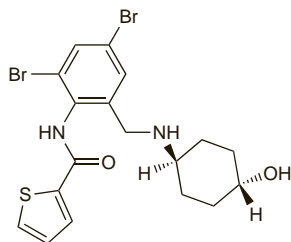


Naphthoic-A: Ocuhist; Opcon-A: VasoClear A; VasoClear; Vasocon-A; Vissine-A; **Venez.:** Camolyn Plus; Fesanol; Pinazo; Soltin; Soluclear.  
Used as an adjunct in: **Fr.:** Xylocaine; **Spain:** Anestisco.

### Neltenexine (rINN)

Neltenexina; Nelténexine; Neltenexinum. 4',6'-Dibromo- $\alpha$ -[(trans-4-hydroxycyclohexyl)amino]-2-thiophene-carboxy-*o*-toluidide.

Нелтенексин  
C<sub>18</sub>H<sub>20</sub>Br<sub>2</sub>N<sub>2</sub>O<sub>2</sub>S = 488.2.  
CAS — 99453-84-6.  
ATC — R05CB14.  
ATC Vet — QR05CB14.



### Profile

Neltenexine is a mucolytic that has been used in respiratory disorders associated with productive cough (p.1547). It has been given orally as the monohydrate, in usual doses of 37.4 mg three times daily. Neltenexine has also been given rectally as the hydrochloride.

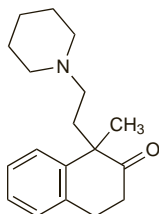
### Preparations

**Proprietary Preparations** (details are given in Part 3)  
**Ital.:** Alveoten; Muco4; Tenoxol.

### Nepinalone (rINN)

Nepinalona; Népinalone; Nepinalonum. (±)-3,4-Dihydro-1-methyl-1-(2-piperidinoethyl)-2(1*H*)-naphthalenone.

Непиналон  
C<sub>18</sub>H<sub>25</sub>NO = 271.4.  
CAS — 22443-11-4.  
ATC — R05DB26.  
ATC Vet — QR05DB26.



### Profile

Nepinalone has been used as the hydrochloride as a cough suppressant in non-productive cough (p.1547). Oral doses of nepinalone hydrochloride 10 mg have been given three times daily.

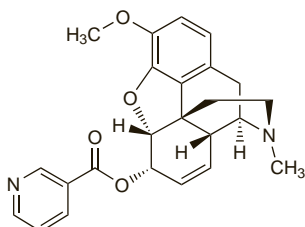
### Preparations

**Proprietary Preparations** (details are given in Part 3)  
**Ital.:** Nepituss; Placatus; Tussolvina.

### Nicocodine (BAN, rINN)

Nicocodina; Nicocodinum. 6-Nicotinoylcodeine; 3-*O*-Methyl-6-*O*-nicotinoylmorphine.

Никокордин  
C<sub>24</sub>H<sub>24</sub>N<sub>2</sub>O<sub>4</sub> = 404.5.  
CAS — 3688-66-2.



### Profile

Nicocodine is an opioid related to codeine (p.37). It has been used as the hydrochloride for its central cough suppressant effects in non-productive cough (p.1547). Nicocodine hydrochloride is given orally in doses of 5 to 7.5 mg up to three times daily.

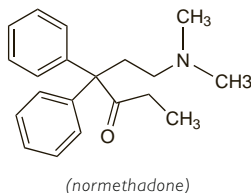
### Preparations

**Proprietary Preparations** (details are given in Part 3)  
**Austria:** Tusscodin.

### Normethadone Hydrochloride (BANM, rINNM)

Desmethylnormethadone Hydrochloride; Hidrocloruro de normetadona; Hoechst-10582 (normethadone); Norméthadone, Chlorhydrate de; Normethadoni Hydrochloridum; Phenylidimazone Hydrochloride. 6-Dimethylamino-4,4-diphenylhexan-3-one hydrochloride.

