Other salts of laurilsulfate have been used for their surfactant properties. These include monoethanolamine, diolamine, and trolamine laurilsulfates, and magnesium and ammonium laurilsulfates. Similar surfactants include sodium lauril ether sulfate and sodium alkyl sulfoacetates such as sodium lauril sulfoacetate.

Sodium laurilsulfate and related surfactants are also included in some combination preparations used rectally for the management of constipation.

Preparations

BP 2008: Emulsifying Wax.

Proprietary Preparations (details are given in Part 3)

Arg.: Euroclear; Limectant; ***Chile:*** Solucion Detergente; ***Fr.:*** Gyalmet†; Saforelle; ***Hong Kong:*** Lowila Cake; ***Mex.:*** Aquanil; ***Spain:*** Anticerumen.

Multi-ingredient: ***Arg.:*** Caien; Micronema; Nigalax; Plus & Plus; ***Austral.:*** Fleet Micro-Enema; Microlax; Pinetarsol; ***Austria:*** Microklist; ***Belg.:*** Microlax; Neo-Sabenyl; ***Canad.:*** Microlax; Plax; ***Cz.:*** Dermofug; ***Denm.:*** Microlax; ***Fin.:*** Microlax; ***Fr.:*** Bactident; Microlax; Ysol 206; ***Ger.:*** Dermowas; Microklist; ***Gr.:*** Sabenyl†; ***Hong Kong:*** Fleet Micro-Enema†; Microlax; ***Indon.:*** Laxarec; Microlax; ***Irl.:*** Micolette; Microlax; ***Israel:*** Microlet; ***Ital.:*** Eso Zim; Novilax; ***Malaysia:*** Dentinox Cradle Cap; Lorasil Feminine Hygeine†; Microlax†; ***Mex.:*** Microlax; ***Neth.:*** Casen Mikroklysma; Microlax; ***Norw.:*** Microlax; ***NZ:*** Fleet Micro-Enema†; Microlax; ***Pol.:*** Rektiolax; ***Port.:*** Fleet Micro-Enema; Microlax; ***Rus.:*** Microlax (Микролакс); ***S.Afr.:*** Medigel; Microlax†; ***Singapore:*** Dentinox Cradle Cap; Microlax; ***Spain:*** Clisteran; Micralax; ***Swed.:*** Fleet Micro†; Microlax; ***Switz.:*** Microklist; ***UK:*** Dentinox Cradle Cap; Micolette; Micralax; Relaxit; ***USA:*** Bodi Kleen; Cetaklenz; Geri-Lav Free; Klout; Maxilube; Summers Eve Post-Menstrual; Trichotine; Trimo-San; ***Venez.:*** Novafix; Vitar†.

Sodium Oleate

Oleato de sodio.

Олеиновокислый Натрий

CAS — 143-19-1.

Profile
Sodium oleate is an anionic surfactant used as an ingredient in preparations for the symptomatic relief of haemorrhoids and pruritus ani.

Zinc oleate and potassium oleate have also been used in skin preparations, while the sodium, potassium, and calcium salts have had applications as food additives.

Preparations

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: ***Belg.:*** Cose-Anal; ***Ger.:*** Alcos-Anal†; Neo-Ballistol†; ***Neth.:*** Epianal; ***Norw.:*** Alcos-Anal; ***Swed.:*** Alcos-Anal.

Sodium Stearate

Estearato de sodio; Natrii stearas; Natrio stearatas; Natriumstearaatti; Natriumstearat; Sodium, stéarate de; Sodu stearynian; Stearan sodný.

Стеарат Натрия

CAS — 408-35-5 (sodium palmitate); 822-16-2 (sodium stearate).

Pharmacopoeias. In *Eur.* (see p.vii). Also in *USNF.*
Ph. Eur. 6.2 (Sodium Stearate). A mixture of sodium salts of different fatty acids consisting mainly of stearic acid ($C_{18}H_{35}O_2Na$ = 306.5) and palmitic acid ($C_{16}H_{31}O_2Na$ = 278.4). It contains 7.4 to 8.5% of sodium, calculated with reference to the dried substance. The fatty acid fraction contains not less than 40% of stearic acid and the sum of stearic acid and palmitic acid is not less than 90%. A white or yellowish, fine powder, with a greasy touch. Slightly soluble in water and in alcohol. Store in airtight containers. Protect from light.
USNF 26 (Sodium Stearate). A mixture containing not less than 90% of sodium stearate ($C_{18}H_{35}NaO_2$ = 306.5) and sodium palmitate ($C_{16}H_{31}NaO_2$ = 278.4); the content of sodium stearate is not less than 40% of the total. It contains small amounts of the sodium salts of other fatty acids. A fine, white powder, soapy to the touch, usually with a slight tallow-like odour. Slowly soluble in cold water and in cold alcohol; readily soluble in hot water and in hot alcohol. Protect from light.

