Not Official.

GARGARISMA MYRRHÆ.-Tincture of Myrrh, 1; Honey, 1; Infusion of Roses, 18: mix.

TINCTURE OF MYRRH AND BORAX. - See Borax.

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Not Official.

NAPHTHALINUM.

NAPHTHALENE.

C10Hs, eq. 127·10.

Purified Naphthalene occurs in white micaceous scales, with a characteristic odour, melting at 98° C.

Solubility.—Insoluble in Water; soluble 1 in 25 of Alcohol (90 p.c.); I in 14 of Chloroform; 1 in 3 of Ether; 1 in 71 of Oil of Turpentine; 1 in 8 of Olive Oil; slightly soluble in Glycerin.

Medicinal Properties.—Intestinal antiseptic and parasiticide. Employed locally with success in scabies as a 10 or 20 p.c. solution in oil. In other skin diseases, especially those in which large surfaces are exposed, it is to be avoided. -L. '82, ii. 909.

In catarrhal conditions of the intestines, also in vesical catarrh. Adult dose, 60 to 75 grains daily.—A.J.P., '84, 645; L. '85, ii. 404.

In gastric fermentation.—M.A. '95, 68.

As an antiseptic for wounds.—L. '85, ii. 821; B.M.J., '86, i. 217.

In dysentery, 7 or 8 grains to 1 fl. oz. of water for an enema.—L. '88, i. 1327; T.G. '85, 412.

In typhoid fever.—T.G. '85, 676; L. '89, ii. 659, 720.

In doses of 23 grains per diem.—L. '86, ii. 745.

In single doses of 15 grains, or daily doses of 75 grains.—T. G. '85, 243.

Usual dose 2 to 5 grains every four or six hours. Larger doses may be given, but are apt to upset digestion.—M.A. '95, 69.

Foreign Pharmacopœias.-Official in Austr., Dutch, Ger., Ital., Mex., Russ., Swiss and U.S.: not in the others.

Test.—Should dissolve colourless in warm concentrated Sulphuric Acid if quite pure, but a decided pinkish tint is observed if the sample contains 1 p.c. of impurity, and the coloration becomes deeper pink, or even brown, the greater the proportions of foreign matter present.—Allen.

Preparations.

NAPHTHALINUM PRÆCIP.—A fine powder, obtained by dissolving the crystals in hot Alcohol and pouring into a quantity of cold Water. Recommended as less irritating than the powdered crystals.

PULVIS NAPHTHALINI (Rossbach).—Purified Naphthalene, 75 grains; Sagar, 75 grains; Oil of Bergamot, & minim; divide into twenty powders. In vesical catarrh. -L. '85, i. 360.

NAPHTHOL.

BETA-NAPHTHOL. [NEW.]

C10H7, OH, eq. 142.98.

Beta-naphthol, or Beta-mono-hydroxy-naphthalene is usually prepared from Naphthalene-sulphonic Acid.

There are two isomeric Naphthols, α and β , bearing the same relation to Naphthalene as Phenol does to Benzol. When no prefix is attached to the name, Beta-Naphthol should be used. The name is also written Naphtol.

Solubility.—Nearly insoluble in Water; soluble 1 in 2 of Alcohol (90 p.c.); 3 in 4 of Ether; 1 in 24 of Chloroform; 1 in 12 of Olive Oil; 1 in 40 of Glycerin.

Aqueous solution of Boric Acid will dissolve comparatively small quantities of Naphthol.

Medicinal Properties.—A powerful disinfectant and intestinal antiseptic. Has been given in 5 grain doses for summer diarrhœa in children.

It is very effective in parasitic diseases and in chronic eczema.—M. T. '82, ii. 505. In typhoid fever.—B.M.J. '88, ii. 1226; '92, i. 442; L. '90, i. 1407; T.G. '94, 420. As a vermifuge, 4 grains three times a day.—L. '93, i. 377.

