- 2. Barceloux DG, et al. American Academy of Clinical Toxicology practice guidelines on the treatment of ethylene glycol poisoning. Clin Toxicol 1999; 37: 537-60.
- 3. Brent J, et al. Fomepizole for the treatment of ethylene glycol poisoning. N Engl J Med 1999; **340:** 832–8.
- 4. Borron SW, et al. Fomepizole in treatment of uncomplicated ethylene glycol poisoning. Lancet 1999; 354: 831.
- Baum CR, et al. Fomepizole treatment of ethylene glycol poisoning in an infant. Pediatrics 2000; 106: 1489–91.
- Brent J. Current management of ethylene glycol poisoning. Drugs 2001; 61: 979–88.
- 7. Battistella M. Fomepizole as an antidote for ethylene glycol poisoning. Ann Pharmacother 2002; 36: 1085-9.

Pharmacokinetics

Ethylene glycol is absorbed from the gastrointestinal tract and is metabolised, chiefly in the liver, by alcohol dehydrogenase. Its breakdown products account for its toxicity and include aldehydes, glycolate, lactate, and oxalate.

♦ References.

Sivilotti ML, et al. Toxicokinetics of ethylene glycol during fo-mepizole therapy: implications for management. Ann Emerg Med 2000; 36: 114–25.

Uses

Ethylene glycol is commonly encountered in antifreeze solutions and has been used illicitly to sweeten some wines. Diethylene glycol has been used similarly.

Ethylenediamine

Edamine (USAN, pINN); Edamina; Édamine; Edaminum; Ethylendiamin; Ethylendiaminum; Éthylènediamine; Ethylenediaminum; Etilén-diamin; Etilendiaminas; Étyleenidiamiini; Etylendiamin; Etylenodiamina.

Эламин

 $C_2H_8N_2 = 60.10.$

CAS — 107-15-3 (anhydrous ethylenediamine); 6780-13-8 (ethylenediamine monohydrate).

$$H_2N$$
 $NH_2 \cdot H_2O$

(ethylenediamine hydrate)

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

Ph. Eur. 6.2 (Ethylenediamine). A clear, colourless or slightly yellow, hygroscopic liquid. On exposure to air, white fumes are evolved. On heating it evaporates completely. Miscible with water and with alcohol. Store in airtight containers. Protect from

USP 31 (Ethylenediamine). A clear, colourless or only slightly yellow liquid having an ammonia-like odour. It is strongly alkaline and may readily absorb carbon dioxide from the air to form a non-volatile carbonate. Miscible with water and with alcohol. Store in well-filled, airtight, glass containers.

Adverse Effects

Ethylenediamine is irritant to the skin and to mucous membranes. Severe exfoliative dermatitis has been reported after systemic use of preparations containing ethylenediamine. Hypersensitivity reactions are common. Concentrated solutions cause skin burns. Headache, dizziness, shortness of breath, nausea, and vomiting have also been reported after exposure to fumes. Ethylenediamine splashed onto the skin or eyes should be removed by flooding with water for a prolonged period.

Hypersensitivity. A review of allergy to ethylenediamine and aminophylline.1

1. Anonymous. Allergy to aminophylline. Lancet 1984; ii: 1192–3.

Skin reactions may occur in patients given aminophylline after they have become sensitised to ethylenediamine. Cross-sensitivity with edetic acid and with some antihistamines has been reported.

Cross-sensitivity. It was reported that some topical corticosteroid creams, including Tri-Adcortyl in the UK,1 and Kenacomb, Halcicomb, and Viaderm in Canada, contained ethylenediamine and could cause unexpected cross-sensitivity reactions with piperazine1 or aminophylline.

- 1. Wright S, Harman RRM. Ethylenediamine and piperazine sensitivity. BMJ 1983; 287: 463-4.
- Hogan DJ. Excipients in topical corticosteroid preparations in Canada. Can Med Assoc J 1989; 141: 1032.

Uses and Administration

Ethylenediamine or ethylenediamine hydrate forms a stable mixture with theophylline to produce aminophylline or aminophylline hydrate. Ethylenediamine is widely used in the chemical and pharmaceutical industries and as an ingredient of some topical creams.