Норметадона Гидрохлорид  
C<sub>20</sub>H<sub>25</sub>NO<sub>2</sub>HCl = 331.9.  
CAS — 467-85-6 (normethadone); 847-84-7 (normethadone hydrochloride).  
ATC — R05DA06.  
ATC Vet — QR05DA06.



### Profile

Normethadone is closely related to methadone (p.82). The hydrochloride is given orally as a cough suppressant in preparations for non-productive cough.

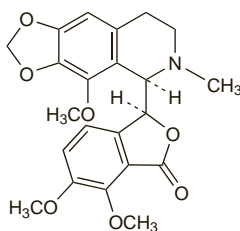
### Preparations

**Proprietary Preparations** (details are given in Part 3)  
**Multi-ingredient:** **Canad.:** Cophylac.

### Noscapine (BAN, rINN)

Narcotine; L- $\alpha$ -Narcotine; Noscapina; Noscapinum; Noskapiini; Noskapin; Noskapias; Noszkapin; NSC-5366. (3S)-6,7-Dimethoxy-3-[(5*R*)-5,6,7,8-tetrahydro-4-methoxy-6-methyl-1,3-dioxolo[4,5-*g*]isoquinolin-5-yl]phthalide.

Носкапин  
C<sub>22</sub>H<sub>23</sub>NO<sub>7</sub> = 413.4.  
CAS — 128-62-1.  
ATC — R05DA07.  
ATC Vet — QR05DA07.



**Description.** Noscapine is an alkaloid obtained from opium.

**Pharmacopoeias.** In *Chin.*, *Eur.* (see p.vii), *Int.*, *Jpn.*, and *US*.

**Ph. Eur. 6.2** (Noscapine). A white or almost white, crystalline powder or colourless crystals. Practically insoluble in water at 20°, very slightly soluble at 100°; slightly soluble in alcohol; soluble in acetone; dissolves in strong acids although the base may be precipitated on dilution with water. Protect from light.

**USP 31** (Noscapine). A fine, white or practically white, crystalline powder. Practically insoluble in water; slightly soluble in alcohol and in ether; soluble in acetone; freely soluble in chloroform.

### Noscapine Camsilate (BANM, rINNM)

Camphoscapine; Camsilato de noscapina; Noscapine, Camsilate de; Noscapine Camsylate; Noscapini Camsilas. Noscapine camphor-10-sulphonate.

Носкапина Камзилат  
C<sub>22</sub>H<sub>23</sub>NO<sub>7</sub> · C<sub>10</sub>H<sub>16</sub>O<sub>4</sub>S = 645.7.  
CAS — 25333-79-3.  
ATC — R05DA07.  
ATC Vet — QR05DA07.

### Noscapine Hydrochloride (BANM, rINNM)

Hidrocloruro de noscapina; Narcotine Hydrochloride; Noscapine, chlorhydrate de; Noscapini hydrochloridum; Noscapini Hydrochloridum Monohydricum; Noscapinum Chloride; Noskapiinihydrokloridi; Noskapiin hydrochlorid monohydrát; Noskapiinhydroklorid; Noskapiinohydrochloridas; Noskapiin chlorowodorek; Noszkapiin-hidroklorid.

Носкапина Гидрохлорид  
C<sub>22</sub>H<sub>23</sub>NO<sub>7</sub> · HCl · H<sub>2</sub>O = 467.9.  
CAS — 912-60-7 (anhydrous noscapine hydrochloride).  
ATC — R05DA07.  
ATC Vet — QR05DA07.

**Pharmacopoeias.** In *Eur.* (see p.vii) and *Int.* (both with H<sub>2</sub>O); in *Jpn* (with xH<sub>2</sub>O).

**Ph. Eur. 6.2** (Noscapine Hydrochloride). A white or almost white, hygroscopic, crystalline powder or colourless crystals. Freely soluble in water and in alcohol. Aqueous solutions are faintly acid; the base may be precipitated when the solutions are allowed to stand. A 2% solution in water has a pH of not less than 3.0. Protect from light.

### Adverse Effects and Precautions

As for Dextromethorphan, p.1555. Hypersensitivity reactions have been reported.

