

Ether removed by evaporation, the residue should not yield a violet coloration when mixed with Test-solution of Ferric Chloride (absence of Salicylic Acid).

For remarks on the above test see *Vinum Aurantii*.

Not Official.

VINUM XERICUM DETANNATUM (*B.P.C.*).—Sherry, 160; Gelatin, cut small, 2; macerate together for fourteen days, and decant.

Not Official.

VINCA MAJOR.

GREATER PERIWINKLE.

An **infusion** made of dried herb 2, boiling Water 20, and strained when cold, is powerfully astringent.

Dose.—A wineglassful drunk as frequently as required will arrest menorrhagia when other remedies have failed.

Foreign Pharmacopœias.—Official in Fr., *Pervenche Grande*; not in the others.

Preparation.

EXTRACTUM VINCE MAJORIS LIQUIDUM.—Made from the expressed juice of the plant of such strength that $1\frac{1}{2}$ fl. drm. are equal to 2 fl. oz. of the infusion.

Dose.—1 to 2 fl. drm. in water.

The Fluid Extract keeps well, and is the best to prescribe.

Not Official.

YERBA SANTA.

The leaves of *Eriodictyon Californicum*.

They contain 30 to 40 p.c. of a gum-resin.

Recommended in acute bronchitis.—*L.M.R.* '82, 47.

Fluid Extract, 1 in 1, made with strong Alcohol; dose, 10 to 60 minims.

Not Official.

ZINCUM.

ZINC.

Zn, eq. 64·91.

Zinc has been transferred to the Appendix of B.P. '98. A bluish-white metal, of peculiar taste and of a perceptible smell when rubbed; laminated, and with a crystalline fracture. Sp. gr. 7·1; fuses at 773° F.

It occurs native, as a Sulphide or as a Carbonate, and is separated from impurities by sublimation.

The Official tests for the presence of Zinc will be found in the Appendix.

Foreign Pharmacopœias.—Official in Ital., Mex., Russ. and U.S.

Incompatibles of Zinc salts are—Alkalis and their Carbonates, Lime Water, astringent vegetable Infusions or Decoctions, and Milk.

Antidotes.—In case of poisoning with the salts of Zinc, Sodium Carbonate or Potassium Carbonate in large quantities dissolved in warm Water, Milk and Eggs freely, Tannic Acid or strong Tea, Laudanum, Linseed Meal Poultices to abdomen.

If there is much pain in the abdomen, an enema of gruel, or starch and water may be given.—*Murrell*.

Official Preparations.—Used to prepare Liquor Zinci Chloridi, Zinci Chloridum, Zinci Oxidum, Zinci Sulphas.

The British Pharmacopœia contains the following salts of Zinc:—

ZINCI ACETAS.
ZINCI CARBONAS.
ZINCI CHLORIDUM.
ZINCI OXIDUM.
ZINCI SULPHAS.
ZINCI SULPHOCARBOLAS.
ZINCI VALERIANAS.

ZINCI ACETAS.

ZINC ACETATE.

$\text{Zn}(\text{C}_2\text{H}_3\text{O}_2)_2, 3\text{H}_2\text{O}$, eq. 235·71.

It is prepared by neutralising Acetic Acid with Zinc Carbonate.

The commercial salt as a rule is slightly basic, and does not give a clear solution in Water without the assistance of a little added Acetic Acid.

Solubility.—10 in 25 of Water; 4 in 1 of boiling Water, 1 in 40 of Alcohol (90 p.c.); 1 in 3 of boiling Alcohol (90 p.c.).

Medicinal Properties.—Astringent. Similar to the Sulphate, chiefly used as a local astringent.

Dose.—1 to 2 grains.

Not Official.—Lotio Zinci Acetatis.

Foreign Pharmacopœias.—Official in Belg., Fr., Ger., Hung., Mex., Port., Russ., Span. and U.S.; not in the others.

Description.—In thin, translucent, and colourless crystalline plates, of a pearly lustre; with a sharp unpleasant taste; soluble in 2·5 parts of Water.