Etiproston Trometamol (rINNM)

Etiprostón trometamol; Etiproston Tromethamine; Étiprostone Trométamol; Etiprostonum Trometamolum. Trometamol salt of (Z)-7-[(IR,2R,3R,5S)-3,5-dihydroxy-2-[(E)-2-[2-(phenoxymethyl)-1,3-dioxolan-2-yl]vinyl]cyclopentyl]-5-heptenoic acid.

Этипростон Трометамол

 $C_{24}H_{32}O_{7}, C_{4}H_{11}NO_{3} = 553.6.$ CAS — 59619-81-7 (etiproston).

Profile

Etiproston trometamol is a synthetic analogue of dinoprost (prostaglandin F2). It is used as a luteolytic in veterinary medicine.

(etibroston)

Eucalyptus Leaf

Blahovičníkový list; Eucalypti folium; Eucalyptus, feuille d'; Eucalyptusblätter; Eukaliptų lapai; Eukaliptuszlevél; Eukalyptuksenlehti; Eukalyptusblad.

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

Ph. Eur. (Eucalyptus Leaf). It consists of the whole or cut dried leaves of older branches of Eucalyptus globulus. The whole drug contains not less than 2% v/w of essential oil and the cut drug not less than 1.5% v/w of essential oil, both calculated with reference to the anhydrous drug. It has an aromatic odour of cineole. Protect from light.

Eucalyptus leaf has been used in oral preparations for coughs and associated respiratory-tract disorders. It is also used as a flavour. It is a source of eucalyptus oil (see below).

Preparations

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: Arg.: Pre Calent; Austria: Euka; Braz.: Broncol; Tussifen†: Canad.: Beech Nut Cough Drops†; Chile: Codetol PM; Paltomiel; Paltomiel Plus; Pulmosina; Fr.: Balsofumine; Balsofumine Mentholee; Ger.: Em-medical†; Hevertopect N†; Israel: Ginglain; Ital.; Altus; Fosoguaiacol; NZ: Otrivine Menthol; Rus.: Insti (Инсти); S.Afr.: Bolus Eucalypti Comp. Spain: Bronpul†; Diabesor†; Llantusil†; Natusor Broncopul†; Natusor Gripotul†; Pastillas Antisep Garg M; Vapores Pyt; **UK:** Calrub; Collins Elixir Decongesant Pasilles; No-Sor Nose Balm; PainEaze; Revitonil; Sinose; Sudarub; Venez.: Gamasol†; Mixagel†.

Eucalyptus Oil

Blahovičníková silice; Esencia de Eucalipto; Essence d'Eucalyptus Rectifiée; Eucalipto, aceite esencial de; Eucalypti aetheroleum; Eucalvoti Etheroleum: Eucalvotus, huile essentielle d': Eukaliptų eterinis aliejus; Eukaliptuszolaj; Eukalyptusolja; Eukalyptusöljy; Ökaliptüs Yağı; Olejek eukaliptusowy; Oleum Eucalypti.

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

Ph. Eur. 6.2 (Eucalyptus Oil). A colourless or pale yellow liquid with a characteristic aromatic camphoraceous odour and a pungent camphoraceous taste. It is obtained by steam distillation and rectification from the fresh leaves or terminal branches of various species of Eucalyptus rich in cineole. The species mainly used are E. globulus, E. polybractea, and E. smithii. It contains not less than 70% w/w of cineole. Relative density 0.906 to 0.927. Soluble 1 in 5 of alcohol (70%). Store in well-filled airtight containers at a temperature not exceeding 25°. Protect from

Adverse Effects and Precautions

The symptoms of poisoning with eucalyptus oil include gastrointestinal symptoms such as epigastric burning, nausea and vomiting, and CNS depression, including coma. Cyanosis, ataxia, miosis, pulmonary damage, delirium, and convulsions may occur. Deaths have been reported.

Oily solutions of eucalyptus oil were formerly used in nasal preparations, but this use is now considered unsuitable as the vehicle inhibits ciliary movements and may cause lipoid pneumonia.

