

**Sodium Dibunate** (BAN, rINN)

Dibunate de Sodium; Dibunato de sodio; L-1633; Natrii Dibunas.  
Sodium 2,6-di-*tert*-butylnaphthalene-1-sulphonate.

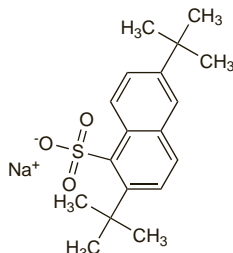
Натрий Дибунат

$C_{18}H_{23}NaO_3S = 342.4$ .

CAS — 14992-59-7 (sodium dibunate).

ATC — R05DB16.

ATC Vet — QR05DB16.

**Profile**

Sodium dibunate is a cough suppressant given by mouth and rectally in non-productive cough (p.1547). It is claimed to have central and peripheral actions. Chlorcyclizine dibunate (naftoclizine) has also been given by mouth or rectally.

**Preparations**

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

**Chile:** Dibunafon; **Port.:** Becantex; **Thai:** Becantex†.

**Multi-ingredient:** **Belg.:** Nobroncit; **Braz.:** Becantosse†; Beclase; Cessatosse†; Coquevit†; Gotas Nican†; Naquinto†; Pectal†; Pulmoverina†; Tusodina†; **Canad.:** Balmiril Suppositories; **Ger.:** Cito-Guakalin†; Epehept Blocker-Pastillen N; **Hong Kong:** Epehept Blocker; **Mex.:** Broend; Neo-Bronty; Tasakal†; **Thai:** Coughmin†.

**Squill**

Bulbo de Escila; Cebolla Albarrana; Cila; Escila; Meerzwiebel; Scilla; Scillae bulbos; Scille; Scille, bulbe de; White Squill.

Морской Лук

**Pharmacopoeias.** In *Br* and *Ger*.

**BP 2008** (Squill). The dried sliced bulb of *Drimia maritima* with the membranous outer scales removed, and containing not less than 68% of alcohol (60%) -soluble extractive. Store at a temperature not exceeding 25° in a dry place.

**Indian Squill**

Escila india; Urginea.

Морской Лук Индийский

**Pharmacopoeias.** In *Br*.

**BP 2008** (Indian Squill). The bulb of *Drimia indica*, with the outer membranous scales removed, usually sliced and dried. Store at a temperature not exceeding 25° in a dry place.

**Adverse Effects, Treatment, and Precautions**

The adverse effects of squill and Indian squill in large doses include nausea, vomiting, and diarrhoea. As squill and Indian squill contain cardiac glycosides they can cause similar adverse effects to digoxin (p.1259).

**Abuse.** Reports of cardiac glycoside toxicity and myopathy associated with the abuse of linctuses which have contained opiates and squill.<sup>1-5</sup>

- Kennedy M. Cardiac glycoside toxicity: an unusual manifestation of drug addiction. *Med J Aust* 1981; **2**: 686-9.
- Kilpatrick C, *et al*. Myopathy with myasthenic features possibly induced by codeine linctus. *Med J Aust* 1982; **2**: 410.
- Seow SSW. Abuse of APF linctus codeine and cardiac glycoside toxicity. *Med J Aust* 1984; **140**: 54.
- Thurston D, Taylor K. Gee's Linctus. *Pharm J* 1984; **233**: 63.
- Smith W, *et al*. Wenckebach's phenomenon induced by cough linctus. *BMJ* 1986; **292**: 868.

**Uses and Administration**

Squill and Indian squill are used as expectorants in productive cough (p.1547) and have been given as the oxymel, elixir, tincture, or vinegar. Preparations containing squill are used in some countries in the treatment of cardiovascular disorders.

Red squill has been used as a rodenticide (p.2050).

◊ The historical use of squill has been reviewed.<sup>1</sup>

- Aliotta G, *et al*. The diuretic use of Scilla from Dioscorides to the end of the 18th century. *J Nephrol* 2004; **17**: 342-7.

