques Anti-Dandruff†; ZNP; ZP 11†; **Chile:** Biolane; DHS Zinc; Skin Cap; ZNP; **Denm.:** Skaelud; **Fr.:** Ducray Antipelluculaire†; Provegol; Shampooing Traitant Antipelluculaire†; ZNP; **Ger.:** De-squamant N†; **Gr.:** Daohair-S; **Israel:** Desquamant; **Ital.:** Rivescal ZPT; Shampoo SDE Zinc†; ZNP; **Mex.:** Pirmined; ZNP; **Port.:** ZP Dermil; **Rus.:** Freederm Zinc (Фридерм Цинк);

Skin-Cap (Скин-Кап); **Spain:** Zincation; **Turk.:** Zetion; Zintion; **USA:** DHS Zinc; Head & Shoulders; Skin Cure; Zincon; ZNP; **Venez.:** Albepr; Blue Caps; Caduzinc†; Denorex Original†; Pirmined.

**Multi-ingredient:** **Arg.:** Aeroseb; Molnia; Neo Moldava†; **Austral.:** Fongitar; **Braz.:** Fisoheh II; **Canad.:** Multi-Tar Plus; X-Seb Plus; Z-Plus; **Chile:** Node DS; **Cz.:** Polytar AF; **Fr.:** Item Alphakeptol; Kelual DS; Klorane Shampooing Antipelluculaire; Node DS; Node P; **Hong Kong:** Fongitar; Multi-Tar; **Hung.:** Polytar AF; Squa-med; **India:** Hyphoral; Scalpe; **Ital.:** Biothymus DS; Derman-Shampoo AF†; Keto Z; Ketomousse; Kevis; **Malaysia:** Ketoplus; **NZ:** Fongitar†; **Philipp.:** Fongitar; Scalpex; **Pol.:** Polytar AF; **Port.:** All Pecium†; Alpha Septol; Alphakeptol†; Fongitar; **Rus.:** Keto Plus (Кето Плюс); **S.Afr.:** Fongitar; **Singapore:** Fongitar; pHiso-Hex Reformulated†; **Spain:** Zincation Plus; **Switz.:** Sebo Shampooing; Sebo-Soufrol; Squa-med; **Thai.:** Fongitar; **Turk.:** Piridolin; Seboreks; Sedolin; **UK:** Polytar AF; **USA:** X-Seb Plus; Xolegel Duo; **Venez.:** Node DS; Pelsel Plus.

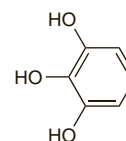
## Pyrogallol

1,2,3-Benzenetriol; Pirogálico, ácido; Pirogalol; Pyrogallol; Pyrogallol Acid; Pyrogallolum. Benzene-1,2,3-triol.

Пирогаллол

C<sub>6</sub>H<sub>3</sub>O<sub>3</sub> = 126.1.

CAS — 87-66-1.



**Pharmacopoeias.** In *Fr.* and *Pol.*

### Profile

Pyrogallol was formerly used topically in the treatment of psoriasis and parasitic skin diseases, but application over large areas or denuded surfaces is dangerous and may produce systemic effects similar to phenol poisoning (see p.1656); methaemoglobinemia, haemolysis, and kidney damage may also occur.

Pyrogallol stains the skin and hair black.

### Preparations

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

**USA:** Pyrogallol.

## Pyroxylin (rINN)

Algodão-Polvora; Algodón pólvora; Cellulose Nitrate; Celulosa decantrica; Colloxylinum; Fulmicoton; Gossypium Colloidum; Kollodiummwolle; Nitrato de celulosa; Piroxilina; Pyroxyline; Pyroxylinum; Soluble Guncotton.

Пироксилин

CAS — 9004-70-0.

**Pharmacopoeias.** In *Br.*, *Jpn.*, *Pol.*, and *US*.

**BP 2008** (Pyroxylin). A nitrated cellulose obtained by the action of a mixture of nitric and sulfuric acids on wood pulp or cotton linters that have been freed from fatty matter. It must be damped with not less than 25% of isopropyl alcohol or of industrial methylated spirit. White or almost white cuboid granules or fibrous material resembling absorbent cotton but harsher to the touch and more powdery. It is highly flammable. Soluble in acetone and in glacial acetic acid. Store in well-closed containers, loosely packed, protected from light, and at a temperature not exceeding 15°, remote from fire. The container should be suitably designed to disrupt should the internal pressure reach or exceed 1400 kPa. The amount of damping fluid must not be allowed to fall below 25% w/w; should this happen, the material should be either re-wetted or used immediately for the preparation of Colloidon.

**USP 31** (Pyroxylin). Pyroxylin is obtained by the action of a mixture of nitric and sulfuric acids on cotton and consists chiefly of cellulose tetranitrate (C<sub>12</sub>H<sub>16</sub>N<sub>4</sub>O<sub>18</sub>)<sub>n</sub>. It occurs as a light yellow, matted mass of filaments resembling raw cotton but harsher to the touch. It is highly flammable. Store loosely packed, protected from light. When kept in well-closed containers and exposed to light, it decomposes with the evolution of nitrous vapours, leaving a carbonaceous residue.

### Profile

Pyroxylin is used in the preparation of collodions which are applied to the skin for the protection of small cuts and abrasions. Collodions are also used as vehicles for the application of drugs when prolonged local action is required.

**Handling.** Dry pyroxylin is explosive and sensitive to ignition by impact or friction and should be handled carefully.

### Preparations

**BP 2008:** Colloidon; Flexible Colloidon;

**USP 31:** Colloidon; Flexible Colloidon.

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

**Multi-ingredient:** **UK:** Dispello.