**Breast feeding.** Maximum concentrations of noscapine in the breast milk of 8 women given 100 or 150 mg of noscapine ranged<sup>1</sup> from 11 to 83 nanograms/mL. It was estimated that breast-fed infants of mothers receiving noscapine 50 mg three times daily would ingest at most 300 nanograms/kg of noscapine, an amount considered unlikely to be a hazard. No adverse effects have been seen in breast-fed infants whose mothers were given noscapine, and the American Academy of Pediatrics<sup>2</sup> considers that it is therefore usually compatible with breast feeding.

1. Olsson B, *et al.* Excretion of noscapine in human breast milk. *Eur J Clin Pharmacol* 1986; **30**: 213–15.
2. American Academy of Pediatrics. The transfer of drugs and other chemicals into human milk. *Pediatrics* 2001; **108**: 776–89. Correction. *ibid.*; 1029. Also available at: <http://aappolicy.aappublications.org/cgi/content/full/pediatrics%3b108/3/776> (accessed 13/12/06)

**Pregnancy.** The UK CSM stood by their recommendation<sup>1</sup> that products containing noscapine should be contra-indicated in women of child-bearing potential (because of potential mutagenic effects<sup>2</sup>), after criticism that the decision was based solely on the results of *in-vitro* work.<sup>3</sup>

1. Asscher AW, Fowler LK. Papaveretum in women of childbearing potential. *BMJ* 1991; **303**: 648.
2. Committee on Safety of Medicines. Genotoxicity of papaveretum and noscapine. *Current Problems* 31 1991. Also available at: [http://www.mhra.gov.uk/home/idcplg?IdcService=GET\\_FILE&dDocName=CON2024449&RevisionSelectionMethod=LatestReleased](http://www.mhra.gov.uk/home/idcplg?IdcService=GET_FILE&dDocName=CON2024449&RevisionSelectionMethod=LatestReleased) (accessed 21/03/07)
3. Allen S, *et al.* Papaveretum in women of child bearing potential. *BMJ* 1991; **303**: 647.

### Interactions

Noscapine should not be given with alcohol or other CNS depressants.

**Anticoagulants.** For mention of a possible interaction between noscapine and warfarin, see Cough Suppressants, p.1430.

### Pharmacokinetics

◇ References.

1. Karlsson MO, *et al.* Pharmacokinetics of oral noscapine. *Eur J Clin Pharmacol* 1990; **39**: 275–9.
2. Karlsson MO, Dahlstrom B. Serum protein binding of noscapine: influence of a reversible hydrolysis. *J Pharm Pharmacol* 1990; **42**: 140–3.

### Uses and Administration

Noscapine is a centrally acting cough suppressant that has actions and uses similar to those of dextromethorphan (p.1556). It is given in an oral dose of up to 50 mg three times daily. It is also used rectally. Noscapine has also been given as the ascorbate, camsilate, embonate, and the hydrochloride.

### Preparations

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

**Belg.:** Nosca-Mereprine; Noscafex; **Chile:** Factoss; **Ger.:** Capval; **Hong Kong:** Recoma; **Indon.:** Longatin; Mercotin; **Neth.:** Roter Noscapet; Streptuss kriebelheest; **S.Afr.:** Nitetap; **Spain:** Tuscalman; **Swed.:** Nipaxon; **Switz.:** Tussanil N.

