

Medicinal Properties.—Cephaeline is more powerfully emetic than Emetine, but does not produce depressing effects in doses of $\frac{1}{12}$ to $\frac{1}{4}$ grain, and is slow in action.—*L.* '95, ii. 1274.

Not Official.

IRIS.

The rhizome and roots of *Iris versicolor*.

Medicinal Properties.—The preparations **Iridin** and **Extractum Iridis** are purgative and diuretic. Emetic and cathartic in large doses. Used in biliousness, torpid liver and duodenal dyspepsia.

Preparations.

IRIDIN.—A dark brown powder, obtained from Iris.

Dose.—1 to 5 grains.

Is a powerful hepatic stimulant; it also stimulates the intestines.—*Dr. Rutherford.*

EXTRACTUM IRIDIS (U.S.).—Prepared by exhausting Iris with Alcohol (94 p.c.), distilling the Alcohol and evaporating to a pilular consistence.

EXTRACTUM IRIDIS FLUIDUM (U.S.).—Strength 1 in 1, prepared by percolation with Alcohol (90 p.c.).

JABORANDI FOLIA.

JABORANDI LEAVES.

The dried leaflets of *Pilocarpus Jaborandi*.

According to Paul and Cownley (*P.J.* '96, ii. 1) it is certain that the drug met with in commerce under the name of Jaborandi is frequently in part the product of various species of *Pilocarpus*. As to the nature of the basic constituents of these drugs very little is known, and the discrepancies in the results of the pharmacological action of *Pilocarpine* are very suggestive of doubt whether the alkaloid referred to is always the same substance. The analysis of the several varieties gave the following result:—

	Total alkaloid.	Crystallisable Nitrate.	Recrystallised Nitrate.
P. Jaborandi,	.72 p.c. . .	.67 p.c., m.p. 161° C. . .	{ .37 p.c., m.p. 162.7 C. .30 ,, ,, 158.3 ,,
P. spicatus,	.16 ,,		{ .03 ,, ,, 151.5 ,, .04 ,, ,, 130.5 ,,
P. trachylophus,	.40 ,,02 p.c.	
P. microphyllus,	.84 ,,45 ,, m.p. 160° C. . .	{ .23 p.c., m.p. 162.7 C. .22 ,, ,, 147.7 ,,

A sample of reputed Jaborandi leaves was found on examination to contain, leaves of *P. Jaborandi* 12 p.c., *P. trachylophus* 38 p.c., stalks 50 p.c.

Jaborandi leaves of commerce (Holmes).—*P.J.* '95, ii. 520, 539.

A spurious Maranham Jaborandi.—*P.J.* '96, ii. 2.

Pilocarpus spicatus is the source of Aracati Jaborandi.—*P.J.* '97, ii. 459.

Microscopical distinction between the different varieties of *Pilocarpus*.—*P.J.* '97, ii. 5.

Medicinal Properties.—Powerful and prompt diaphoretic, sialagogue, and galactagogue. Useful in the dropsy, uræmia and thirst of Bright's disease. It is antagonistic in its action to Belladonna. See also *Pilocarpinæ Nitras*.

Is a very feeble hepatic stimulant.—*Dr. Rutherford.*

Official Preparations.—Extractum Jaborandi Liquidum, and Tinctura Jaborandi. Used in the preparation of *Pilocarpinae Nitrates*.

Foreign Pharmacopœias.—Official in Belg., Fr., Ger., Ital., Jap., Mex., Port., Russ., Span. and Swiss; U.S. (*Pilocarpus*); not in the others.

Description.—Jaborandi leaflets are dull green in colour, oval-oblong or oblong-lanceolate in outline, and usually vary from two and a half to four inches (six to ten centimetres) in length. They are shortly petiolate, obtuse and emarginate at the apex and, for the most part, unequal at the base; the margin is entire and slightly revolute, the texture coriaceous. The mature leaflets are glabrous, or exhibit at most a few scattered hairs on the under surface; on the upper surface the lateral veinlets are distinctly prominent. The mesophyll contains numerous oil-glands readily visible by transmitted light. They emit, when bruised, a slight aromatic odour; the taste is at first somewhat bitter and aromatic, becoming afterwards pungent. When chewed they increase the flow of saliva.

Preparations.