Tests.—It affords the reactions characteristic of Zinc and of Acetates. It should yield no characteristic reaction with the tests for Lead, Copper, Cadmium, Arsenium, Iron, Aluminium, Calcium, Magnesium, Sodium, Potassium, Ammonium, Chlorides or Sulphates.

Not Official.

LOTIO ZINCI ACETATIS.—Zinc Acetate, 2 grains; Water, 1 fl. oz.: mix.

An astringent **collyrium** in ophthalmia, or as an **injection** in gonorrhœa after the acute stage has passed.

Tincture of Opium causes no precipitate with this Lotion.

A lotion very commonly prescribed at one time was that containing Zinc Sulphate and Lead Acetate, which mutually react with formation of soluble Zinc Acetate and insoluble Zinc Sulphate; it has been superseded by the above.

Not Official.

ZINCI BROMIDUM.

A whitish granular powder, very deliquescent.

Solubility.—4 in 1 of Water; 2 in 1 of Alcohol (90 p.c.).**Dose.**—2 grains three times a day for epilepsy.**Foreign Pharmacopœias.**—Official in Mex., Span. and U.S.; not in the others.**ZINCI CARBONAS.**

ZINC CARBONATE.

 $\text{ZnCO}_3(\text{ZnH}_2\text{O}_2)_2, \text{H}_2\text{O}$, eq. 339·68.

Zinc Carbonate or Zinc Hydroxycarbonate, is produced by the interaction of Zinc Sulphate and Sodium Carbonate.

The anhydrous normal Carbonate, ZnCO_3 , occurs native as **Calamine**. The composition of the precipitated hydrated Carbonate varies much according to the conditions under which it is formed.**Official Preparations.**—Used in the preparation of Zinci Acetas, Zinci Oxidum, and Zinci Valerianas.**Foreign Pharmacopœias.**—Official in U.S., Zinci Carbonas Præcipitatus; not in the others.**Description.**—A white, tasteless, inodorous powder, insoluble in Water; entirely soluble in Diluted Nitric Acid.**Tests.**—It affords the reactions characteristic of Zinc and of Carbonates. It should yield no characteristic reaction with the tests for Lead, Copper, Cadmium, Arsenium, Iron, Aluminium, Calcium, Magnesium, Sodium, Potassium, or Ammonium, and only the slightest reactions with the tests for Chlorides or Sulphates.**ZINCI CHLORIDUM.**

ZINC CHLORIDE.

 ZnCl_2 , eq. 135·29.

It is produced by the interaction of Hydrochloric Acid and Zinc.

Solubility.—10 in 4 of Water; 1 in 1 of Alcohol (90 p.c.); freely in Ether; 1 in 4 (nearly) of Glycerin.**Medicinal Properties.**—Astringent, antiseptic and disinfectant. Seldom given internally. Externally, applied as a caustic, in form of **point** or **paste**, to indolent and malignant ulcers and growths, to condylomata, and to nævi. As a **lotion**, 20 grains to 1 fl. oz. of Water, it is an efficient substitute for Carbolic Acid, in syringing out offensive pus cavities, sinuses, foul ulcers, &c.As a paste for packing the cavity of uterus in malignant disease.—*B.M.J.* '95, i. 756.

As an injection (1 grain to 1 fl. oz.) in gonorrhœa.

Official Preparation.—Liquor Zinci Chloridi.

Not Official.—Zinc Chloride Points, Compound Zinc Chloride Points, Lotic Zinci Chloridi, Pasta Zinci Chloridi, Pasta Zinci Chloridi cum Opio, Pulvis Zinci Chloridi Comp.

Antidotes.—In case of poisoning with Zinc Chloride, *see* Zincum, page 645.

Foreign Pharmacopœias.—Official in Austr., Ger., Hung., Jap., Russ. and Swiss, Zincum Chloratum; Belg., Chloruretum Zinci; Dan., Norw. and Swed., Chloretum Zincicum; Fr., Chlorure de Zinc; Ital., Cloruro di Zinco; Mex., Cloruro de Zinc; Port., Chloreto de Zinco; Span., Cloruro Zincico; U.S., Zinci Chloridum; not in Dutch.

Description.—In colourless opaque rods or tablets, very deliquescent and caustic.