**Multi-ingredient:** **Arg.:** Funciobron; Graneodin N; Jarabe Bago; No-Tos Pocket; Saltos Infantil; Saltos; Tosedrin Compuesto; Vi-Balsabron; **Austria:** Pneumopet; Tuscalman; **Belg.:** Noscafex; Rosil; **Braz.:** Expectussin; Ipecol; **Chile:** AB Antitusivo; Captus; Congestex; Cotibin Flu; Freshmel Tos; Graneodin N; Graneodin-Tos; Griplexin Limonada Caliente; Griplexin Nueva Formula Compuesto; Kitadol Flu Noche; Kitadol Flu; Pectoserum; Tapsin Compuesto; Tapsin Compuesto con Clorfenamina; Tapsin Compuesto Dia/Noche Plus; Tapsin Compuesto DN; Tapsin Limonada DN; Tapsin Limonada Dia; Tapsin Limonada Noche; **Fin.:** Codasan N; Posivil; **Fr.:** Tussisedal; **Hong Kong:** Asmeton; Coldcap-A; Coldrex; Coldtab-2; Mefedra-N; Panadol Cold & Flu Extra; **India:** Coscopin; Coscopin Plus; **Indon.:** Flunadin; Noscapax; Paratusin; Tilomix; **Swed.:** Spasmofen; **Switz.:** Brosoline-Rectocaps; DemoTussil; Hederix; Noscorex; Spasmosol; Tossamine; Tossamine plus; Tuscalman; Tussanil Compositum; **Thai:** Asmeton; **Turk.:** Coldeks.

**Oxeladin Citrate** (BANM, rINNM)

Citrato de oxeladina; Okseladiniivetystraatti; Okseladino-vandenilio citratas; Oxeladin-citrát; Oxeladine, Citrate d'; Oxeladine, hydrogénocitrate d'; Oxeladini Citras; Oxeladini hydrogenocitras; Oxeladinvätecitrat. 2-(2-Diethylaminoethoxy)ethyl 2-ethyl-2-phenylbutyrate dihydrogen citrate.

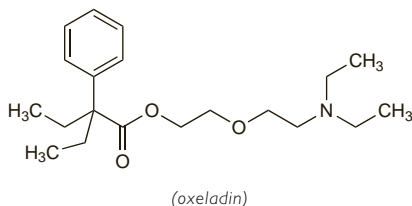
Окселадина Цитрат

$C_{20}H_{33}NO_3 \cdot C_6H_8O_7 = 527.6$ .

CAS — 468-61-1 (oxeladin); 52432-72-1 (oxeladin citrate).

ATC — R05DB09.

ATC Vet — QR05DB09.



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

**Ph. Eur. 6.2** (Oxeladin Hydrogen Citrate). A white or almost white, crystalline powder. It exhibits polymorphism. Freely soluble in water; slightly to very slightly soluble in ethyl acetate.

**Profile**

Oxeladin citrate has been given orally as a centrally acting cough suppressant for non-productive cough (p.1547). Up to 50 mg daily in divided doses has been given orally. Higher doses of up to 120 mg daily have been given as a modified-release preparation.

**Preparations**

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

**Arg.:** Elitos; Frenotos; Nadetos; Pldoxo; **Fr.:** Paxeladine.

**Multi-ingredient:** **Arg.:** Aseptobron Bromexina; Aseptobron C; Frenotos Muc; Pectoral Laledar; **Braz.:** Novotussan†; Tossivitan†; Tripulmin†; **Mex.:** Fluxedan; TheraFlu Tenaif.

**Oxolamine** (rINN)

683-M; Oksolamiini; Oksolamin; Oxolamin; Oxolamina; Oxolaminum. 5-[2-(Diethylamino)ethyl]-3-phenyl-1,2,4-oxadiazole.

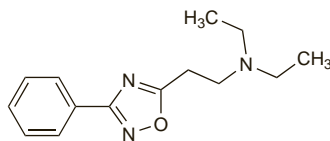
ОКСОЛАМИН

$C_{14}H_{19}N_3O = 245.3$ .

CAS — 959-14-8.

ATC — R05DB07.

ATC Vet — QR05DB07.

**Oxolamine Citrate** (rINNM)

AF-438; Citrato de oxolamina; Oxolamine, Citrate d'; Oxolamini Citras; SKF-9976.

Оксоламин Цитрат

$C_{14}H_{19}N_3O \cdot C_6H_8O_7 = 437.4$ .

CAS — 1949-20-8.

ATC — R05DB07.

ATC Vet — QR05DB07.

**Oxolamine Phosphate** (rINNM)

Fosfato de oxolamina; Oxolamine, Phosphate d'; Oxolamini Phosphas.

Оксоламин Фосфат

CAS — 1949-19-5.

ATC — R05DB07.

ATC Vet — QR05DB07.