EXTRACTUM JABORANDI LIQUIDUM. LIQUID EXTRACT OF JABORANDI. (NEW.)

Jaborandi Leaves, in No. 20 powder, 20; Alcohol (45 p.c.) a sufficient quantity. Moisten the powdered Jaborandi leaves with 10 of the Alcohol; pack the moistened powder in a percolator, and set aside for twelve hours; then percolate with the menstruum, collecting and reserving 17 of percolate; continue percolation until an additional quantity of 50 of percolate is obtained; distil the latter so as to recover the Alcohol, evaporate the residual aqueous liquid to the consistence of a soft extract, adding it to the reserved percolate; to the product add sufficient of the Alcohol to produce 20 of the Liquid Extract.

Dose.—5 to 15 minims.

Foreign Pharmacopœias.—Official in U.S., *Extractum Pilocarpi Fluidum* 1 in 1; Belg. and Fr. have a **Solid Extract**; not in the others.

TINCTURA JABORANDI. TINCTURE OF JABORANDI. (ALTERED.)

Jaborandi Leaves, in No. 40 powder, 4; Alcohol (45 p.c.) a sufficient quantity. Moisten the powder with $2\frac{1}{2}$ of the Alcohol, and complete the percolation process. The resulting Tincture should measure 20. = (1 in 5).

Now 1 in 5 instead of 1 in 4, and Alcohol (45 p.c.) used in place of Proof Spirit.

Dose.—30 to 60 minims.

Foreign Pharmacopœias.—Official in Belg., Fr., and Span., 1 and 5; Mex., 1 in 5; not in the others.

Wright and Farr (*P.J.* (3) xxii. 1) show an enormous variation in the strength of various samples of this tincture, viz., from .032 to .148 p.c. of alkaloid, and recommend a standard of .1 p.c.

This agrees with the manufacturing yield of *Pilocarpine Nitrate*, viz., .5 to .6 p.c. of the leaf employed.—*C.D.* '92, ii. 147.

The best strength of Alcohol to use is 50 p.c. (by volume).

PILOCARPINÆ NITRAS. See p. 482.

JALAPA.

JALAP.

The dried tubercules of *Ipomœa Purga*.

As stated in our previous edition, this Jalap contains, as its principal ingredient, a glucoside **Convolvulin**, insoluble in Ether, and constituting all but a small part of Resina Jalapæ B.P.

Tampico Jalap from *Ipomœa simulans*, and Orizaba root (Woody Jalap), from *Ipomœa Orizabensis*, also yield a glucoside **Jalapin**, soluble in Ether, and almost, if not completely, identical with Resina Scammonii B.P. from *Convolvulus Scammonia*.

It is unfortunate that the name Jalapin should have been applied to the resin of *spurious* Jalap, which is identical with the *true* Resin of Scammony, and which is quite distinct from the Official Resin of Jalap.

During 1892, attention was again called to this misleading nomenclature (*P.J.* (3) xxii. 888), and considerable correspondence ensued. It appears that it has been customary in this country to apply the term 'Jalapin' to the true Jalap Resin, but the article imported from Germany under that name is invariably the Ether-soluble Resin from *spurious* Jalap or Scammony. Several suggestions were made, but none which seemed at all likely to be acceptable both in Britain and Germany. The most feasible proposal is that the term 'Scammonin' should be used to designate the Ether-soluble Resin (shown, *P.J.* (3) xxiii. 86, to be identical from either of the previous named sources), and that the earliest opportunity should be taken to make Official, under the name Jalapin, an Ether-wholly-insoluble Resin from true Jalap.

Medicinal Properties.—A brisk cathartic, operating sometimes painfully, producing copious watery discharges. From its hydragogue powers, it is especially serviceable in dropsy and cerebral congestion, when it is usually prescribed in the form of the Compound Powder; also used in febrile diseases, and as a vermifuge it is an ingredient of Pulvis Scammonii Compositus.

Is a moderately powerful hepatic, and a powerful intestinal stimulant.—*Dr. Rutherford.*

Dose.—5 to 20 grains.