Tests.—Almost entirely soluble in Water, Alcohol (90 p.c.), and Ether. It affords the reactions characteristic of Zinc and of Chlorides. It should yield no characteristic reaction with the tests for Lead, Copper, Cadmium, Arsenium, Iron, Aluminium, Calcium, Magnesium, Sodium, Potassium, Ammonium, or Sulphates.

Preparation.

LIQUOR ZINCI CHLORIDI. SOLUTION OF ZINC CHLORIDE.

Granulated Zinc, 16; Hydrochloric Acid, 44; Distilled Water, a sufficient quantity. Mix the Hydrochloric Acid with 20 of Distilled Water in a porcelain dish; add the Zinc; apply gentle heat until gas is no longer evolved; boil for half an hour, supplying the water lost by evaporation; allow the product to cool. Test a few drops of the resulting liquid for Iron and Lead.

If either be present, filter the remainder of the product into a bottle, and add Solution of Chlorine by degrees, with frequent agitation, until the liquid acquires a permanent odour of Chlorine; add Zinc Carbonate in small quantities at a time, with renewed agitation, until a brown sediment appears and the whole of the Iron or Lead is thus precipitated; filter the liquid into a basin, and evaporate to the bulk of 40.

If no Iron or Lead be present, filter the cooled product and evaporate it to 40.

Foreign Pharmacopœias.—Official in U.S., sp. gr. 1.535; not in the others.

Description.—A colourless liquid of astringent and sweetish taste.

Tests.—Sp. gr. 1.530. It should respond to the tests for Zinc and for Chlorides. It should not yield any characteristic reaction with the tests for Lead, Copper, Cadmium, Arsenium, Iron, Aluminium, Calcium, Magnesium, or Sulphates.

When made as above the solution will be basic and precipitate Oxychloride on dilution with Water. It should be evaporated rather lower, then neutralised with Hydrochloric Acid (so that it will cease to precipitate on being diluted with ten volumes of Water, or when this diluted solution just reddens Methyl Orange), and finally made up to 40.

When finished without loss the above quantities will yield a solution sp. gr. about 1.53. For details and an improved formula of **Chlor-Zinc Iodine (Schulze's Solution)** *see* P.J. (3) xxiii. 648.

Not Official.

ZINC CHLORIDE POINTS.—Zinc Chloride fused and run into conical moulds; preserved in glass tubes.

Darts of Zinc Chloride have been used in the treatment of Anthrax.—*B.M.J.* '87, ii. 644.

COMPOUND ZINC CHLORIDE POINTS.—Zinc Chloride, 1; Zinc Oxide, 1; Wheaten Flour, 2; Water to make a stiff paste, which is formed into points.

LOTIO ZINCI CHLORIDI (L.O.H.).—Zinc Chloride, 1 grain; Distilled Water, 1 fl. oz.

PASTA ZINCI CHLORIDI (L.H.).—Zinc Chloride and Flour, equal parts; Glycerin, *q.s.*; rub the Zinc Chloride into a thin paste with Water, then add the Flour; mix well and make into a thick paste with Glycerin.

PASTA ZINCI CHLORIDI CUM OPIO (L.H.).—Zinc Chloride Paste, 1 oz.; Extract of Opium, 20 grains; rub the Extract smooth with a few drops of Water and then mix thoroughly with the Paste.

PULVIS ZINCI CHLORIDI COMP.—Zinc Oxide, mixed with an equal weight of Zinc Chloride, will preserve the latter dry enough to blow through a tube into any cavity required, and may be so kept in a bottle for a long time.

Not Official.

ZINCI NITRAS.

Medicinal Properties.—Used as a caustic in the place of Zinc Chloride, it penetrates deeper and produces less pain.

It can be made into a **paste** in the same way as Zinc Chloride.

ZINCI OXIDUM.

ZINC OXIDE.

ZnO, eq. 80·79.

It may be prepared by exposing Zinc Carbonate to a dull red heat, or from metallic Zinc by combustion.