For Scables.—β-Naphthol, 15; Pulv. Cretæ Alb., 10; Sapo virid., 50; Lard, 100. FOR PEDICULI. - B-Naphthol, 5; Olive Oil, 50.

FOR PITTRIASIS VERSICOLOR.—β-Naphthol, 2; Spir. Lavand., 10; Sapo virid., 100.-M.T. '82, ii. 505.

Acute nephritis following the use of a 2 p.c. ointment.—Y.B.T. '95, 379.

Beta-naphthol and Bismuth Subnitrate as intestinal antiseptics.—B.M.J. '95, ii. 1483.

Dose.—3 to 10 grains.

Prescribing Notes.—Given in cachets or pills. A good Pill can be made by adding Glucose q.s. or a small quantity of Compound Powder of Tragacanth and Dispensing Syrup q.s. Also administered dissolved in Oil which is then emulsi-

Not Official.—Asaprol, Benzonaphthol, Betol, Quinaphthol, Unguentum Naphtholi.

Foreign Pharmacopæias.-Official in Austr., Dan., Dutch, Fr., Ger., Hung., Ital., Mex., Norw., Russ., Swiss and U.S.; not in the others.

Sodium-Naphthol (microcidin) readily soluble in Water, Benzonaphthol, and Waphthol Camphor have also been introduced as possessing similar antiseptic properties to Naphthol; A-Oxynaphthoic Acid forms soluble salts with alkalis, which are antiseptics.

Description.—In white or nearly white crystalline laminæ, or in powder. It has a sharp, pungent taste, and an odour resembling Phenol. Very soluble in boiling Alcohol (90 p.c.), Ether, Chloroform, or Solution of Sodium Hydroxide.

Tests.—Melts at 251.6° F. (122° C.). On the addition of 1 drop of Solution of Ammonia to a hot saturated aqueous solution of Betanaphthol a blue fluorescence is developed. A cold saturated aqueous solution gives a white turbidity with Solution of Chlorine, which, on the addition of excess of Solution of Ammonia, gives place to a green or brown coloration. 'I gramme of Beta-naphthol dissolved in 10 c.c. of boiling Water, and treated with 10 drops of a 3 p.c. aqueous solution of Ferric Chloride, gives a white precipitate becoming brown, but not violet (absence of Alpha-naphthol). Beta-naphthol should be neutral to Litmus Paper moistened with Alcohol (90 p.c.), and should leave no residue on heating to redness (absence of mineral impurities).

It is distinguished from its isomer Alpha-Naphthol by its melting point; also a solution made with cold Water or cold Alcohol gives a pale yellow colour with bleaching powder, and a pale green with Test-solution of Ferric Chloride, which are characteristic. Alpha-Naphthol melts at 95° C., gives a dark violet with bleaching powder, and a red with Ferric Chloride.

Detection of traces of Alpha-naphthol.—J.S.C.I. '97, 894; C.D. '97, i. 422.

Not Official.

UNGUENTUM NAPHTHOLI (B.S.H.). Syn. — Karosi's Ointment. — Beta-Naphthol, 60 grains; Prepared Lard, 1 oz.

BETOL.—Salicylate of 3-Naphthol Ester. In tasteless, small white crystals, insoluble in Water, soluble in Alcohol and fixed Oils. Recommended in rheumatism, cystitis and intestinal catarrh.—P.J. (3) xviii. 264.

Dose. -21 to 8 grains as a powder, or in pills with Glucose.

In pencils for gonorrhoea containing 20 p.c. of Betol made with Oil of Theobroma.

ASAPROL (Calcium Beta-naphthol-alpha-monosulfonate).—A white powder soluble in Water. Has been recommended as an antipyretic and analgesic, in sciatica, muscular and chronic rheumatism and in chronic nephritis.—T.G. '93, 182; '94, 252; Pr. liii, 52; M.A. '95, 8; Y.B.T. '94, 462; '95, 159.

