

munomodulator for the treatment of chronic hepatitis B, and with interferon for hepatitis C (p.851). It is given by subcutaneous injection in a dose of 1.6 mg twice weekly for up to 12 months. The dose in patients who weigh less than 40 kg is 40 micrograms/kg. Thymalfasin is also used to enhance the effectiveness of influenza vaccines in immunocompromised or elderly patients and of influenza and hepatitis B vaccines in chronic haemodialysis patients.

Thymalfasin is under investigation for a number of other diseases, including hepatitis D, hepatocellular carcinoma, non-small cell lung cancer, melanoma, and HIV infection and AIDS.

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#### Preparations

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

**Arg.:** Zadaxin; **Hong Kong:** Zadaxin; **Indon.:** Zadaxin; **Ital.:** Zadaxin; **Malaysia:** Zadaxin; **Mex.:** Zadaxin; **Philipp.:** Zadaxin; **Singapore:** Zadaxin; **Thai.:** Zadaxin†.

#### Thyme

Common Thyme; French Thyme; Garden Thyme; Kakukkfű; Rubbed Thyme; Thym; Thymi herba; Thymian; Timjami; Timjan; Timo; Tomillo; Tyminová nat'; Vaistinių čiobrelių žolė; Ziele tymianku.

NOTE. Distinguish from Wild Thyme, p.2415.

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

**Ph. Eur. 6.2** (Thyme). The whole leaves and flowers separated from the previously dried stems of *Thymus vulgaris*, or *T. zygis*, or a mixture of both species. It contains not less than 12 mL/kg of essential oil, of which a minimum of 40% is thymol and carvacrol, both calculated with reference to the anhydrous drug. It has a strong aromatic odour reminiscent of thymol.

#### Profile

Thyme is the source of thyme oil (below). It has carminative, antiseptic, antitussive, and expectorant properties and is used chiefly in preparations for respiratory-tract disorders and as a flavour.

#### Preparations

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

**Austria:** Scottopect; **Chile:** Hustagil†; **Cz.:** Bronchicum Husten-Pastillen†; **Ger.:** Anasit†; Aspector; Biotuss; Bronchicum Pastillen†; Bronchipret; Expectal N†; Fichtensirup N†; Gelobronchial; Hustagil Thymian-Hustensaft; Hustagil Thymiantropfen; Hustes†; Isephca S; Makatussin Saft†; Melrosolum Hustensirup†; Menthymon mono†; Mirfussot†; Nimopect; Pertussin; Sanopin-wern; Solumed Hustensaft; Solumed Hustentropfen; Tetesept; Erkaltungstropfen; Thymipin N; Thymiverlan; Tussamag Hustenlösung; Tussamag Hustensaft N; Tussiflorin Thymian; **Israel:** Thymi Syrup; **Pol.:** Bronchicum N; Bronchicum T; **Rus.:** Bronchicum Husten (Бронхикум Пластики от Кашля); Tussamag (Туссамаг); **Switz.:** Thymusin N.