Prescribing Notes.—The powder can be given in **cachets**, or mixed with Confections. The Resin is given in **pills** made by adding Dispensing Syrup *q.s.*

Official Preparations.—Extractum Jalapæ, Pulvis Jalapæ Compositus, Resina Jalapæ, Tinctura Jalapæ; used in the preparation of Pulvis Scammonii Compositus. The **resin** is contained in Pilula Scammonii Composita.

Not Official.—Sapo Jalapinus.

Foreign Pharmacopœias.—Official in Austr., Belg., Dan., Dutch, Fr., Ger., Hung., Ital., Jap., Mex., Norw., Port., Russ., Span., Swed., Swiss and U.S.

Description.—Dark brown, irregularly oblong, ovoid, napiform or fusiform roots, varying in length from one to three inches (two and a half to seven and a half centimetres) or more, the larger being frequently incised. They are hard, compact, and heavy. Externally they are furrowed and wrinkled, and marked with small transverse scars; internally they vary in colour from yellowish-grey to dingy brown. The transverse section usually exhibits irregular dark concentric lines, and, when examined under the microscope, numerous compound starch grains, clustered crystals of Calcium Oxalate, and cells con-

taining resin. The odour is characteristic, the taste at first sweet but afterwards acrid and disagreeable.

Test.—Jalap, when assayed by the process described under 'Jalapæ Resina,' should not yield less than 9 nor more than 11 p.c. of Resin having the properties of the official Resin.

The Fr. Codex (1884) fixed the standard at 16—18 p.c. of Resin, U.S. (1880 and 1890) at 12 p.c., but Ger. (1890) has lowered the figure to 7 p.c.

Process for resin-estimation by extraction with Amylic Alcohol and freeing from Water soluble compounds by washing in a separator.—*P.J.* (3) xxiii. 107.

Preparations.

EXTRACTUM JALAPÆ. EXTRACT OF JALAP. (MODIFIED.)

Jalap, in coarse powder, 1; Alcohol (90 p.c.), 5; Distilled Water, 10. Macerate the powdered Jalap in the Alcohol for seven days; press out the tincture, filter and then remove the Alcohol by distillation, leaving a soft extract. Again macerate the residue of the Jalap in the Water for four hours; express; strain through flannel; evaporate to the consistence of a soft extract. Mix the two extracts, and evaporate at a temperature not exceeding 140° F. (60° C.) to the consistence of a firm extract.

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

We have found 100 lbs. of Jalap to yield 50 lbs. of Extract. Squibb, *Y.B.P.* '72, 324, states that the total yield varies from 35 to 52 p.c., the alcoholic portion, 9 to 17 p.c., and the aqueous 26 to 40 p.c. Cripps, *P.J.* (3) xxiii. 779, examined a number of commercial samples for Resin and found them to vary from 12 to 50 p.c.; a sample prepared by himself gave 23 p.c. of total Resin.

Dose.—2 to 8 grains.

Foreign Pharmacopœias.—Official in Jap., Russ. and U.S.; not in the others.

PULVIS JALAPÆ COMPOSITUS.—COMPOUND POWDER OF JALAP.

Jalap in powder, 5; Acid Potassium Tartrate in powder, 9; Ginger in powder, 1: mix. = (1 in 3)

Dose.—20 to 60 grains.

Foreign Pharmacopœias.—Official in Russ., Jalap 1, Potassium Bitartrate 2; Span., Jalap 1, Cream of Tartar 1, Magnesia 1; U.S. Jalap 35, Potassium Bitartrate 65; Mex.; not in the others.

JALAPÆ RESINA.—JALAP RESIN.

Jalap in No. 40 powder, 8; Alcohol (90 p.c.) a sufficient quantity; Distilled Water, a sufficient quantity. Digest the Jalap with twice its weight of the Alcohol in a covered vessel, heating gently, for twenty-four hours; transfer to a percolator; when the Tincture ceases to pass, continue the percolation with successive portions of the Alcohol until nothing more is dissolved; add to the Tincture thus produced 4 of the Distilled Water; remove the Alcohol by distillation; transfer the residue while hot to an open dish; allow it to become cold; pour off the supernatant fluid from the Resin; wash this two or three times with hot Distilled Water; dry.

Description.—In dark-brown opaque fragments, translucent at the

edges, brittle, breaking with a resinous fracture, readily reduced to a pale-brown powder, sweetish in odour, acrid to the throat. Easily soluble in Alcohol (90 p.c.), insoluble in Oil of Turpentine.