Profile
Sodium stearate is an emulsifying and stiffening agent used in a variety of topical and rectal preparations.

Sodium Stearyl Fumarate

Fumarato de estearilo y sodio; Natrii stearylis fumaras; Natrio stearilfumaratas; Natriumstearylfumarat; Natrium-stearyl-fumarát; Natriumstearylifumaraatti; Nátrium-sztearil-fumarát; Stéaryle (fumarate de) sodique.

Натрия Стеарилфумарат

$C_{22}H_{39}NaO_4$ = 390.5.
CAS — 4070-80-8.

Pharmacopoeias. In *Eur.* (see p.vii). Also in *USNF.*
Ph. Eur. 6.2 (Sodium Stearyl Fumarate). A fine, white or almost white powder with agglomerates of flat, circular shaped particles. Practically insoluble in water, in alcohol, and in acetone; slightly soluble in methyl alcohol.
USNF 26 (Sodium Stearyl Fumarate). A fine white powder. Practically insoluble in water; slightly soluble in methyl alcohol.

Profile
Sodium stearyl fumarate is used as a lubricant in the manufacture of tablets and capsules.

Sodium Tetradecyl Sulfate *(rINN)*

Natrii Tetradecylis Sulfas; Natriumtetradecylsulfat; Natriumtetradekyylisulfaatti; Sodium Tetradecyl Sulphate; Tetradecilsulfato de sodio; Tétradécyl Sulfate de Sodium. Sodium 4-ethyl-1-isobutyloctyl sulfate.

Натрия Тетрадецил Сульфат

$C_{14}H_{29}NaO_4S$ = 316.4.
CAS — 139-88-8.
ATC — C05BB04.
ATC Vet — QC05BB04.

Pharmacopoeias. *Br.* includes as a concentrated form.
BP 2008 (Sodium Tetradecyl Sulphate Concentrate). A clear, colourless gel. Store at a temperature not exceeding 25°. Protect from light.

Adverse Effects and Precautions
The complications of injection sclerotherapy with sclerosants such as sodium tetradecyl sulfate are discussed under Monoethanolamine Oleate, p.2346.

Uses and Administration
Sodium tetradecyl sulfate is an anionic surfactant. It has sclerosing properties and is used in the treatment of varicose veins (p.2347). It has also been given in the management of bleeding oesophageal varices (p.2346), and tried in endoscopic injection therapy for nonvariceal bleeding associated with peptic ulcer disease (p.1702).

For sclerotherapy of varicose veins a solution of sodium tetradecyl sulfate is injected slowly into the lumen of an isolated segment of an emptied superficial vein, followed by compression. Solutions are available in a variety of strengths (0.2 to 3%); doses depend on the site and condition being treated. A test dose is advisable in patients with a history of allergy. Facilities for treating anaphylaxis should be available.

Preparations

BP 2008: Sodium Tetradecyl Sulphate Injection.

Proprietary Preparations (details are given in Part 3)

Arg.: Fibro-Vein; ***Austral.:*** Fibro-Vein†; ***Canad.:*** Tromboject; Trombovar†; ***Cz.:*** Fibro-Vein†; ***Fr.:*** Trombovar; ***Hung.:*** Fibro-Vein; ***Irl.:*** Fibro-Vein; ***Ital.:*** Fibro-Vein; Trombovar; ***Malaysia:*** Trombovar†; ***Neth.:*** Trombovar; ***NZ:*** Fibro-Vein; ***Rus.:*** Trombovar (Тромбовар); ***S.Afr.:*** Fibrovein; STD; ***UK:*** Fibro-Vein; ***USA:*** Sotradecol.

Soft Soap

Green Soap; Jabón blando; Jabón de potasa; Jabón verde; Medicinal Soft Soap; Mydło potasowe; Potassium Soap; Sabão Mole; Sapo Mollis.

Зелёное Мыло; Калиевое Мыло

Pharmacopoeias. In *Br., Chin.,* and *US.*
BP 2008 (Soft Soap). It is made by the interaction of potassium hydroxide or sodium hydroxide with a suitable vegetable oil or oils or their fatty acids. It may be coloured with chlorophyll or not more than 0.015% of a suitable green soap dye. A yellowish-white to green or brown, unctuous substance. Soluble in water and in alcohol.
USP 31 (Green Soap). It is made by the saponification of suitable vegetable oils, excluding coconut oil and palm kernel oil, without the removal of glycerol. The method given in the USP 31 involves mixing the oil with oleic acid and to the heated mixture adding potassium hydroxide dissolved in glycerol and water. The homogeneous emulsion is then adjusted to weight with hot water. A yellowish-white to brownish- or greenish-yellow, transparent to translucent, soft unctuous mass with a slight, characteristic odour.