Dose.-5 to 15 grains.

BENZONAPHTHOL.—Prepared by the action of Benzoyl Chloride on Betanaphthol. A white odourless tasteless powder, almost insoluble in Water and Ether, soluble in Chloroform; should dissolve with formation of a pale yellow colour in concentrated Sulphuric Acid.

Intestinal antiseptic and disinfectant. Has been found useful in typhoid.— Pr., li. 213.

In tropical dysentery.—L. '95, ii. 169; P.J. '95, ii. 238.

Dose.—5 to 15 grains.

QUINAPHTHOL (Quinine Beta-naphthol-sulphonate).—A yellow crystalline powder, sparingly soluble in Water and in Alcohol.

Recommended as an intestinal antiseptic. Useful in typhoid.—P.J. '97, ii. 83.

Dose. -8 to 10 grains, three or four times a day.

Not Official.

NICKEL.

A metal closely allied to Cobalt, with which it is generally associated in minerals. Commercially it is largely contaminated with Copper, Iron, and sometimes Cobalt. Alloyed with Copper and Zinc, it forms German silver. Easily soluble in mineral acids, forming salts of a characteristic green colour.

NICCOLI BROMIDUM.—Soluble in Water, Alcohol, and Ether. Sedative. Recommended in epilepsy.

Dose.-1 to 5 grains.

In solution, or in pills, with powdered Althea and Extract of Gentian.

SYRUPUS NICCOLI BROMIDI.—Granulated Nickel, 137 grains; Bromine, 377 grains; Water, 12 fl. oz.; digest them in a pint flask at a gentle heat until reaction ceases, filter, add Sugar 24 oz. and sufficient Water to make 32 fl. oz.

Each fluid drachm contains 5 grains of Nickel Bromide, which is an average dose.—A.J.P. '86, 592.

NICCOLI SULPHAS.—Greenish blue crystals, readily soluble in Water.

Dose. $-\frac{1}{2}$ to 1 grain two or three times a day given in chlorosis; is best given on a full stomach, as on an empty one it is apt to produce nausea. In somewhat larger doses it has also been given in locomotor ataxy.

Not Official.

NITROGLYCERIN.

Syn.—Glyceryl Trinitrate. Glonoin. Trinitrin. Trinitroglycerin.

C₃H₅ (NO₃)₃, eq. 225·47.

When pure it is a heavy colourless Oil. Sp. gr. 1.6. Explodes violently on percussion, and under some circumstances spontaneously. It solidifies at 46° F., and is then more dangerous to handle.

A 10 p.c. solution in Alcohol is commercial, and is used in making the Tabella-Solubility.—Very slightly soluble in Water; readily in Alcohol (90 p.c.); mixes with Ether and Chloroform.

Medicinal Properties.—Chiefly given for angina pectoris associated with aortic disease, spasmodic asthma and the dyspaces of acute bronchitis; and in headache, neuralgia or hemicrania if associated with pallor. It reduces arterial tension in chronic Bright's disease and acts as a diuretic and diminishes the albuminuria. Its action is more prolonged and less violent than that of Amyl Nitrite.

In optic atrophy, M.A. '95, 261; in neuralgia and sciatica, M.P., liv. 515; M.A. '95, 37, 445; in uramic dyspnea, 497; in all forms of vomiting, 520, and Pr. li. 140; in arterio-sclerosis, T.G. '93, 736; in warding off, and (hypodermically) during paroxysm of epilepsy, B.M.J.E., '93, ii. 32; in gall-stone colic, L. '96, i. 353.

Dose.—200 to 30 grain, the average dose being 100 grain, generally given as a 1 p.c. solution in Alcohol (90 p.c.).

Prescribing Notes.—The Solution may be given on Sugar or diluted with Water or in the form of Tablets.