**Preparations**

**BP 2008:** Squill Liquid Extract; Squill Oxymel.

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

**Ger.:** Digitalysat Scilla-Digitaloid†; Scilla N†.

**Multi-ingredient:** **Canad.:** Bronco Asmol; Sirop Cocillana Codeine; Sirop Cocillana Composite; **Ger.:** Miroton; Miroton N†; Nephrian P†; **Hong Kong:** Codi-Fedra; Codi-Fedra-C; Cocillana Christo; Cocillana Com-

pound; Dextrocilla; Eurocillana; Mefedra-N†; Mist Expect Stim; **S.Afr.:** Cocillana Co; Contra-Coff; Linctus Tussi Infans; **UK:** Allens Chesty Cough; Balm of Gilead; Buttercup Syrup; Chest Mixture; Covonia Mentholated; Galloway's Cough Syrup; Honey & Molasses; Modern Herbs Cough Mixture; Potters Children's Cough Pastilles; Potters Gees Linctus; Sanderson's Throat Specific.

**Sulfogaiacal** (rINN)

Kalii Sulfogaiacolas; Kalium Guaiacolsulfonicum; Kaliumsulfogaiacolaatti; Kaliumsulfogaiacolat; Potassium Guaiacolsulfonate; Potassium Guaiacolsulphonate; Sulfogaiacol; Sulfogaiacolum; Sulfogaiayacol; Sulfogaiyakol; Thiocol; Tiocol. Potassium hydroxymethoxybenzenesulphonate hemihydrate.

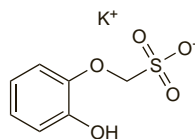
Сульфогайякол

$C_7H_7KO_5S \cdot H_2O = 251.3$ .

CAS — 1321-14-8 (anhydrous sulfogaiacol); 78247-49-1 (sulfogaiacol hemihydrate).

ATC — R05CA09.

ATC Vet — QR05CA09.



**Pharmacopoeias.** In *Pol* and *US*. Also in *Fr* and *Jpn*, both of which do not specify the hemihydrate.

**USP 31** (Potassium Guaiacolsulfonate). Protect from light.

**Profile**

Sulfogaiacol is used as an expectorant for productive cough (p.1547). Calcium guaiacolsulfonate has been used similarly.

**Preparations**

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

**Arg.:** Pectoral Lafedar Ninos; **Austria:** Pectosorin; **Israel:** Guaiacol; **Ital.:** Tioguaialina; **Mex.:** Broncoserum; **Pol.:** Atiussic; Diabetussic.

**Multi-ingredient:** **Arg.:** Antitos†; Medex Rub; No-Tos Infantil; Pastillas De Ambay; Pectobron; Pectoral Lafedar; Polipectol†; **Austria:** Asthma-Hilfe; Pneumopan; **Belg.:** Broncho-pectorale Pholcodine; Eucalyptine Pholcodine Le Brun†; Eucalytus; Nobroncit; Pholco-Mereprine; Saintbois; **Braz.:** Benzomel†; Broncatar; Broncofisin†; Bronkotrat†; Cessatosse†; Epectil; Fenergan Expectoante; Frenotossil†; Iodetal; Iodeto de Potassio†; Ipecol†; Pulmonox†; Pulmoverina†; Trifedrin; Tusodina†; Tussucalman†; Xarope Sao Joao†; Xpe SPC†; **Fr.:** Camphodion†; Ephedion; Eucalyptine Le Brun; Germose†; Neo-Codion; Passedy†; **Hong Kong:** Bendracol; Chrisracol; **Hung.:** Erigon; **India:** Neogadine SG; Pulmo-Cod (C & G); **Indon.:** Benacol DTM; Benacol Expectorant; Fludexin; Phenadex; Promet; Promet-hazine Ikapharmidino; Sanadryl; **Israel:** Cod-Guaiacol; Oxacatin; Pertussol; Promethazine Expectorants; Shiulon; Tussophedrine New Formula; **Ital.:** Balsamina Kroner; Balsatux†; Broncal†; Bronchenolo; Bronchiase; Donalg Guaiacalcium Complex; Polised; Pulmarin; Sciroppo Berta; Stenobronchial; Tauglicolo; Talcocalina; Tiococol; Tionamil†; Tussany†; **Mex.:** Eucalyptine; Ex-offi; Oxin; Pulmoval†; **Pol.:** Apipulmol; Gwajatussin; Herbapect; Pastylki Wykrztusne; Thiocodin; **Port.:** Calmarum†; Codol; Lesli; Xarope Antigripal†; **Rus.:** Neo-Codion (Heo-Kodion); **Spain:** Bronco Medical; Broncovir; Broncovital†; Brota Rectal Balsamico; Fenergan Expectorante; Pastillas Pectoral Kely; Pazbronquial; Pulmofasa; **Switz.:** Neo-Codion N; Phol-Tux Saintbois; **Thai.:** Bisolvon EX; Bromo-Ex; Dutross-P200†; Hustazol-C†; Med-Mucolo†; **Turk.:** Antibeksin; Artu; Fenokodin; Gayabeksin; Gayaben; Latusin; Pektodin; **USA:** Cypex; De-Chlor NX; Entuss Expectorant; Humibid; Humibid DM; Hy-KXP; Hydron EX; Hydron KGS; KGS-PE; Lemotussin-DM; Marcol; Protuss-D†; Protuss†.