Adverse Effects and Treatment
Soaps and anionic detergents, in general, may be irritant to the skin by removing natural oils and may produce redness, soreness, cracking and scaling, and papular dermatitis. There may be some irritation of the mucous membranes and this limits the use of soap enemas; marked irritation may occur if soaps or detergents enter the eye. Ingestion of anionic detergents may cause gastrointestinal irritation with nausea, diarrhoea, intestinal distension, and occasionally vomiting. Treatment is symptomatic.

Uses
Soft soap is used to remove incrustations in chronic scaly skin diseases such as psoriasis (p.1583) and to cleanse the scalp before the application of lotions. A solution of soft soap in warm water has been used as an enema to soften impacted faeces but should be avoided as it may inflame the colonic mucosa; other measures are now preferred (see Constipation, p.1693). Alcoholic solutions of soft soap, such as Soap Spirit (BP 2008) and Green Soap Tincture (USP 31), are used as skin cleansers and detergents.

Potash soap (linseed oil soap) has been used in the preparation of liquid soaps. Hard soap (castile soap) and curd soap were formerly used as pill excipients and hard soap was also formerly used in the preparation of plasters.

Preparations

BP 2008: Soap Spirit;
USP 31: Green Soap; Green Soap Tincture.

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: ***Austria:*** Waldheim Abfuhrdragees forte; Waldheim Abfuhrdragees mild; ***Spain:*** Linimento Naion; ***USA:*** Therevac Plus; Therevac SB.

Sulfated Castor Oil

Aceite de ricino sulfatado; Ol. Ricin. Sulphat.; Oleum Ricini Sulphatum; Red Oil; Sulfonated Castor Oil; Sulphated Castor Oil; Turkey-red Oil.

Ализариновое Масло; Сульфированное Касторовое Масло

CAS — 8002-33-3.

Profile
Sulfated castor oil is a detergent and wetting agent derived from castor oil (p.2278); it has been used as a skin cleanser and emulsifying agent. Sodium ricinoleate has been used similarly.

Sulfated hydrogenated castor oil (hydroxystearin sulfate) has been used in the manufacture of hydrophilic ointment bases and other emulsions.

Zinc Stearate

Cinko stearatas; Cink-sztearát; Cynku stearynian; Estearato de zinc; Sinkkistearaatti; Stearan zinečnatý; Zinc, stéarate de; Zinci stearas; Zinkstearat.

Стеарат Цинка

CAS — 4991-47-3 (zinc palmitate); 557-05-1 (zinc stearate).

Pharmacopoeias. In *Eur.* (see p.vii) and *US.*
Ph. Eur. 6.2 (Zinc Stearate). Zinc stearate [$(C_{17}H_{35}CO_2)_2Zn$ = 632.3] may contain varying proportions of zinc palmitate [$(C_{15}H_{31}CO_2)_2Zn$ = 576.2] and zinc oleate [$(C_{17}H_{33}CO_2)_2Zn$ = 628.3]. A light, white or almost white, amorphous powder, free from gritty particles. Practically insoluble in water and in dehydrated alcohol.
USP 31 (Zinc Stearate). A compound of zinc with a mixture of solid organic acids obtained from fats and consisting mainly of variable proportions of zinc stearate [$(C_{17}H_{35}CO_2)_2Zn$ = 632.3] and zinc palmitate [$(C_{15}H_{31}CO_2)_2Zn$ = 576.2]. A fine, white, bulky powder, free from grittiness, with a faint characteristic odour. Insoluble in water, in alcohol, and in ether.

Adverse Effects
Zinc stearate inhalation has caused fatal pneumonitis, particularly in infants.

Uses
Zinc stearate is added to granules as a lubricant in the manufacture of tablets and capsules.

Zinc stearate has also been used as a soothing and protective application in the treatment of skin inflammation. It may be used either alone or with other powders or in the form of a cream.

Preparations

USP 31: Compound Clioquinol Topical Powder.

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: ***Arg.:*** Prurisedan; ***Ital.:*** Steril Zeta; ***Switz.:*** Hydrocortisone compositum; ***Thai.:*** Banocin; ***UK:*** Simpsons.