**Profile**

Oxolamine is a cough suppressant with a mainly peripheral action that has been used for non-productive cough (p.1547). It has been given as the citrate in usual oral doses of 100 to 200 mg three times daily. The phosphate has been used similarly. It has also been given as the tannate.

Hallucinations in children have been reported after oxolamine use.

## ♦ References.

- McEwen J, et al. Hallucinations in children caused by oxolamine citrate. *Med J Aust* 1989; **150**: 449-52.

The symbol † denotes a preparation no longer actively marketed

**Interactions.** **ANTICOAGULANTS.** For mention of a possible interaction between oxolamine and *warfarin*, see Cough Suppressants, p.1430.

**Preparations**

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

**Chile:** Numosol; Perebron; Respibron; Tulox; **Israel:** Symphocal; **Ital.:** Gantimex†; Perebron; Tussibron; **Mex.:** Aledron; Bredon; Contuxin; Eumol; Expecmin; Fartoxol†; Kentosani†; Oxathos; Oxobron; Oxomar; Oxomier; Oxotus; Oxotusin; Toxal†; Tukson†; **Turk.:** Kalamini; Oksabron; Perebron; Perebron; Sekodin; Subitol; **Venez.:** Broxol; Cafox; Calcimonio; Citralamina; Exeton†; Lexo; Opilina; Oxalcor; Oxolam†; Oxotil; Perebron; Toloxent†.

**Multi-ingredient:** **Ital.:** Unipulsi; **Mex.:** Caltusine; Caobre; **Turk.:** Forza; Katarin; Katarin Forte; Oledro; **Venez.:** Broxamel†; Opilina Compuesta; Oxolavin Compuesto; Perebron con Miel†.

**Oxymetazoline Hydrochloride**

(BANM, USAN, rINNM) ⊗

H-990; Hidrocloruro de oximetazolina; Oksimetatsoliinihydrokloridi; Oksimetazolin Hidroklorür; Oksimetazolino hidroklorida; Oximetazolin-hidroklorid; Oximetazolinhydroklorid; Oxymetazolin hydrochlorid; Oxymetazoline, chlorhydrate d'; Oxymetazolini hydrochloridum; Sch-9384.

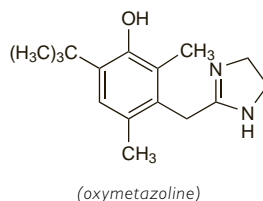
Оксиметазолина Гидрохлорид

$C_{16}H_{24}N_2O \cdot HCl = 296.8$ .

CAS — 2315-02-8.

ATC — R01AA05; R01AB07; S01GA04.

ATC Vet — QR01AA05; QR01AB07; QS01GA04.



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

**Ph. Eur. 6.2** (Oxymetazoline Hydrochloride). A white or almost white, crystalline powder. Freely soluble in water and in alcohol.

**USP 31** (Oxymetazoline Hydrochloride). A white to practically white, fine, hygroscopic, crystalline powder. Soluble 1 in 6.7 of water, 1 in 3.6 of alcohol, and 1 in 862 of chloroform; practically insoluble in ether and in benzene. pH of a 5% solution in water is between 4.0 and 6.5. Store in airtight containers.

**Adverse Effects and Precautions**

As for Naphazoline, p.1565.

**Porphyria.** Oxymetazoline has been associated with acute attacks of porphyria and is considered unsafe in porphyric patients.

**Interactions**

Since oxymetazoline is absorbed through the mucosa interactions may follow topical application. The *BNF* considers that all sympathomimetic nasal decongestants may cause a hypertensive crisis if used during treatment with an MAOI. For the interactions of sympathomimetics in general, see p.1407.

**Uses and Administration**

Oxymetazoline is a direct-acting sympathomimetic (p.1408) with marked alpha-adrenergic activity. It is a vasoconstrictor and reduces swelling and congestion when applied to mucous membranes. It acts within a few minutes and the effect lasts for up to 12 hours. It is used as the hydrochloride for the symptomatic relief of nasal congestion (p.1548). In adults and children over 6 years, a 0.05% solution of oxymetazoline hydrochloride is applied topically as nasal drops or a spray, usually 2 or 3 times daily to each nostril as required. Over-the-counter cough and cold preparations containing sympathomimetic decongestants (including oxymetazoline) should be used with caution in children and generally avoided in those under 2 years of age (see p.1547).