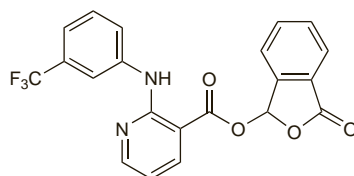
**Talniflumate** (USAN, rINN)

BA-7602-06; Talniflumato; Talniflumatum. Phthalidyl 2-( $\alpha,\alpha,\alpha$ -trifluoro-*m*-toluidino)nicotinate.

Тальнифлумат

$C_{21}H_{13}F_3N_2O_4 = 414.3$ .

CAS — 66898-62-2.

**Profile**

Talniflumate inhibits the human calcium-activated chloride channel protein hCLCA1, which is overexpressed in the lungs of patients with certain pulmonary diseases associated with excess

sive or abnormal mucus production. Talniflumate is under investigation for the management of cystic fibrosis, chronic obstructive pulmonary disease, and asthma. Talniflumate has also been used to treat inflammation.

**Preparations**

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

**Arg.:** Somalgen.

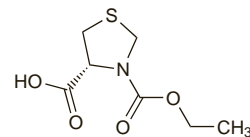
**Telmesteine** (rINN)

Telmesteina; Telmestéine; Telmesteinum. (-)-3-Ethyl hydrogen (R)-3,4-thiazolidinedicarboxylate.

Тельмesteин

$C_7H_{11}NO_4S = 205.2$ .

CAS — 122946-43-4.

**Profile**

Telmesteine has been used as a mucolytic (p.1547) in the treatment of respiratory-tract disorders in oral doses of 300 mg two or three times daily.

**Preparations**

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

**Ital.:** Muconorm†; Reolase.

**Multi-ingredient:** **UK:** Atopclair; Xclair; **USA:** Atopclair.

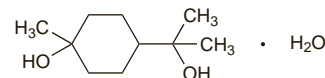
**Terpin Hydrate** (BANM)

Terpene Hydrate; Terpinihydraatti; Terpina, hidrató de; Terpinhydrat; Terpini Hydras; Terpinol. *p*-Menthane-1,8-diol monohydrate; 4-Hydroxy- $\alpha,\alpha,\alpha$ -trimethylcyclohexanemethanol monohydrate.

Терпингидрат

$C_{10}H_{20}O_2 \cdot H_2O = 190.3$ .

CAS — 80-53-5 (anhydrous terpin); 2451-01-6 (terpin monohydrate).



**Pharmacopoeias.** In *Fr*, *Swiss*, *US*, and *Viet*.

**USP 31** (Terpin Hydrate). Colourless lustrous crystals or white powder with a slight odour. It effloresces in dry air. Soluble 1 in 200 of water, 1 in 35 of boiling water, 1 in 13 of alcohol, 1 in 3 of boiling alcohol, and 1 in 140 of chloroform and of ether. A hot 1% solution is neutral to litmus. Store in airtight containers.

**Stability.** If crystals form in terpin hydrate elixir, they may be redissolved by warming the closed container of solution in warm water and then gently shaking it.

**Profile**

Terpin hydrate has been stated to increase bronchial secretion directly and has been given orally as an expectorant in productive cough (p.1547).

Nausea, vomiting, or abdominal pain may follow the ingestion of terpin hydrate on an empty stomach.

Terpin hydrochloride has also been used.