The solution is preferable to the tablet.—L. '85, ii. 546; L. '89, i. 1238,

Official Preparations.—Liquor Trinitrini and Tabellæ Trinitrini.

Antidotes.—Ergot, Atropine, Strychnine, cold applications to the head.

Official Proparations.

LIQUOR TRINITRINI. SOLUTION OF TRINITRIN. B.P.Syn.—Solution OF NITROGLYCERIN. (MODIFIED.)

Trinitroglycerin of commerce, 17½ grains; Alcohol (90 p.c.), a sufficient quantity. Dissolve the Trinitroglycerin in sufficient of the Alcohol to produce 4 fl. oz. of the Solution of Trinitrin. =(1 in 100).

Now made with Alcohol (90 p.c.) in place of Rectified Spirit.

110 minims contain 1 grain of Trinitroglycerin; 100 c.c. contain 1 gramme.

Dose.—1 to 2 minims.

In severe cases of angina pectoris or asthma, the dose is sometimes increased.

Description.—A clear and colourless liquid, neutral to test-papers.

Tests.—Sp. gr. 840. A mixture of 10 c.c. with an equal volume of Water, cooled to 60° F. (15.5° C.), remains clear, but the further admixture of 1 c.c. of Water causes opacity (presence of a due amount of Trinitroglycerin). On further diluting with Water and setting the mixture aside, there is deposited a liquid of oily consistence, one drop of which, absorbed by paper and struck with a hammer on a hard surface, explodes.

—(1 in 100).

Foreign Pharmacopœias.—Official in Dutch (Solutio Nitroglycerini), 1 in 100; U.S. (Spiritus Glonoini), 1 in 100; not in the others.

TABELLÆ TRINITRINI. TRINITRIN TABLETS. B.P. Syn.—TABLETS OF NITROGLYCERIN. (MODIFIED.)

Tablets of Chocolate, each weighing 5 grains (324 gramme) and containing one hundredth of a grain (30065 gramme) of the Trinitroglycerin of commerce.

Now weigh 5 grains instead of $2\frac{1}{2}$, but contain the same amount of Trinitroglycerin as formerly.

Dose.-1 or 2 tablets.

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NUX VOMICA.

NUX VOMICA.

The dried ripe seeds of Strychnos Nux-vomica.

Imported from India, Ceylon, and Cochin China.

The chief source of Strychnine and Brucine.

The total alkaloids have been found to vary between 1.25 and 3.9 p.c. (some Ceylon Seeds gave 5.3 p.c.), but the value of total alkaloids as a medicinal standard is considerably reduced by the fact that the ratio of Strychnine to Brucine may vary as much as 3:1, and 1:2.

Medicinal Properties.—In small doses, a general tonic. Useful in paralysis of reflex origin, in peripheral paralysis due to alcohol, lead, tobacco, or to diphtheria; in all chronic paralytic affections, except those in which there is organic lesion of nerve-centres or inflammation of brain or spinal cord. It is recommended in atonic dyspepsia and chronic gastric catarrh, and in debilitated conditions of the alimentary canal. It stimulates peristalsis, and therefore is a frequent and valuable ingredient in medicines for chronic constipation. Generally prescribed in the form of Extract and Tincture.

Dose .- In powder, 1 to 4 grains.

Official Preparations.—Of the seeds, Extractum Nucis Vomicæ Liquidum and Strychnina; of the Liquid Extract, Extractum Nucis Vomicæ and Tinctura Nucis Vomicæ.

Not Official.—Brucine.

Antidotes.—Emetic of Zinc Sulphate, Mustard, or Ipecacuanha, or hypodermic injection of Apomorphine; Animal Charcoal; Potassium Bromide or Chloral; Amyl Nitrite inhalations; Chloroform or Ether to relax the muscles; hypodermic injection of Curare.—Murrell.