Medicinal Properties.—Internally as a tonic, especially in chronic nervous spasmodic affections and to check the perspirations of phthisis. Externally, an astringent application in eczema and slight excoriations and ulcerations, in the form of **ointment** or **paste**; absorbent as a **dusting powder** when mixed with Starch.

Dose.—3 to 10 grains.

Prescribing Note.—Generally prescribed in the form of **pills**. A good pill may be made by adding Glucose *q.s.*

Official Preparation.—Unguentum Zinci. Used in the preparation of Zinci Sulphocarbolas.

Not Official.—Dusting Powder, Lassar's Paste, Zinci Oleas (Shoemaker's), Zinc Oxide Plaster Mulls, Zinc and Salicylic Plaster Mulls, and Zinc Gelatin.

Foreign Pharmacopœias.—Official in all; Fr. by the dry as well as the humid process.

Description.—Prepared from the Carbonate it is a soft, nearly

white, tasteless, and inodorous powder, becoming pale yellow when heated; prepared by combustion it is white.

Tests.—It affords the reactions characteristic of Zinc. It should be entirely soluble when rubbed, and, if necessary, warmed, with Solution of Ammonia mixed with Strong Solution of Ammonia (absence of metallic zinc). It should yield no characteristic reaction with the tests for Lead, Copper, Cadmium, Arsenium, Iron, Aluminium, Calcium, Magnesium, Sodium, Potassium, Ammonium, Carbonates, Chlorides, or Sulphates.

It is questionable whether any commercial Zinc Oxide is entirely soluble in Ammonia.

Preparation.

UNGUENTUM ZINCI. ZINC OINTMENT.

Zinc Oxide, finely sifted, 3; Benzoated Lard, 17. Add the Zinc Oxide gradually to the Benzoated Lard, previously melted at a low temperature; stir the mixture constantly until cold. = (1 in 6 $\frac{2}{3}$).

Foreign Pharmacopœias.—Official in Austr., 1 in 7 $\frac{1}{2}$; Belg., Dan., Dutch, Fr. (Pommade), Ger., Hung., Jap., Mex., Norw., Russ. and Swiss, 1 in 10; Span., 1 in 16; U.S., 1 in 5; not in Ital., Port. or Swed.

Applied to the feet once in twenty-four hours, prevents the unpleasant odour of perspiration.

Not Official.

DUSTING POWDER.—Zinc Oxide, 3; Salicylic Acid (in fine powder), 1; Starch, 12.

LASSAR'S PASTE.—Zinc Oxide, 24; Starch, 24; Salicylic Acid, 2; Soft Paraffin, 50. Used in eczema.

ZINCI OLEAS (Shoemaker's).—Zinc Acetate, 180 grains; dissolve in cold Water 40 fl. oz. Add slowly 20 fl. oz. of a **Solution of Sodium Oleate**, made by dissolving powdered Castile Soap 1 oz. in 20 fl. oz. of Water; wash the precipitate with cold Water, collect, and dry.

It forms a solid cake, easily powdered, and melting at about 175° F.

Solution of Sodium Oleate of the above strength is also used to precipitate Bismuth, Copper, and Lead Oleates.

ZINC OXIDE PLASTER MULLS (Unna).—Containing $\frac{1}{2}$ grain and 1 grain to the square inch.

ZINC AND SALICYLIC PLASTER MULL (Unna).—Containing Zinc Oxide $\frac{1}{2}$ grain and Salicylic Acid $\frac{1}{4}$ grain to the square inch.

ZINC GELATIN (Unna).—Zinc Oxide, 10; Gelatin, 16; Glycerin, 20; Water, 20.

Not Official.

ZINCI PERMANGANAS.

In reddish-purple crystalline masses.

Solubility.—About 1 in 3 of Water, generally with a slight residue.

An **injection** in chronic urethritis, 1 grain in 8 fl. oz. of Water.—*B.M.J.* '89, i. 1458.

Not Official.

ZINCI PHOSPHIDUM.

Minutely crystalline friable fragments, or a greyish-black powder, containing about 24 p.c. of Phosphorus, corresponding to the formula Zn_3P_2 .

Solubility.—Insoluble in Water or Alcohol (90 p.c.). Soluble in Acids with evolution of Phosphuretted Hydrogen, which is not spontaneously inflammable.