**Preparations**

**USP 31:** Terpin Hydrate and Codeine Elixir; Terpin Hydrate Elixir.

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

**Multi-ingredient:** **Braz.:** Ozonyl; Tetrapulmo; **Canad.:** Valda; **Chile:** Broncodeina; **Cz.:** Coldrex; **Fin.:** Toclase Expectorant; **Fr.:** Bronchorectine au Citral; Pates Pectorales; Pulmoiluide Simple; Pulmoli; Terpone; **Ger.:** Ozothin†; **Hong Kong:** Bendracol; Chrisracol; Codoplex; Coldcap-A; Coldrex†; Coldtab-2; Panadol Cold & Flu Day; Panadol Cold & Flu Extra; Panadol Cold and Flu; **Hung.:** Coldrex; **Ital.:** Elisir Terpin; Neo Borocillina Balsamica; Tionamil†; **Neth.:** Balsoclase Compositum; **Pol.:** Coldrex Max-Grip C; **Rus.:** Alex Plus (Алекс Плюс); Glycodin (Гликодин); **Spain:** Pastillas Pectoral Kely; Terponil; **Switz.:** Bromocod N; Rectoseptal-Neo bis-muthe; Rectoseptal-Neo simple; Sedotussin†; **Thai.:** Antust; D-Coate; Dexpin; Dextro BS; Fartussin; Med-Guaiphan†; Mila-Tercon; Muco-DX; Roccal; Seco; Stocof; Terco-C; Terco-D; **UK:** Original Cabdrivers Expectorant; **Venez.:** Codoform†; Derpinol†.

The symbol † denotes a preparation no longer actively marketed

**Tetryzoline Hydrochloride** (BANM, rINNM) ⊗

Hidrocloruro de tetrizolina; Tetrahydrozoline Hydrochloride; Tetrizolin Hidroklorür; Tetrizolino hidrokloridas; Tetrysolinihidrokloridi; Tétrizoline, chlorhydrate de; Tetryzolin-hydrochlorid; Tetryzolinhydrochlorid; Tetryzolini hydrochloridum. 2-(1,2,3,4-Tetrahydro-1-naphthyl)-2-imidazoline hydrochloride.

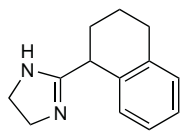
Тетризолина Гидрохлорида

$C_{13}H_{16}N_2 \cdot HCl = 236.7$ .

CAS — 84-22-0 (tetryzoline); 522-48-5 (tetryzoline hydrochloride).

ATC — R01AA06; R01AB03; S01GA02.

ATC Vet — QR01AA06; QR01AB03; QS01GA02.



(tetryzoline)

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

**Ph. Eur. 6.2** (Tetryzoline Hydrochloride). A white or almost white crystalline powder. Freely soluble in water, in alcohol, and in dehydrated alcohol; practically insoluble in acetone.

**USP 31** (Tetrahydrozoline Hydrochloride). A white odourless solid. Soluble 1 in 3.5 of water and 1 in 7.5 of alcohol; very slightly soluble in chloroform; practically insoluble in ether. Store in airtight containers.

**Profile**

Tetryzoline is a sympathomimetic with effects similar to those of naphazoline (p.1565). It is used as the hydrochloride for its vasoconstrictor effect in the symptomatic relief of nasal congestion (p.1548). A 0.1% solution is instilled into each nostril as nasal drops or a spray as necessary, although not more often than every 3 hours. Children aged 2 to 6 years of age may be given 2 or 3 drops of a 0.05% solution in each nostril as necessary, although again not more often than every 3 hours.

Solutions of tetryzoline hydrochloride containing 0.05% are used as a conjunctival decongestant (see Conjunctivitis, p.564).

Other salts of tetryzoline including the nitrate, phosphate, and sulfate have been used similarly.

**Effects on the eyes.** For mention of conjunctivitis induced by ophthalmic decongestant preparations containing tetryzoline, see under Phenylephrine, p.1568.

