

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

Hydrocloruro de tetryzolina; Tetrahydrozoline Hydrochloride; Tetryzolin Hidroklorür; Tetryzolino hidrokloridas; Tetryzolinihidrokloridi; Tetryzoline, chlorhydrate de; Tetryzolin-hydrochlorid; Tetryzolinhydrochlorid; Tetryzolini hydrochloridum. 2-(1,2,3,4-Tetrahydro-1-naphthyl)-2-imidazoline hydrochloride.

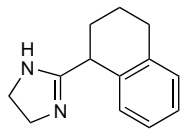
Тетризолина Гидрохлорида

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

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†; Ocudifant†; 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.:** Constrictin; **Ger.:** Caltheon†; Diabenzyl T†; Ophtalmil N; Rhinex mit Tetryzolin; Rhinopront†; Sanopinwern T†; Tetrilin; Tyzine†; Vasopos N; Visine Yxin; Yxin†; **Gr.:** Ursa-Fin; Visine; **Hong Kong:** Optizoline; Visine Original; **Hung.:** 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 (Октялия); Tyzine (Тизин); Visine (Визин); **S.Afr.:** Visine; **Singapore:** Octilia†; Visine; **Spain:** Azulina; Vispring; **Switz.:** Rhinopront Top; Visine; **Thai.:** Zine; **Turk.:** Burnil; Eye-Visol; Visine; Zenkain; **USA:** Eye Drops; Eye-Zine; Geneye Extra†; Mallazine†; Optigene 3; Tetrysine†; Tyzine; Visine Original; **Venez.:** Cusibel†.

**Multi-ingredient:** **Arg.:** Antiflogol; Biocortin†; Efemolina; Larsimal; Provisual Compuesto; Toflam; Visine Plus; Visubri; **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; Spersadexolin†; Spersallerg; **Gr.:** Spersadexolin†; Spersallerg; **Hong Kong:** Efemoline; Spersadexolin†; Spersallerg; Visine AC; Visine Moisturizing; **Hung.:** Spersallerg; **Indon.:** Visine Extra; **Israel:** Visine AC; **Ital.:** Bioniril; Cromozil; Dextoline; Efemoline; Eta Biocortilen VC; Flumezina; Ischemol A; Stillerig; Tetramil; Vasosterone; Vasosterone Antibiotico; Vasosterone Collirio; Visublefarite; Visuloben Decongestionante; Visumetazone Antibiotico; Visumetazone Decongestionante; Visustin; **Malaysia:** Efemoline†; Gentadexa; Murine Plus†; Spersadexolin; Spersallerg; **Mex.:** Fluorometil; Visine Extra; **Norw.:** Spersallerg; **NZ:** Visine Advanced Relief; **Philipp.:** Efemoline; Spersallerg; **Pol.:** Spersallerg; **Port.:** Gentadexa; Medirvas Antibiotico; **Rus.:** Spersallerg (Сперсаллер); **S.Afr.:** Efemoline; Gemini; Oculeger; Oculofort†; Safyr Bleu Antihistamine†; Spersadexolin; Spersallerg; **Singapore:** Efemoline; Spersadexolin†; Spersallerg; **Spain:** Dexam Constrict†; Fluorvas; Gentadexa; Medirvas; Medirvas Antib; Tivitis; Vasodexa; **Switz.:** Collypan; Efemoline; Spersadexolin†; Spersallerg; **Thai.:** Antazallerg; Efemoline; Histaoph; Mano; Opa-His†; Opsi-A; Spersadexolin; Spersallerg; **Turk.:** Efemoline; Flumetol; **USA:** Advanced Relief Visine; Collyrium Fresh†; Murine Plus; Tetrysine Extra†; Visine Allergy Relief; Visine Moisturizing†; **Venez.:** Gentidexa; Gentsor†.

**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.

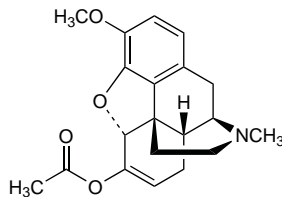
Тебакона Гидрохлорида

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

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.:** Acacidon.

**Tipecidine Hibenzate** (rINNM)

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

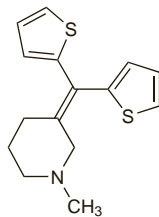
Типеидина Гибензат

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

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 piperidinic derivative ('tipecidina ibenzato') in man. *Acta Neurol (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 Novapron; Neo Novapron Plus; **Jpn.:** Sin Colgen Kowa Kaze.

**Tolu Balsam**

Bálsamo de tolu; Balsamum toluatanum; Baume de tolu; Tolu balsamas; Toluánský balzám; Tolubalsam; Tolubalzsam; Tolupalsami.

Толуанский Балзам

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.:** Sainbois; Tux†; **Braz.:** Agrimel†; Broncofisin†; Calmatoss†; Expectomet; Frenotosse; Frenotossil†; Glycon; Infantoss†; Inhalante Yatropan; Iodetal; Ipecol†; Melagrão; Peitoral Angico Pelotense†; Pulmonix†; Tossanil†; Vick Pastilhas; Xarope de Caraguatã†; Xarope Sao João†; **Canad.:** Bronco Asmol; Rophelin†; **Chile:** Elitos ET; Fitotos; Flemex Jat; Jarabe Palto Compuesto con Miel Adulto; Notosil†; Pulmosina; Sedotus†; **Cz.:** Solutan†; Stodal; **Fr.:** Broncalene Nourisson; 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; Lesli; Stodal; **Rus.:** Solutan (Солутан); Choats Extract of Lettuce Cough Mixture; Linctus Tussi Infans; Puma Cough Balsam; Turulington Tincture; **Spain:** Bactopumon; Bronquidiazina CR; Pastillas Antisept Garg M; Pulmoasa; Tosdiazina†; **Switz.:** Baume†; Dinacode N†; Euphon N; Ipeca†; Neo-Codion N; Neo-DPT†; Pastilles pectorales Demo N; Pectocalmine Junior N; Pectosan N†; Phol-Tussil; Pommade au Baume; Sainbois; Sano Tuss; **Thai.:** Baby Cough Syrup Atlantic; Baby Cough with Anthistamine; **UK:** Allens Chesty Cough; Chesty Cough Relief; Modern Herbsal Cold & Congestion; Sanderson's Throat Specific; **USA:** Tonsiline; Vicks Menthol Cough Drops; **Venez.:** Yerba Santa.

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

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

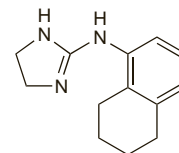
Трамазолина Гидрохлорида

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

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).