Medicinal Properties.—Strongly recommended as a substitute for Phosphorus. In hay fever.—*Pr.* lv. 205; *P.J.* '95, ii. 205.

Dose.— $\frac{1}{20}$ to $\frac{1}{4}$ grain, given in a pill with Milk Sugar and Glucose.

Foreign Pharmacopœias.—Official in Fr., Phosphure de Zinc; Mex., Fosforo de Zinc; U.S.; not in the others.

ZINCI SULPHAS.

ZINC SULPHATE.

$ZnSO_4 \cdot 7H_2O$, eq. 285.41.

It is formed by the interaction of diluted Sulphuric Acid and Zinc.

Solubility.—10 in 7 of Water. Insoluble in Alcohol (90 p.c.).

Medicinal Properties.—In small doses tonic and astringent; chiefly employed in spasmodic diseases, as epilepsy, chorea, whooping-cough; also in infantile diarrhœa; in large doses a prompt emetic. As an astringent **injection** in leucorrhœa and in the less acute stages of gonorrhœa; as a **collyrium** in ophthalmia.

Dose.—1 to 3 grains, as a tonic; as an emetic, 10 to 30 grains.

Prescribing Note.—Tincture or Wine of Opium causes no precipitate with Solutions of Zinc.

Official Preparations.—Used in the preparation of Unguentum Zinci Oleatis, Zinci Carbonas, and Zinci Valerianas.

Not Official.—Injectio Sulphatum, Injectio Zinci Sulphatis, Lotio Rubra, Lotio Zinci Sulphatis, and Cadmii Sulphas.

Foreign Pharmacopœias.—Official in Austr., Ger., Hung., Jap., Russ. and Swiss, Zincum Sulfuricum; Belg., Sulphas Zinci; Dan., Dutch, Norw., and Swed., Sulphas Zincicus; Fr., Sulfate de Zinc; Ital., Solfato di Zinco; Mex., Sulfato de Zinc; Port., Sulfato de Zinco; Span., Sulfato Zincico; U.S., Zinci Sulphas.

Description.—Colourless, transparent, prismatic crystals, with a strong metallic styptic taste. Soluble in less than an equal weight of cold Water.

Tests.—It affords the reactions characteristic of Zinc and of Sulphates. It should yield no characteristic reaction with the tests for Lead, Copper, Cadmium, Arsenium, Aluminium, Calcium, Magnesium, Sodium, Potassium, Ammonium, or Acetates, and only the slightest reactions with the tests for Iron or Chlorides.

Preparations.

UNGUENTUM ZINCI OLEATIS. ZINC OLEATE OINTMENT.

Zinc Sulphate, 2; Hard Soap, in shavings, 4; Distilled Water, boiling, Soft Paraffin, white, of each a sufficient quantity. Dissolve the Zinc Sulphate in 4 of the Distilled Water. Dissolve the Hard Soap in 40 of the Distilled Water. Mix the solutions; collect the precipitated Zinc Oleate; wash with hot Distilled Water until the washings afford little or no reaction for Sulphate; dry on a water-bath

and mix with an equal weight of the Soft Paraffin, melted; stir until cold.

The Zinc Oleate is now made by precipitation as above.

Not Official.

INJECTIO SULPHATUM—Zinc Sulphate, Copper Sulphate, Ferrous Sulphate and Alum, of each 1 grain, Water to 1 fl. oz.—*Lock Hospital.*

INJECTIO ZINCI SULPHATIS—Zinc Sulphate, 3 grains; Water 1 fl. oz.

For gonorrhœa and leucorrhœa.

LOTIO RUBRA—Zinc Sulphate, 2 grains; Compound Tincture of Lavender, 10 minims; Water to 1 fl. oz. A stimulant to indolent ulcers.

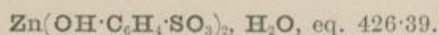
LOTIO ZINCI SULPHATIS (L.O.H.)—Zinc Sulphate, 1 grain; Distilled Water, 1 fl. oz. Used in ophthalmia.