**Preparations**

**USP 31:** Tetrahydrozoline Hydrochloride Nasal Solution; Tetrahydrozoline Hydrochloride Ophthalmic Solution.

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

**Arg.:** Bano Ocular; Chiosan; Octilia†; Ocudifan†; Piam; **Austral.:** Murine Sore Eyes; Optazine Fresh†; Visine Original; **Belg.:** Visine; **Canad.:** Eye Drops†; Visine Original; **Chile:** Murine Plus†; Visional Gotas; **Cz.:** Rhinal; Tyzine†; Vasopos N; Visine; **Denm.:** Tyzine; **Fin.:** Oftan Starine; Visine; **Fr.:** Constrictil; **Ger.:** Caltheon†; Diabenzyl T†; Ophtalmin N; Rhinex mit Tetryzolin; Rhinopront†; Sanopinwern T†; Tetrilin; Tyzine†; Vasopos N; Visine Yxin; Yxin†; **Gr.:** Ursa-Fin; Visine; **Hong Kong:** Optizoline; Visine Original; **Hung.:** Tyzine; Visine; **India:** Visine; **Indon.:** Braito; Insto; Isotic Clean†; Visine; Visolin; Visto; **Israel:** Azoline; Stilla; V-Zoline; Visine; **Ital.:** Demetil; Octilia; Stilla Decongestionante; Vasonil†; Visine; **Malaysia:** Visine; **Mex.:** Eye-Mo; Tetrazol; **NZ:** Visine; **Philipp.:** Eye-Mo; Sinutab NS; Visine; Visine Advanced Relief; Visine Cool; **Pol.:** Berberil; Starazolin; Tetryvil; Visine; **Port.:** Visine; **Rus.:** Octilia (Октилия); Tyzine (Тизин); Visine (Визин); **S.Afr.:** Visine; **Singapore:** Octilia†; Visine; **Spain:** Azulina; Vispring; **Switz.:** Rhinopront Top; Visine; **Thai.:** Visine; **Turk.:** Burnil; Eye-Visol; Visine; Zenkain; **USA:** Eye Drops; Eye-Zine; Geneye Extra†; Mallazine†; Optigene 3; Tetraset†; Tyzine; Visine Original; **Venez.:** Cusibelt†.

**Multi-ingredient:** **Arg.:** Antiflogol; Biocortin†; Efemolina; Larsimal; Provisal Compuesto; Toflam; Visine Plus; Visubiri; **Austral.:** In A Wink Allergy†; Visine Advanced Relief; Visine Allergy†; Visine Revve†; **Braz.:** Fenidex; Mirabel; Vislin; Visodin; Visolux†; **Canad.:** Visine Advance Triple Action; Visine Allergy; Visine Cool; **Chile:** Spersallerg; **Cz.:** Spersallerg; **Ger.:** Allergopos N; Berberil N; Efemolin; Spersadexoline†; Spersallerg; **Gr.:** Spersadexoline†; Spersallerg; **Hong Kong:** Efemoline; Spersadexoline†; Spersallerg; Visine AC; Visine Moisturizing; **Hung.:** Spersallerg; **Indon.:** Visine Extra; **Israel:** Visine AC; **Ital.:** Bionril; Cromozil; Dextoline; Efemoline; Eta Biocortilen VC; Flumezina; Ischemol A; Stillerg; Tetramil; Vasosterone; Vasosterone Antibiotic; Vasosterone Collirio; Visiblefalarite; Visuloben Decongestionante; Visumetazone Antibiotic; Visumetazone Decongestionante; Visustrin; **Malaysia:** Efemoline†; Gentadexa; Murine Plus†; Spersadexoline; Spersallerg; **Mex.:** Fluorometil; Visine Extra; **Norw.:** Spersallerg; **NZ:** Visine Advanced Relief; **Philipp.:** Efemoline; Spersallerg; **Pol.:** Spersallerg; **Port.:** Gentadexa; Medirvas Antibiotic; **Rus.:** Spersallerg (Спериаллерг); **S.Afr.:** Efemoline; Gemini; Oculeger; Oculofort†; Safyr Bleu Antihistamine†; Spersadexoline; Spersallerg; **Singapore:** Efemoline; Spersadexoline†; Spersallerg; **Spain:** Dexam Constrict†; Fluorvas; Gentadexa; Medirvas; Medirvas Antib; Tivitis; Vasodexa; **Switz.:** Collypan; Efemoline; Spersadexoline†; Spersallerg; **Thai.:** Antazallerg; Efemoline; Histaoph; Mano; Opsa-Hist†; Opsil-A; Spersadexoline; Spersallerg; **Turk.:** Efemoline; Flumetol; **USA:** Advanced Relief Visine; Collyrium Fresh†; Murine Plus; Tetrasine Extra†; Visine Allergy Relief; Visine Moisturizing†; **Venez.:** Gentidexa; Gentisor†.

**Thebacon Hydrochloride** (BANM, rINNM)

Acetyldihydrocodeine Hydrochloride; Acetyldihydrocodeinone Hydrochloride; Dihydrocodeinone Enol Acetate Hydrochloride; Hidrocloruro de tebacón; Thébacone, Chlorhydrate de; Thebaconi Hydrochloridum. 6-O-Acetyl-7,8-dihydro-3-O-methyl-6,7-didehydromorphine hydrochloride; (–)-(5R)-4,5-Epoxy-3-methoxy-9a-methylmorphin-6-en-6-yl acetate hydrochloride.