**Multi-ingredient Arg.:** Cellskinlab Phyto Spot; Expectosan Hierbas y Miel; **Austral.:** Broncafec†; Bronchilin†; Cough Relief†; Euphorbia Complex; **Austria:** Bronchipret; Bronchithym; Bronchostop; Brust- und Hustentee St Severin; Codelum; Eicebaer; Expectal-Tropfen; Krauter Hustensaft; Luuf-Hustentee; Paracodin; Pilka; Pilka Forte; Pneumopan; Pneumopect; Scottopect; Thymoval; Tussamag; Tussimont; **Belg.:** Colimax†; Thymoseptine; **Canada.:** Herbal Throat†; Original Herb Cough Drops; Swiss Herb Cough Drops; **Chile:** Phyto Corrective Gel; Phyto Spot; Primacy Phyto ††; Rhos Opodeldoc; **Cz.:** Biotussil; Bronchialtee N†; Bronchicum Elixir†; Bronchicum Hustensirup†; Bronchicum Sekret-Loser†; Bronchicum Tropfen†; Bronchipret; Bronchostop†; Erkaltungstee†; Nontusyl†; Perospir†; Pleumolysin; Pulmoran; Stomatosan†; Thymomel; Urcyston Planta; **Fin.:** Katapekt; **Fr.:** Depuratum; Germose†; Saugella; **Ger.:** Bronchicum; Bronchicum Elixir N†; Bronchicum Elixir Plus†; Bronchicum Elixir S; Bronchicum Pflanzlicher†; Bronchicum Sekret-Loser†; Bronchicum Thymian†; Bronchicum Tropfen N†; Bronchipret; Bronchosy N†; Brust- und Hustentee; Cefadrin; Cito-Guakalin†; Dr Scheffler Bergischer Krautertee Husten- und Bronchialtee; Drosithym-N; Em-medical†; Epepect-Pastillen N; Equisil N; Eucabal†; Eupatal†; Expectasyt N; Harzer Hustenloser†; Hevertopet N†;

Junisan†; Kinder Em-ekal Hustensaft†; Kneipp Husten- und Bronchial-Tee; Lomali†; Makatussin Tropfen; Melissengeist; Muc-Sabona†; Original Schnecken-sirup†; Phytobronchid; Pulmocordio mite SL†; Pulmotin†; Sinufortin; Thymipin N†; Tussiflorin forte†; Tussiflorin Hustentropfen†; Tussiflorin N†; **Hong Kong:** Pectoral†; **Hung.:** Bronchipret; **Indon.:** Bronchipret; Codipront cum Expectator†; Jesscol; Pectum; Silex; **Thymal. Israel.:** Pilka; **Ital.:** Altea (Specie Composta)†; Broncoed; Broncoesedina; Immunil Plus; Immunil†; Pinedrin†; Piodermina; Saugella Attiva; Saugella Fitohym; Saugella Polign 7; SebacoN†; Timo (Specie Composta)†; Tussol; **Neth.:** Balsocase Compositum; Bronchicum; **Philipp.:** Bronchipret; **Pol.:** AphiHelix; Bobodent; Bronchicum Elixir†; Bronchicum†; Bronchosol; Dentosept†; Dentosept A; Echinasal; Enterosol; Hedelicum; Herbapect; Mucosol; Neoazarin; Pectobonisol; Pectosol; Pini-Helix; Salviasept; Saponarex; Tussipect; Tysal†; **Port.:** Calmarum†; **Rus.:** Bronchicum (Бронхикум); Bronchicum Husten (Бронхикум Сироп от Кашля); Bronchipret (Бронхипрет); Bronchipret TP (Бронхипрет ТП); Codelac Phyto (Коделак Фито); Eucabal (Эвкабал); Maraslavin (Мараславин); Passifit (Пассифит); Stoptussin-Fito (Стотпуссин-Фито); **S.Afr.:** Bronchicough†; Bronchicum†; Cough Elixir†; **Spain:** Natusor Asmaten†; Natusor Farinol†; Natusor Gripotul†; Natusor Infenol†; Natusor Renal†; Natusor Sinulan†; Pilka; Wobenzimal†; **Switz.:** Bronchofluid N†; Bronchosan Nouvelle formule†; Codipront cum Expectator†; Demopectol; Dinacode N†; Expectoran Codein†; Expectoran†; Liberol Dragees contre la toux†; Liberol Pastilles contre la toux†; Liberol Sirop contre la toux†; Makaphyt Gouttes antitussives; Makaphyt Sirop; Neo-DPI†; Nican; Pectoral N; Pilka†; Strath Gouttes contre la toux; Thymodrosin N†; Tisane pectorale et antitussive; Tisane pectorale pour les enfants; **Thai.:** Solvopret; Tolvopret P; **UK:** Herb and Honey Cough Elixir; **Venez.:** Codebromil; Mixagel†; T-Smag.