Foreign Pharmacopœias.—Official in Austr., Dutch, Ger., Jap., Swiss and Russ., Semen Strychni; Belg., Dan., Fr. (Noix Vomique), Hung., Ital. (Noce Vomica), Mex. and Span. (Nuez Vomica), Norw., Port. (Noz Vomica), Swed. and U.S.

Description. — Nearly disc-shaped, ash-grey, or greenish-grey seeds, three-quarters of an inch to one inch (two to two and a-half centimetres) in diameter, and a quarter of an inch (six millimetres) in thickness. They are concavo-convex, nearly flat, but sometimes irregularly bent, rounded or somewhat acute at the margin, where there is a small prominence from which a raised line passes to the central hilum. The surface is covered with short, satiny, radiately arranged and closely appressed hairs. The endosperm is large and horny, the cotyledons small and leafy. The seeds have an extremely bitter taste. Unbroken, they have no odour.

Preparations.

EXTRACTUM NUCIS VOMICÆ. EXTRACT OF NUX VOMICA. (ALTERED.)

An Extract containing 5 p.c. of Strychnine.

Liquid Extract of Nux Vomica, 11 fl. oz.; Milk Sugar, in fine powder, a sufficient quantity.

Ascertain the proportion of Milk Sugar required for 10 fl. oz. of the

Liquid Extract by the following experiment on 1 fl. oz.

Evaporate 1 fl. oz. of the Liquid Extract of Nux Vomica in a counterpoised dish on a water-bath to a moderately firm extract, and weigh. The difference between the weight of the extract and 131½ grains, multiplied by 10, will give the amount of Milk Sugar required for the remaining 10 fl. oz. of the Liquid Extract of Nux Vomica.

Distil the Alcohol from 10 fl. oz. of the Liquid Extract of Nux Vomica; to the residue add the quantity of Milk Sugar shown to be required by the above experiment; mix; evaporate; to the consistence of a firm

extract, which should weigh 3 oz.

Now made from Liquid Extract evaporated, and Milk Sugar.

Dose .- to 1 grain.

Often prescribed with Aloes and Ipecacuanha.

This Extract has about two-thirds the total alkaloidal strength of the Extract of Nux Vomica of the British Pharmacopoeia of 1885.

Foreign Pharmacopœias.—Official in Austr., Belg., Dan., Dutch, Ger., Hung.; Russ., Swiss and U.S. use 68 to 70 p.c. Alcohol; Fr., Ital., Mex. and Span., 80 p.c.; Norw. and Swed., 65 p.c.; Port., 90 p.c.; Jap., 60 p.c. by weight.

EXTRACTUM NUCIS VOMICÆ LIQUIDUM. LIQUID EXTRACT OF

Nux Vomica. (New.)

A Liquid Extract containing 1½ grains of Strychnine in 110 minims.

Moisten 16 of Nux Vomica, in No. 20 powder, with 8 of Alcohol (70 p.c.); set aside in a covered vessel for six hours; pack firmly in a percolator; pour over the powder sufficient of the menstruum to saturate

it and to leave a stratum above it; when the liquid begins to flow, close the lower orifice; set aside for twenty-four hours; continue slow percolation, adding more menstruum as required, until 12 have been collected; reserve this strong percolate. Change the receiver; continue the percolation until about sixty of the menstruum have been employed, or until the powder is exhausted; press the mare; add the expressed liquid to the weaker percolate; remove the Alcohol by distillation; evaporate the residue to 1; add 3 of Alcohol (90 p.c.). Add this mixture to the reserved portion; set aside for twenty-four hours; pour off the clear liquid; filter the remainder.