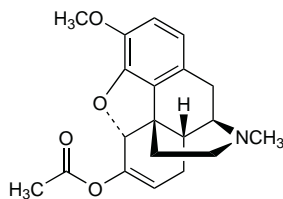
Тебакона Гидрохлорида

$C_{20}H_{23}NO_4 \cdot HCl = 377.9$ .

CAS — 466-90-0 (thebacon); 20236-82-2 (thebacon hydrochloride).

ATC — R05DA10.

ATC Vet — QR05DA10.



(thebacon)

**Profile**

Thebacon hydrochloride is a centrally acting cough suppressant used for non-productive cough (p.1547). It has actions similar to those of codeine (p.37) but is stated to be about 4 times more potent. It is given orally in a usual daily dose of 10 mg in divided doses; the maximum daily dose should not exceed 20 mg.

**Preparations**

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

**Belg.:** Acedicon.

**Tipecidine Hibenzate** (rINNM)

AT-327 (tipecidine); CR-662 (tipecidine); Hibenzato de tipecidina; Tipépidine, Hibenzate de; Tipecidine Hybenzate; Tipecidini Hibenzas. 3-[Di(2-thienyl)methylene]-1-methylpiperidine 2-(4-hydroxybenzoyl)benzoate.

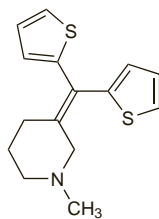
Типеидина Гибензат

$C_{15}H_{17}NS_2 \cdot C_{14}H_{10}O_4 = 517.7$ .

CAS — 5169-78-8 (tipecidine); 31139-87-4 (tipecidine hibenzate).

ATC — R05DB24.

ATC Vet — QR05DB24.



(tipecidine)

**Pharmacopoeias.** In *Jpn.*

**Profile**

Tipecidine hibenzate is a cough suppressant used for non-productive cough (p.1547) which is claimed also to have an expectorant action. It is given orally as the hibenzate but doses are expressed as the citrate; tipecidine hibenzate 22.2 mg is equivalent to about 20 mg of tipecidine citrate. A usual dose is the equivalent of 20 to 40 mg of the citrate 3 times daily.

**Epileptogenic effect.** Generalised convulsions associated with therapeutic oral doses of tipecidine hibenzate have occurred in some patients.<sup>1</sup>

1. Cuomo RM. On the possible convulsive activity of an antitussive piperidine derivative ('tipecidina ibenzato') in man. *Acta Neurologica (Napoli)* 1982; 37: 110–16.

**Preparations**

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

**Indon.:** Asvex; **Jpn.:** Asverin.

**Multi-ingredient:** **Arg.:** Di-Neumobron; **Indon.:** Neo Novapon; Neo Novapon Plus; **Jpn.:** Sin Colgen Kowa Kaze.

**Tolu Balsam**

Bálsamo de tolú; Balsamum toluatum; Baume de tolu; Tolu balsamas; Toluánský balzám; Tolubalsam; Tolubalsam; Tolupalsami.

Толуанский Бальзам

CAS — 9000-64-0; 8017-09-2.

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

**Ph. Eur. 6.2** (Tolu Balsam). Oleoresin obtained from the trunk of *Myroxylon balsamum* var. *balsamum*. It contains 25 to 50% of free or combined acids, expressed as cinnamic acid, calculated with reference to the dried drug. It occurs as a hard, friable, brownish to reddish-brown mass; thin fragments are brownish-yellow when examined against the light. It has an odour reminiscent of vanillin. Practically insoluble in water and in petroleum spirit; very soluble or freely soluble in alcohol. Do not store in powdered form.

**USP 31** (Tolu Balsam). A balsam obtained from *Myroxylon balsamum* (Leguminosae). It is a brown or yellowish-brown plastic solid transparent in thin layers and brittle when old, dried, or exposed to cold temperatures. It has a pleasant aromatic odour, resembling that of vanilla. Practically insoluble in water and in petroleum spirit; soluble in alcohol, in chloroform, and in ether, sometimes with slight residue or turbidity. Store at a temperature not exceeding 40° in airtight containers.

**Profile**

Tolu balsam is considered to have very mild antiseptic properties and some expectorant action but is mainly used in the form of a syrup to flavour cough mixtures. However, Tolu Syrup (BP 2008) no longer contains tolu balsam but is based on cinnamic acid (p.1640).