CADMII SULPHAS—Colourless crystals, readily soluble in Water, insoluble in Alcohol. Has been used as an astringent in the place of Zinc Sulphate.

Foreign Pharmacopœias—Official in Belg., Fr., Mex., and Port.; not in the others.

ZINCI SULPHOCARBOLAS.

ZINC SULPHOCARBOLATE.



Zinc Sulphocarbolate, or Zinc phenol-para-sulphonate, may be obtained by heating a mixture of Phenol and Sulphuric Acid, and saturating the product with Zinc Oxide.

Prepared in this way it will contain a quantity of Sulphate.

Solubility—1 in 2 of Water; 3 in 1 of boiling Water; 1 in $2\frac{1}{2}$ of Alcohol (90 p.c.).

Medicinal Properties—Astringent and antiseptic.

For a **spray** to the throat, 5 grains to the ounce of Water; for a **nasal douche**, 2 grains to the ounce of Water; for **vaginal injection**, 60 grains in a pint of Water, for leucorrhœa or gonorrhœa.

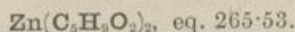
Foreign Pharmacopœias—Dutch, Sulphophenylas Zincicus; Russ., Zincum Sulfocarbolicum; Swiss, Zincum Sulfophenicum; not in the others.

Description—Colourless, transparent, tabular, efflorescent crystals; soluble in 2.5 parts of Alcohol (90 p.c.), and in 2 parts of Water.

Tests—The aqueous solution is coloured violet by Test-solution of Ferric Chloride, and affords a white precipitate with Solution of Ammonium Hydrosulphide. It should yield no characteristic reaction with the tests for Lead, Copper, Cadmium, Arsenium, Iron, Aluminium, Calcium, Magnesium, Sodium, Potassium, Ammonium, Acetates or Chlorides, and only the slightest reactions with the tests for Sulphates.

ZINCI VALERIANAS.

ZINC VALERIANATE.



Zinc Valerianate, or Zinc Iso-valerianate, may be prepared by saturating Iso-valerianic Acid with Zinc Carbonate, or by the interaction of Zinc Sulphate and Sodium Iso-valerianate.

Solubility.—1 in 120 of Water; 1 in 60 of Alcohol (90 p.c.); 1 in 500 of Ether.

Medicinal Properties.—Antispasmodic and nervine tonic, used in various neuralgic and hysterical affections, and sometimes in chorea.

In hay fever.—*B.M.J.* '96, i. 967.

Dose.—1 to 3 grains.

Incompatibles.—All Acids, soluble Carbonates, most metallic salts, vegetable astringents.

Foreign Pharmacopœias.—Official in Belg., Dutch, Fr., Hung., Ital., Mex., Port., Russ., Span., Swed., Swiss and U.S.; not in Austr., Dan., Ger., Jap. or Norw.

Description.—In white pearly tabular crystals, with a disagreeable odour and a metallic taste; very slightly soluble in cold Water or in Ether, soluble in hot Water and Alcohol (90 p.c.).

Tests.—On heating to redness, after moistening with a small quantity of Nitric Acid it should yield not less than 26 nor more than 30 p.c. of Zinc Oxide. It should yield no characteristic reaction with the tests for Lead, Copper, Cadmium, Arsenium, Iron, Aluminium, Calcium, Magnesium, Sodium, Potassium, Ammonium, Acetates, or Carbonates, and only the slightest reactions with the tests for Chlorides or Sulphates. When heated with Diluted Sulphuric Acid, it gives a distillate which, when mixed with Solution of Copper Acetate, does not immediately affect the transparency of the liquid but forms after a little time oily drops, which gradually pass into a bluish-white crystalline deposit (absence of Butyrates).

Butyric Acid if present will form an immediate crystalline precipitate.

The theoretical percentage of ZnO is 30.3 (with H₂O 28.4). The examination of a number of commercial samples is given (*P.J.* (3) xxiii., 190), the yield being from 21 to 64 p. c. of Oxide, and suggesting a minimum standard of 26 p. c. All the samples examined showed Butyric Acid by the copper test. The commercial 'precip.' generally contains a quantity of Oxide, but pure samples can occasionally be obtained.

ZINGIBER.