#### Thyme Oil

Esencia de Tomillo; Essência de Tomilho; Kakukkfűolaj; Kekik Yağı; Oil Thym; Olejek tymiankowy; Oleum Thymi; Thym; huile essentielle de; Thymi aetheroleum; Thymi Etheroleum; Timjamölj; Timjanolja; Tomillo, aceite esencial de; Tyminová silice; Vaistinių čiobrelių eterinis aliejus.

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

**Ph. Eur. 6.2** (Thyme Oil). The essential oil obtained by steam distillation from the fresh flowering aerial parts of *Thymus vulgaris*, *T. zygis*, or a mixture of both species. A clear, yellow or very dark reddish-brown, mobile liquid with a characteristic aromatic, spicy odour, reminiscent of thymol. Miscible with dehydrated alcohol and with petroleum spirit. It contains between 36 and 55% of thymol. Store in well-filled, airtight containers at a temperature not exceeding 25°. Protect from light.

#### Profile

Thyme oil is used similarly to thyme (above). It is also used in aromatherapy.

#### Preparations

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

**Ger.:** Bronchicum Medizinal-Bad†; Fichtensirup N†; Penaten; Thymian Erkaltungsbad.

**Multi-ingredient Arg.:** Cuassicum; **Austral.:** Efalex†; Tixylx Chest Rub†; Zam-Buk†; **Austria:** Bronchostop; Expectal-Balsam; Heumann's Bronchialtee; Luuf-Hustentee; Scottopect; **Belg.:** Perubore; **Canada.:** Efalex†; **Chile:** Hustagil†; **Cz.:** Tussilen; **Fr.:** Acarid†; Balsolumine; Balsolumine Menthol; Biogaze†; Gouttes aux Essences; Nazinette du Docteur Gilbert; Perubore; **Ger.:** Antitussivum Burger N†; Aspector-Balsam†; Eukal†; Heumann Bronchialtee Solubifix T†; Hustagil Erkaltungsbalsam†; Medizinisches Erkaltungsbad; Melrosolum Medizinalbad†; Nasulind; Pulmotin; Retterspitz Innerlich; Tetesept Badekonzentrat Erkaltungsbad N†; Tetesept Bademedizin Erkaltungstropfen Intensiv Bad N†; **Gr.:** Snuffelbabe†; **Ital.:** Altuss; Calyptol; Esoklin; Fomentil; Valda Timo e Limone; Vegetaluminia; **NZ:** Efalex; Tixylx Chest Rub; **Pol.:** Argol Essenza Balsamica; Argol Grip; Argol Rheuma; Carmolis; Inhalol; Salviasept; **Port.:** Erpecalm; Vaporil; **Rus.:** Carmolis (Кармолис); Carmolis Fluid (Кармолис Жидкость)†; **S.Afr.:** Balmem Vita GEEI; Balmem Vita ROO†; Balmem Vita VIT†; Oleum Rhinale Nasol Oil; Zam-Buk†; **Spain:** H Tussan; Temosan; **Switz.:** Carmol; Carmol Plus†; Demo pommade contre les refroidissements†; Demonatur Capsules contre les refroidissements; Dolo-Arthrosenex sine Heparino†; Eucapinol; Frigoplasma†; Frixo-Dragon Vert†; Liberol Bain†; Liberol N; Makaphyt Baume†; Nasobol N; Perubare†; Pinimenthol Baby†; Pulmex; Sedasept†; Spagyrom; Wolo Bain antirefroidissement; **Thai.:** St Luke's Oil; **Turk.:** Algo-Wax; Mentoseptol; **UK:** Efalex; Nine Rubbing Oils; Snowfire; Snuffelbabe; **USA:** Maximum Strength Flexall 454; Unguentine.