- Patel S, Wiggins J. Eucalyptus oil poisoning. Arch Dis Child 1980; 55: 405.
- 2. Spoerke DG, et al. Eucalyptus oil: 14 cases of exposure. Vet Hum Toxicol 1989; 31: 166-8

- 3. Webb NJA, Pitt WR. Eucalyptus oil poisoning in childhood: 41 cases in south-east Queensland. *J Paediatr Child Health* 1993; **29:** 368–71.
- 4. Tibballs J. Clinical effects and management of eucalyptus oil ingestion in infants and young children. *Med J Aust* 1995; **163**: 177–80.
- 5. Anpalahan M, Le Couteur DG. Deliberate self-poisoning with eucalyptus oil in an elderly woman. *Aust NZJ Med* 1998; **28**: 58.
- 6. Darben T, et al. Topical eucalyptus oil poisoning. Australas J Dermatol 1998; 39: 265-7

Uses and Administration

Eucalyptus oil has been taken orally for catarrh and coughs and is an ingredient of many preparations. It has been used as an in-halation often in combination with other volatile substances. Eucalyptus oil has also been applied as a rubefacient and is used as a flavour. It is also used in aromatherapy.

Preparations

Proprietary Preparations (details are given in Part 3)

Austral: Rosisto's Euclaphus Spray; Ger.: Aspecton Eulaps; Broncho-Truw Erkaltungsbalsam; Eucotol†; Exeu; Gelodurat†; Pinimenthol Erkal-tungsbal für Kinder; Pinimenthol Erkaltungskapseln†; Pulmotin Inhalat; Schnupfen Kapseln; Tussidermil N; Pol.: Migrenol; Port.: Vicks Vaporub; Switz.: Nicobrevin N+.

Multi-ingredient: numerous preparations are listed in Part 3.

Eugenol

4-Allylguaiacol; Eugen.; Eugenic Acid; Eugénol; Eugenoli; Eugenolis; Eugenolum. 4-Allyl-2-methoxyphenol. $C_{10}H_{12}O_2 = 164.2.$ CAS — 97-53-0.

Pharmacopoeias. In Eur. (see p.vii), US, and Viet.

 $\textbf{Ph. Eur. 6.2} \ (\textbf{Eugenol}). \ A \ colourless \ or \ pale \ yellow \ liquid \ with$ a strong odour of clove. Practically insoluble in water and in glycerol; freely soluble in alcohol (70%); miscible with alcohol, with glacial acetic acid, with dichloromethane, and with fatty oils. Eugenol darkens in colour on exposure to air. Store in wellfilled containers. Protect from light.

USP 31 (Eugenol). It is obtained from clove oil or from other sources. A colourless or pale yellow liquid having a strongly aromatic odour of clove. Upon exposure to air, it darkens and thickens. Slightly soluble in water; miscible with alcohol, with chloroform, with ether, and with fixed oils. Store in airtight containers. Protect from light.

Profile

Eugenol is a constituent of clove oil (p.2285) and some other essential oils. It is used in dentistry, often mixed with zinc oxide, as a temporary anodyne dental filling, and is an ingredient in oral hygiene preparations. Eugenol has been used as a flavour.

Eugenol is an irritant and sensitiser and can produce local anaesthesia. It is reported to inhibit prostaglandin synthesis.

For the pulmonary effects of eugenol inhalation from clove cigarettes, see Abuse, under Clove, p.2284.

♦ References.

1. Sarrami N, et al. Adverse reactions associated with the use of eugenol in dentistry. Br Dent J 2002; 193: 257-9.

Preparations

Proprietary Preparations (details are given in Part 3) Chile: Analgesico Dental; USA: Red Cross Toothache