A 0.025% solution of oxymetazoline hydrochloride may be instilled into the eye every 6 hours when necessary as a conjunctival decongestant in adults and children over 6 years (see Conjunctivitis, p.564).

**Preparations**

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

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

**Arg.:** Apracur Nasal; Dristan Nasal†; Isly†; Lidl; Newclat; Rinov VX; Vick Sinex†; Visine D; Yusin; **Austral.:** Chemists Own Decongestant Nasal Spray†; Dimetapp 12 Hour Nasal; Drixine Nasal; Logicon Rapid Relief; Or-dov Sinudex†; **Austria:** Nasivin; **Belg.:** Nesivine; Rhino Humex; Vicks Sinex; **Braz.:** Afrin; Aturgyl; Desfrin; Freenal; Nasivin; **Canada.:** Claritin Allergic Congestion Relief; Claritin Eye Allergy Relief; Decongestant Nasal Mist; Dristan; Drixoral; Long Lasting Nasal Mist; Naftrin†; Vicks Sinex; Visine Workplace; **Chile:** Facimin; Iliadin; Isly†; Oxilin; **Cz.:** Iversalt†; Nasivin; Oxamet; **Denm.:** Drixin; Iliadin; **Fin.:** Vicks Sinex; **Fr.:** Aturgyl; **Ger.:** Em-medical Mono†; Nasivin; Nasivin gegen Schnupfen†; Nasivin Sanft; Nasivinetten gegen Schnupfen†; Vistoxyn; Wick Sinex; **Gr.:** Narol; Ronal; **Hong Kong:** Afrin; Duration; Iliadin; Logicon Rapid Relief; Long Lasting Decongestant Nasal Mist; Nezerin†; Oxilyn†; **Hung.:** Afrin; Nasivin; **India:** Naselin; Nasivin; Sinarest; Sinarest-PD; **Indon.:** Afrin; Iliadin; Visine LR; **Irl.:** Dristan†; **Israel:** Af-Tipa; Afrin; Nasivin†; Rhinocil; Sinulin; **Ital.:** Actifed Nasale; Coricidin†; Oxilin; Rino Calypot; **Jpn.:** Nasivin; **Malaysia:** Afrin; Iliadin; Oxynase†; **Mex.:** Afrin; Fracidin†; Iliadin; Naztrik; Ocuclear†; Oxilyn; Sinex; Visine AD; **Neth.:** Nasivin; Oxilyn; Vicks Sinex; **Norw.:** Iliadin; Rhinox; **NZ:** At-Eze; Dimetapp 12 Hour Nasal; Drixine†; **Philipp.:** Drixine; Nasivin; **Pol.:** Acataar; Afrin; Nasivin; Nosox; Oxalin; Resoxym; **Port.:** Alerjon; Bisolspray; Nasarox; Nasex; Nasorhinathiol; Neozine†; Oxilyn; Rinerge; Sinexsens; Vicks VapoSpray; **Rus.:** Nasivin (Називин); Nazol (Назол); Sanorinchik (Саноринчик); **S.Afr.:** Dristan; Drixine; Iliadin; Merck-P Nasal†; Oxilyn; Sparkling White Eye Drops; Vicks Decongestant; **Singapore:** Afrin; Iliadin; Nazolin; Oxy-Nase; Utabon; **Spain:** Alerfin; Antirrimun; Conilina; Could-espir; Idasal Nebulizador†; Ilvina; Nasolina; Nebulicina; Oftinal; Respien; Respir; Serranasal; Utabon; **Swed.:** Iliadin; Nasin; Nezerin; Zolin†; **Switz.:** Nasivine; Nasivinettes†; Vistoxyn†; **Thai.:** Iliadin; Oxymet; **Turk.:** Iliadin; Oksinazal; **UAE:** Nasivin; **UK:** Afrazine; Nasivin; Vicks Sinex; **USA:** 4-Way Long Lasting; Afrin; Allerest 12 Hour Nasal; Chlorphed-LA; Dristan 12-hr Nasal Decongestant Spray; Dristan Long Lasting; Duramist Plus; Duration; Genasal; Nasal Relief; Nasal Spray; Neo-Synephrine 12 Hour; Nostrilla; NTZ Long Acting Nasal; Ocuclear†; Twice-A-Day; Vicks Sinex 12-Hour; Visine LR; **Venez.:** Afrin; Airfen; Clarx; Drixine; Nasin; Solarsalt†.