GINGER.

The scraped and dried rhizome of *Zingiber officinale*.

From plants cultivated in the West Indies, India, and other countries.

Medicinal Properties.—Aromatic stimulant and carminative. It is given in atonic dyspepsia, flatulency, and as a corrective adjunct to purgative medicines.

Official Preparations.—Syrupus Zingiberis, and Tinctura Zingiberis; used in the preparation of Infusum Sennæ, Pilula Scillæ Composita, Pulvis Cinnamomi

Compositus, Pulvis Jalapæ Compositus, Pulvis Opii Compositus, Pulvis Rhei Compositus, Pulvis Scammonii Compositus. Contained in Mistura Sennæ Composita, Pilula Aloes et Ferri, and Pilula Cambogiæ Composita. The **Tincture** is used in the preparation of Acidum Sulphuricum Aromaticum, Liquor Sennæ Concentratus, Pilula Scammonii Composita, and contained in Infusum Cinchonæ Acidum.

Not Official.—Tinctura Zingiberis Fortior, and Oleoresina Zingiberis.

Foreign Pharmacopœias.—Official in all; Fr., Gingembre; Ital., Zenzero; Port., Gengibre; Mex. and Span., Jengibre.

Description.—In flattish irregularly branched pieces; varying in length, but commonly from about three to four inches (seven and a-half to ten centimetres), each branch marked at its summit by a depressed scar; externally pale buff and somewhat striated and fibrous; breaking readily with a mealy, short, but rather fibrous or sometimes resinous fracture. Odour agreeable, aromatic; taste hot and pungent.

Preparations.

SYRUPUS ZINGIBERIS. SYRUP OF GINGER.

Ginger, in fine powder, $\frac{1}{2}$; Alcohol (90 p.c.), Syrup, of each a sufficient quantity. Prepare 1 of a strong tincture of the Ginger by the process of percolation with the Alcohol. To this add sufficient of the Syrup to produce 20 of the Syrup of Ginger. =(about 1 in 27).

Dose.— $\frac{1}{2}$ to 1 fl. drm.

Foreign Pharmacopœias.—Official in Jap., 1 of Tincture in 10; Swed., 1 (rhizome) in 28, by weight; U.S., 3 (Fluid Extract) in 100; not in the others.

TINCTURA ZINGIBERIS. TINCTURE OF GINGER. (ALTERED.)

Ginger, in No. 40 powder, 2; Alcohol (90 p.c.) a sufficient quantity. Moisten the powder with 2 of the Alcohol, and complete the percolation process. The resulting Tincture should measure 20. =(1 in 10).

Now 1 in 10 instead of 1 in 8 and Alcohol (90 p.c.) used in place of Rectified Spirit.

Dose.— $\frac{1}{2}$ to 1 fl. drm.

Foreign Pharmacopœias.—Official in Belg., Fr., Ger., Hung., Jap., Mex., Port., Russ., Swiss and U.S., 1 in 5; all by weight except U.S.; not in the others.

Not Official.

TINCTURA ZINGIBERIS FORTIOR. *Syn.*—ESSENCE OF GINGER. (B.P. '85).—Ginger percolated with Alcohol (90 p.c.) to form 1 in 2.

Our **Essence of Ginger** has always been twice the above strength.

By re-percolation a fluid Extract 1 in 1, or even 2 in 1, can be readily prepared.

OLEORESINA ZINGIBERIS (U.S.) *Syn.*—GINGERINE.

Ginger, in No. 60 powder, 10; Ether, a sufficient quantity. Put the Ginger into a cylindrical glass percolator, provided with a stop-cock, and arranged with cover and receptacle suitable for volatile liquids. Press the drug firmly, and percolate slowly with Ether, added in successive portions, until the drug is exhausted. Recover the greater part of the Ether from the percolate by distillation on a water-bath, and, having transferred the residue to a capsule, allow the remaining Ether to evaporate spontaneously.

Keep the Oleoresin in a well-stoppered bottle.

(Not in the other Pharmacopœias.)

Note on Extract of Ginger (Gingerine).—P.J. '98, ii. 178; C.D. '98, ii. 206.