Multi-ingredient: Arg.: Sicadentol Plus†; Austria: Ledermix; Belg.: Dentophar; Olbas; Braz.: Passaja†; Relampago†; Um Instante†; Chile: Astrijesan; Listermint Con Fluor; Cz.: Alvogyl; Parodontal F5†; Denm.: Ledermix†; Fr.: Alodont; Pectoderme†; Ger.: Ledermix† Gr.: Counterpain; Hong Kong: Begesic, Counterpain; Flanil; Indon.: Counterpain; Counterpain-PXM; Lafalos; Molakrim; Nufasic; Painkila; Remakrim; Stop X; Zeropain; pain-PXM; Lafalos; Molakrim; Nufasic; Painklia; Remakrim; Stop X; Zeropain; Israel: Dentin; Ital: Cresosto Composto; Eugenol-Guaiacolo Composto; Odongi; Odontalgiche (Dentali)†; Malaysia: Flanil; Phillipp.: Begesic; Counterpain; S.Afr.: Counterpain; Singapore: Antipain; Begesic Counterpain; Flanil; Spadin: Alvogi; Porlis; Tangenol†; Tifelf!; Switz.: Aldoont†; Alvogy!; Benzocaine PD; Ledermix; Thal.: Begesic†; Centropain; Counterpain; Counterpain; Plus; Filiup; Flanil; Heat Cream; Hot Ize; Masabalm; Muscalax; Neotica†; Nox-Pain; Olympic Balm†; Painza; Reduxpain; Sancago; Stopain; X-Pain; UK; Ledermix; Venez.: Flemicaine.

Euphorbia

Euforbia; Pill-bearing Spurge; Snake Weed.

Pharmacopoeias. Chin. includes monographs for Euphorbia humifusa or E. maculata herb and E. pekinensis root.

Euphorbia, the aerial parts of Euphorbia hirta (E. pilulifera, Chamaesvce hirta) (Euphorbiaceae), has sedative and expectorant properties and is used in the treatment of asthma and other

respiratory-tract disorders. It has also been used for intestinal

Other Euphorbia spp. are used for a variety of disorders. The seeds and latex of E. lathyrus (caper spurge) have been used as a purgative but are too toxic for general use. Many species have been used as arrow poisons.

Preparations

Proprietary Preparations (details are given in Part 3)

India: Thankgod

Multi-ingredient: Austral.: Asa Tones; Euphorbia Complex; Procold†; Sambucus Complex† Belgs: Toularynx; Canads: Sirop Cocillana Codeine; Sirop Cocillana Compose; Hong Kong: Cocillana Christo; Cocillana Compound; Mefedra-N†; UK: Antibron.

Euphrasia

Augentrost; Eufrasia; Euphraise; Eyebright.

Profile

Euphrasia, the aerial parts of various Euphrasia spp. including E. rostkoviana and E. officinalis (Scrophulariaceae), has been used topically for blepharitis, conjunctivitis, and other eye disorders. However, such use is not generally recommended. Euphrasia has also been used for nasal catarrh and sinusitis, and to prevent snor-

Homoeopathy. Euphrasia has been used in homoeopathic medicines under the following names: Euphrasia officinalis; Euphrasia ex planta tota; Euph. of.

Preparations

Proprietary Preparations (details are given in Part 3) **UK:** Snore Calm.

Multi-ingredient: Austral.: Bilberry Plus; Euphrasia Complex; Euphrasia Compound; Eye Health Herbal Plus Formula 4; Lifesystem Herbal Plus Formula 5 Eye Relieft; Sambucus Complex; Gerz: Herba-Vision Augenbad; Ital.: Altacura Ipragocce; Euluox, Iridi; Wallaysia: Eyebright Plus†; Switz.: Collypan; Oculosan; Tendro; UK: Se-Power; Vital Eyes.

Evening Primrose

King's Cureall; Onagre.

Profile

Evening primrose, the aerial parts of Oenothera biennis (Onagraceae) and related species of Oenothera, is reported to have sedative and astringent properties. It has been used in herbal preparations for respiratory and gastrointestinal disorders.

Evening primrose seed is the source of evening primrose oil (below), which is a source of essential fatty acids.

Preparations

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: Ital.: Sclerovis H.

Evening Primrose Oil

Helokkiöljy; Nakvišų aliejus; Nattljusolja; Oenotherae oleum; Olej wiesiołkowy; Olej wiesiołkowy bezpośredniego tłoczenia (virgin evening primrose oil); Onagra, aceite de; Onagre, huile d'; Pupalkový olej.

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

Ph. Eur. 6.2 (Evening Primrose Oil, Refined; Oenotherae Oleum Raffinatum). The fatty oil obtained from the seeds of Oenothera biennis or O. lamarkiana by extraction and/or expression, and then refined. A suitable antoxidant may be added. A clear, light yellow or yellow liquid. Relative density about 0.923. Practically insoluble in water and in alcohol; miscible with petroleum spirit (b.p.: 40° to 60°). Store in well-filled, airtight containers under an inert gas. Protect from light.