**Multi-ingredient:** **Arg.:** Panoxi; **Austral.:** Nasex; Vasylox†; Vicks Sinex; **Austria:** Wick Sinex; **Fr.:** Deturgylone; **Hong Kong:** Bonjedex; **Hung.:** Nasopax; **Israel:** Sinaf; **Ital.:** Triaminol; Vicks Sinex; **Mex.:** Grimal; Hyalox; **NZ:** Vicks Sinex; **Rus.:** Nazol Advance (Назол Адванс); **S.Afr.:** Nazene Z; **Spain:** Egaron†; Seniospray; Vicks Spray; **Switz.:** Vicks Sinex.

**Pentoxyverine** (BAN, rINN)

Carbetapentane; Pentoksiveriini; Pentoxiverin; Pentoxiverina; Pentoxyvérine; Pentoxyverinum. 2-[2-(Diethylamino)ethoxy]ethyl 1-phenylcyclopentanecarboxylate.

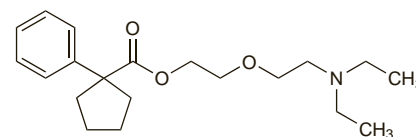
Пентоксиверин

$C_{20}H_{31}NO_3 = 333.5$ .

CAS — 77-23-6.

ATC — R05DB05.

ATC Vet — QR05DB05.

**Pentoxyverine Citrate** (BANM, rINNM)

Carbetapentane Citrate; Citrato de pentoxiverina; Pentoksiveriiniivetystraatti; Pentoksiverino-vandenilio citratas; Pentoxiverin-hidrogén-citrát; Pentoxiverinvätecitrat; Pentoxiverin-citrát; Pentoxyvérine, Citrate de; Pentoxyverine Hydrogen Citrate; Pentoxyvérine, hydrogénocitrate de; Pentoxiverini Citras; Pentoxiverini hydrogenocitras; UCB-2543.

Пентоксиверин Цитрат

$C_{20}H_{31}NO_3 \cdot C_6H_8O_7 = 525.6$ .

CAS — 23142-01-0.

ATC — R05DB05.

ATC Vet — QR05DB05.

**Pharmacopoeias.** In *Chin.*, *Eur.* (see p.vii), and *Jpn.*

**Ph. Eur. 6.2** (Pentoxyverine Hydrogen Citrate; Pentoxyverine Citrate BP 2008). A white or almost white crystalline powder. M.p. about 93°. Freely soluble in water and in methyl alcohol; soluble in alcohol and in dichloromethane; very soluble in glacial acetic acid. A 10% solution in water has a pH of 3.3 to 3.7. Protect from light.

**Pentoxyverine Hydrochloride** (BANM)

Pentoksiverin Hidroklorür; Pentoxiverina, hidrocloruro de.

Пентоксиверин Гидрохлорид

$C_{20}H_{31}NO_3 \cdot HCl = 369.9$ .

CAS — 1045-21-2.

ATC — R05DB05.

ATC Vet — QR05DB05.

**Profile**

Pentoxyverine is a centrally acting cough suppressant used for non-productive cough (p.1547). Usual doses of up to 180 mg daily of the citrate or hydrochloride have been given orally in divided doses. The tannate is also given orally and the base has been given rectally.

The symbol ⊗ denotes a substance whose use may be restricted in certain sports (see p.vii)