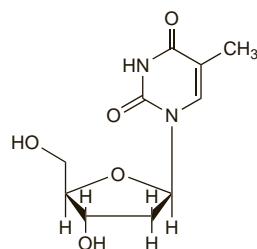
#### Thymidine

NSC-21548; Thymine 2-Desoxyriboside; Timidine; Tymidyna. 1-(2-Deoxy- $\beta$ -D-ribofuranosyl)-5-methyluracil; 1-(2-Deoxy- $\beta$ -D-ribofuranosyl)-1,2,3,4-tetrahydro-5-methylpyrimidin-2,4-dione.

ТИМИДИН

$C_{10}H_{14}N_2O_5 = 242.2$ .

CAS — 50-89-5.



#### Profile

Thymidine is an endogenous thymine nucleoside involved in many biological processes; it is one of the components of nucleic acids (p.2355). It was formerly given by intravenous infusion to modulate the toxicity of methotrexate but is not considered to be a substitute for calcium folinate; it may also have an antineoplastic action of its own.

Thymidine is given typically with other nucleosides in preparations for the treatment of corneal damage.

#### Preparations

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

**Multi-ingredient Belg.:** Vitacic; **Hung.:** Vitacic†; **Mon.:** Vitacic; **Rus.:** Vitacic (Витасик)†.

#### Thymus Hormones

Timo, hormonas del.

CAS — 69558-55-0 (thymopentin); 60529-76-2 (thymopoietin); 63340-72-7 (thymic humoral factor).

#### Profile

The thymus gland controls the development of T-lymphocytes and thereby plays a central role in cell-mediated immunity and the regulation of immune responses. Several polypeptides characterised in the thymus or serum are able to induce lymphocyte differentiation *in vitro* and *in vivo*. They include: thymosin fraction 5, a crude thymus gland extract; thymalfasin (p.2400); thymosin beta 4; thymic humoral factor (THF), isolated from crude thymic extract dialysate; nonathymulin (thymulin, serum thymic factor, Facteur Thymique Serique, FTS), a synthetic nonapeptide; thymomodulin, a partially purified extract from calf thymus; thymogene A, extracted from calf thymus; thymopoietin, a polypeptide of known amino acid sequence; thymopentin (thymopoietin pentapeptide, TP-5), a fragment of thymopoietin with 5 amino acids; and thymostimulin (TP-1), extracted from calf thymus.

Various preparations, including crude extracts from calf thymus gland, thymomodulin, thymopentin, and thymostimulin have been tried as immunomodulators in numerous conditions including rheumatoid arthritis, diabetes mellitus, immunodeficiency disorders, skin disorders, malignant neoplasms, and some infections.

#### References.

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#### Preparations

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

**Arg.:** Leucotrofina; **Austral.:** Thymunes; **Braz.:** Leucogen; **Cz.:** TP-1†; **Ger.:** Thym-Uvocal; Thymo-Glanduretten†; Thymoject; Thymophysin; Thymowied†; **Ital.:** Sintomolina.

**Multi-ingredient Austria:** Wobe-Mugos; **Cz.:** Wobe-Mugos†.

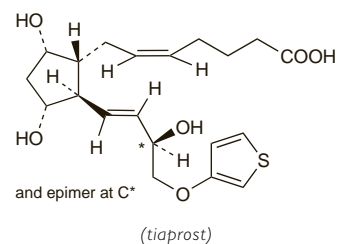
#### Tiaprost Trometamol (BANM, rINNM)

Tiaprost Trometamol; Tiaprostum Trometamolium. Trometamol salt of (±)-(Z)-7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(E)-(3R)-3-hydroxy-4-(3-thienyloxy)but-1-enyl]cyclopentyl]hept-5-enoic acid.

Тиапрост Трометамол

$C_{20}H_{28}O_6S, C_4H_{11}NO_3 = 517.6$ .

CAS — 71116-82-0 (tiaprost).



#### Profile

Tiaprost trometamol is a synthetic analogue of dinoprost (prostaglandin F<sub>2</sub>). It is used as a luteolytic in veterinary medicine.