Adverse Effects and Precautions

See Gamolenic Acid, p.2308.

Effects on the nervous system. Temporal lobe epilepsy was diagnosed after treatment with evening primrose oil in 3 patients who had previously been diagnosed as schizophrenic. Tonicclonic (grand mal) seizures occurred in 2 additional schizophrenic patients during treatment with evening primrose oil. All of these patients had received or were taking phenothiazine antipsy-

- 1. Vaddadi KS. The use of gamma-linolenic acid and linoleic acid to differentiate between temporal lobe epilepsy and schizophrenia. *Prostaglandins Med* 1981; **6:** 375–9.

 2. Holman CP, Bell AFJ. A trial of evening primrose oil in the treat-
- ment of chronic schizophrenia. *J Orthomol Psychiatry* 1983; **12**: 302–4.

Uses and Administration

Evening primrose oil is a source of linoleic and gamolenic acid which are essential fatty acids of the omega-6 series that act as prostaglandin precursors (see p.2308). Evening primrose oil has been given orally for the symptomatic relief of atopic eczema in usual doses of up to 3 grams twice daily; it is also used topically as a cream for the relief of dry or inflamed skin. Evening primrose oil has also been given orally for mastalgia. Evening primrose oil has been studied in a variety of other disorders including multiple sclerosis, rheumatoid arthritis, and the premenstrual syndrome. Mixtures of essential fatty acids (including EF-4, EF- 12, and EF-27) derived from evening primrose oil and other oils have also been investigated in various disorders, including diabetic neuropathy, restenosis after angioplasty, and skin damage after radiotherapy.

♦ General references.

1. Kleijnen J. Evening primrose oil. BMJ 1994; 309: 824-5.

Eczema. For the use of evening primrose oil as a source of essential fatty acids for the management of eczema, see under Gamolenic Acid. p.2308.

Mastalgia. For the use of evening primrose oil as a source of gamolenic acid for the management of mastalgia, see p.2308.

Menopausal disorders. Although there are anecdotal reports of benefit, a controlled study1 found that evening primrose oil was no more effective than placebo for managing menopausal vasomotor symptoms (p.2077).

1. Chenoy R, et al. Effect of oral gamolenic acid from evening primrose oil on menopausal flushing. BMJ 1994; 308: 501-3.

Multiple sclerosis. For the use of evening primrose oil in the management of multiple sclerosis, see under Gamolenic Acid,

Premenstrual syndrome. For conflicting results from the use of evening primrose oil in premenstrual syndrome see under Gamolenic Acid, p.2308.

Rheumatoid arthritis. For the use of evening primrose oil as a source of gamolenic acid for the management of rheumatoid arthritis, see p.2309.

Preparations

Proprietary Preparations (details are given in Part 3)

Arg.: Efamol†, Austral.: Bioglan Primrose Micelle; Naudicelle†; Canad.: Efamol†; Primanol†, Cz.: Efamast†; Epogam†; Fr.: Bioleine; Bionagre; Bionagro!, Osmonagre, Ger.: Epogam, Gammacur; Linola gamma; Neobonser, Unigamol†, India: Simrose; Irl.: Epogam†; Naudicelle; Malaysia: Primolin†, MZ: Efamol; Philipp.: Eveprim; Pol.: Linoeparol; Oeparol; S.Afr.: Primolin; Switz: Biennol; Efamol; Epogam; UK: Efamol; Evening Gold; Evoprim; Linola Gamma; Venez.: Eve 500.

Multi-ingredient: Austral.: Bioglan Arthri Plus; Bioglan Ginger-Vite Forte; Bioglan Primrose-E; Bioglan Zellulean with Escin; Efalex;† Efamarine;† For Women Multi Plus EPO, Maxepa & EPO;† Medinat PMT-Eze;† Naudicelle Marine;† PMTS Support;† Canad: Efalex;† Glucosamine Joint & Muscle Cream with MSM†; Primanol Borage Oil; Fr.: Bi-Osteo; Bionagrol Plus; Dioptec; GLA; Phytosolaire; Regederm; Hong Kong; Mumomega; Pregacare; Indon: Epocaldi; Malaysia: Prim E; VtaEPA Plus;† Mex.: Rodan; NZ: Efacal;† Efalex; Efamarine; Efamax; Mr Nits; Pol.: Alliogal;† Tran z Olejem Wiesiolkowym;† Port.: Atopic;† S.Afr.: CalmolinADD; Femolin PMS; Singopore: Vita Natal; VtaEPA Plus; UK: Efalex; Efamarine, Efamol PMP; PMT Formula; USA: Eucerin Itch-Relief.