**Preparations**

**BPC 1954:** Compound Iodoform Paint;

**USNF 26:** Tolu Balsam Syrup; Tolu Balsam Tincture;

**USP 31:** Compound Benzoin Tincture.

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

**Multi-ingredient:** **Arg.:** Cobenzil Compuesto†; No-Tos Adultos; No-Tos Infantil; Pastillas Medex; Pectobron; Polipectol†; Refenax Caramelos Expectorantes; **Austral.:** Camphor Linctus Compound; **Belg.:** Saintbois; Tux†; **Braz.:** Agrimel†; Broncofin†; Calmatoss†; Expectoriel; Frenotossie; Frenotossil†; Glycon; Infantoss†; Inhalante Yatropan; Iodetel; Ipecol†; Melagria; Peitoral Angico Pelotense†; Pulmonix†; Tossanil†; Vick Pastilhas; Xarope de Caraguata†; Xarope Sao Joao†; **Canad.:** Bronco Asmol; Rophelin†; **Chile:** Elitos ET; Fitotos; Flemex Jat; Jarabe Palto Compuesto con Miel Adulto; Notosil†; Pulmosina; Sedotus†; **Cz.:** Solutan†; Stodal; **Fr.:** Broncalene Nourison; Dinacode avec codeine†; Dinacode†; Hexapneumine; Pastilles Médicinales Vicks; Pastilles Monleone; Pates Pectorales; Phytotux; Theralene Pectoral Nourisson†; Tussipax; **Hong Kong:** Baby Cough with Anthistamine; Hexapneumine; **Ital.:** Stenobronchial; **Mex.:** Citos; Epicol†; Fen-y-Tos; **Port.:** Broncodiazina; Lesil; Stodal; **Rus.:** Solutan (Солутан); **S.Afr.:** Choats Extract of Lettuce Cough Mixture; Linctus Tussi Infans; Puma Cough Balsam; Turulington Tincture; **Spain:** Bactopumon; Bronquidiazina CR; Pastillas Antisep Garg M; Pulmofasa; Tosdiazina†; **Switz.:** Baume†; Dinacode N†; Euphon N; Ipecat; Neo-Codion N; Neo-DP†; Pastilles pectorales Demo N; Pectocalmine Junior N; Pectosan N†; Phol-Tussil; Pommade au Baume; Saintbois; Sano Tuss; **Thai.:** Baby Cough Syrup Atlantic; Baby Cough with Anthistamine; **UK:** Allens Chesty Cough; Chesty Cough Relief; Modern Herbals Cold & Congestion; Sanderson's Throat Specific; **USA:** Tonsiline; Vicks Menthol Cough Drops; **Venez.:** Yerba Santa.

**Tramazoline Hydrochloride** (BANM, USAN, rINNM) ⊗

Hidrocloruro de tramazolina; Tramazoline, chlorhydrate de; Tramazolin-hidroklorid; Tramazolin-hydrochlorid; Tramazolini hydrochloridum; Tramazolino hidrokloridas; Tramazoliny chlorowodorek. 2-(5,6,7,8-Tetrahydro-1-naphthylamino)-2-imidazoline hydrochloride monohydrate.

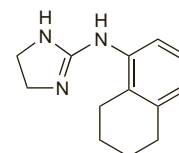
Трамазолина Гидрохлорида

$C_{13}H_{17}N_3 \cdot HCl \cdot H_2O = 269.8$ .

CAS — 1082-57-1 (tramazoline); 3715-90-0 (tramazoline hydrochloride).

ATC — R01AA09.

ATC Vet — QR01AA09.



(tramazoline)

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

**Ph. Eur. 6.2** (Tramazoline Hydrochloride Monohydrate). A white or almost white crystalline powder. Soluble in water and in alcohol. A 5% solution in water has a pH of 4.9 to 6.3.

**Profile**

Tramazoline hydrochloride is a sympathomimetic with effects similar to those of naphazoline (p.1565). It is used to provide symptomatic relief of nasal congestion (p.1548). Tramazoline hydrochloride is given as a solution containing about 0.12%, instilled into each nostril as nasal drops or a spray three or four times daily.

Solutions of tramazoline hydrochloride containing about 0.06% have also been used in eye drops as a conjunctival decongestant (see Conjunctivitis, p.564).