Determine the proportion of Strychnine in the resulting strong liquid extract by the following analytical process: - Evaporate 10 c.c. to a thick syrupy consistence on a water-bath; dissolve the residue in 20 c.c. of Water, heating if necessary; place the solution in a separator, and add 5 grammes of Sodium Carbonate dissolved in 25 c.c. of Water, together with 10 c.c. of Chloroform; agitate thoroughly; set aside; separate the clear Chloroformic solution. Twice repeat the agitation with Chloroform, and the separation. Mix 6 c.c. of Diluted Sulphuric Acid with 25 c.c. of Water; divide this into 3 parts, and shake the mixed Chloroformic solutions with each in turn. Dilute the united acid liquids with Water to 175 c.c.; transfer to a stoppered flask, adding 25 c.c. of Solution of Potassium Ferrocyanide; shake well and frequently during half an hour; allow to stand for six hours. Transfer the precipitate to a small filter, rinsing out the last portions with Water containing one-fortieth of its volume of Diluted Sulphuric Acid, and wash until the washings are free from bitterness. Rinse the precipitate into a separator. Add 5 c.c. of Solution of Ammonia, and shake well; then add 15 c.c. of Chloroform in two successive portions, shaking well after each addition; separate the Chloroformic solutions, mix and allow the Chloroform to evaporate in a counterpoised dish in a current of warm air; dry the residue for one hour on a water-bath, covering the dish to avoid loss of Strychnine from decrepitation; weigh.

From this weight calculate the amount of Strychnine in the strong liquid extract, and add to the latter sufficient Alcohol (70 p.c.) to produce a Liquid Extract of Nux Vomica containing 1.5 grammes of Strychnine in 100 c.c., or 1½ grains in 110 minims.

Dose.-1 to 3 minims.

Foreign Pharmacopœias. - Official in Mex. and U.S.; not in the others.

TINCTURA NUCIS VOMICÆ. TINCTURE OF NUX VOMICA. (ALTERED.)

N.O. Syn.—TINCTURA STRYCENI.

Liquid Extract of Nux Vomica, 2; Distilled Water, 3; Alcohol (90 p.c.), a sufficient quantity. Mix the Liquid Extract of Nux Vomica with the Distilled Water; add sufficient of the Alcohol to produce 12 of the Tincture; filter.

Now made with Alcohol (90 p.c.) in place of Rectified Spirit; prepared from the Liquid Extract and standardised.

Dose. -5 to 15 minims.

OLE

This preparation contains about twice the proportion of Strychnine present in the Tincture of Nux Vomica of the British Pharmacopoeia of 1885.

Foreign Pharmacopœias.—Official in Austr., Dan., Ger., Ital., Jap., Norw., Russ., Swed. and Swiss, 1 in 10; Belg., Fr., Hung., Mex., Port. and Span., 1 in 5; prepared from the seeds. Dutch, 1 Extract in 100; U.S., 1 Extract in 50; all by weight except U.S.

Tests.—Treated by the assay process given under 'Extractum Nucis Vomicæ Liquidum,' 100 c.c. should yield not less than '24 nor more than '26 gramme of Strychnine, corresponding to about \(\frac{1}{8} \) grain in 1 fl. drm. or \(\frac{1}{4} \) grain in 110 minims.

STRYCHNINE .- See STRYCHNINA.

Not Official.

BRUCINE (C25H26N2O4.4H2O).—Colourless crystals, containing about 15 p. c. of Water, which quickly effloresce in dry air.

The presence of 5 p. c. of Strychnine in Brucine can be detected by the reaction with Sulphuric Acid and Potassium Bichromate.—P.J. (3) xxiv. 2.

Solubility.—But slightly soluble in Water; 1 in 20 of Alcohol (90 p.c.), 1 in 2 of Chloroform, with separation of the combined Water. Its salts are bitter, and most of them crystallisable. They are distinguished by giving a deep red with strong Nitric Acid, changing to violet on the addition of Stannous Chloride.

It possesses powerful analysesic properties, in 5 p.c. solutions of the Sulphate or Nitrate applied locally.—T.G. '85, 376; '86, 18.

A very sensitive reaction for Brucine is the Nitrite test.—P.J. '96, ii. 378.

OLEA.

OILS.