Febuprol (rINN)

Fébuprol; Febuprolum. I-Butoxy-3-phenoxy-2-propa-

Фебупрол

 $C_{13}H_{20}O_3 = 224.3.$ CAS = 3102-00-9

Profile

Febuprol is a choleretic used in the treatment of biliary-tract disorders in an oral dose of 100 mg three times daily.

Preparations

Proprietary Preparations (details are given in Part 3)

Ger.: Valbil: Port.: Valbil

Felypressin (BAN, USAN, HNN)

Felipresina; Felipresinas; Felipressin; Felypresin; Felypressiini; Félypressine; Felypressinum; Phelypressine; PLV2. [2-Phenylalanine,8lysine]vasopressin; Cys-Phe-Phe-Gln-Asn-Cys-Pro-Lys-Gly-NH2.

Фелипрессин

 $C_{46}H_{65}N_{13}O_{11}S_2 = 1040.2.$ CAS — 56-59-7.

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

Ph. Eur. 6.2 (Felypressin). A synthetic nonapeptide available as an acetate. A white or almost white powder or flakes. Freely soluble in water; practically insoluble in alcohol and in acetone. It dissolves in dilute solutions of alkali hydroxides. Store in airtight containers at a temperature of 2° to 8°. Protect from light.

Profile

Felypressin is a synthetic analogue of vasopressin (p.2411) with similar actions. Its antidiuretic effects are less than those of vasopressin. It is used as a vasoconstrictor in local anaesthetic injections for dental use when sympathomimetics should be avoided. It is also an ingredient of preparations that have been used in the treatment of pain and inflammation of the mouth.

Preparations

Proprietary Preparations (details are given in Part 3)

Used as an adjunct in: Austral.: Citanest Dental; Braz.: Citanest; Citocaina; Denm.: Citanest Octapressin; Fin.: Citanest Octapressin; Ger.: Xylonest; Ital:: Citanest con Octapressin; Mex.: Citanest Octapressin; Pristesin F; Neth.: Citanest Octapressin; Norw.: Citanest Octapressin; Pristesin F; Weth.: Citanest Octapressin; Norw.: Citanest Octapressin; Spain: Citanest Octapressin; Swed.: Citanest Octapressin; Vir.: Cita

Fenchone

Fenchon. 1,3,3-Trimethylbicyclo[2.2.1]heptan-2-one.

Фенхон

 $C_{10}H_{16}O; = 152.2.$ CAS — 4695-62-9 ((+)-fenchone); 7787-20-4 ((-)-fenchone) chone); 1195-79-5 ((±)-fenchone).

Profile

Fenchone is a constituent of several essential oils. It has been used in preparations in the treatment of biliary and urinary-tract disorders. It is reported to have counter-irritant properties. Fenchone is also used as a flavour and in perfumery.

Preparations

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: Austria: Rowatinex, Chile: Rowatinex, Cz.: Rowatinex, Ger.: Rowatinex, Hong Kong: Neo-Rowatinex, Rowatinex; Hug.: Rowatinex, Irl.: Rowatinex, Israel: Rowatinex, Malaysia: Rowatinex, Philipp.: Rowatinex, Pol.: Rowatinex, Spain: Rowanefrin; Thai: Rowatinex, Venez.: Rowatinex, Pol.: Rowatinex, Spain: Rowanefrin; Thai: Rowatinex, Venez.: Rowatinex.

Fencibutirol (USAN, rINN)

Fencibutirolum; Mg-4833. 2-(I-Hydroxy-4-phenylcyclohexyl)butyric acid.

Фенцибутирол

 $C_{16}H_{22}O_3 = 262.3$ CAS - 5977-10-6

Profile

Fencibutirol is a choleretic that has been used in the treatment of constipation and biliary-tract disorders.