Tests.—The powder yields little or nothing to warm Water, and not more than 10 per cent. to Ether (indicating absence of Scammony Resin and Resin of Tampico Jalap). A solution in Alcohol (90 p.c.) is not coloured bluish-green by Test-solution of Ferric Chloride (absence of Guaiacum Resin).

Dose.—2 to 5 grains.

Foreign Pharmacopœias.—Official in Austr., Belg., Dan., Dutch, Fr., Ger., Hung., Ital., Jap., Mex., Norw., Port., Russ., Span., Swed., Swiss and U.S.

TINCTURA JALAPÆ.—TINCTURE OF JALAP. (ALTERED.)

Jalap in No. 40 powder, 4; Alcohol (70 p.c.) a sufficient quantity. Moisten the powder with 2 of the Alcohol; pack in a percolator; gradually add more of the Alcohol until 12 of percolate has been collected; subject the marc to pressure; add the expressed liquid to the percolate; set aside for twenty-four hours; filter.

Determine the amount of Jalap Resin present in 10 c.c. of the resulting strong tincture by the process described under 'Jalapæ Resina,' and dilute the remainder of the strong tincture with a sufficient quantity of the Alcohol to produce a Tincture containing 1.5 grammes of the Resin in 100 c.c.

Now made with Alcohol (70 p.c.) in place of Rectified Spirit and standardised.

Dose.— $\frac{1}{2}$ to 1 fl. drm.

Foreign Pharmacopœias.—Official in Belg., Fr. and Port., 1 and 5 by weight; Mex. 1 in 5; not in the others. Belg., Fr., Port. and Swiss have a Compound Tincture.

Test.—Treated as described under 'Jalapæ Resina,' 10 c.c. of the Tincture should yield not less than .145 nor more than .155 gramme of the Resin.

Not Official.

SAPO JALAPINUS.—

Ger. and Russ.—Resin of Jalap, 4; Soap, 4; Alcohol, 8; evaporate to 9 by weight.

Jap.—Resin of Jalap, 4; Medicated Soap, 4; Dilute Alcohol, 8; evaporate to 9.

Swiss.—Resin of Jalap, 9; Hard Soap, 9; Glycerin, 1; Alcohol, 12; evaporate to 20 by weight.

Not Official.

JAMBUL.

The Seeds of *Eugenia Jambolana*, which have been used in India and this country for diabetes.—*P.J.* (3) xviii. 921; *B.M.J.* '91, ii. 1283. *B.M.J.E.* '92, i. 39; *T.G.* '93, 611; *Pr.* li. 138.

Dose.—5 to 30 grains.

It can be given in the form of **fluid extract**, dose 5 to 15 minims.

Not Official.

JUGLANS, U.S.

The bark of the root of *Juglans cinerea* (Butternut), collected in autumn.

A mild cathartic, used in the form of **Extractum Juglandis U.S.**, which is prepared with Dilute Alcohol, and **Juglandin**, an eclectic remedy, which was found by Rutherford to be a moderately powerful hepatic stimulant, and in doses of 5 to 10 grains is used as a mild purgative.

SPIRITUS NUCIS JUGLANDIS.—A distilled preparation from the Walnut (*Juglans Regia*).

Aromatic bitter, astringent, vermifuge.

Dose.—1 to 4 fl. drm.

JUNIPERI OLEUM.

OIL OF JUNIPER.

The Oil distilled from the full-grown unripe green fruit of *Juniperus communis*.

Sp. gr. .860 to .880.

Messrs. Schimmel state that doubly Rectified Oil of Juniper has sp. gr. .858.

Solubility.—1 in 20 of Alcohol (90 p.c.), but it does not become quite clear: it mixes with equal parts of Absolute Alcohol, but if more Alcohol be added it becomes milky.

Medicinal Properties.—Stimulant, carminative, antispasmodic, and a stimulating diuretic, the latter property constituting its chief medicinal value. Used in cardiac and hepatic dropsical cases, either alone or combined with other diuretics; should not be used in acute Bright's disease.

Dose.— $\frac{1}{2}$ to 3 minims.

Official Preparation.—*Spiritus Juniperi*; contained in *Mistura Croosoti*.

Foreign Pharmacopœias.—Official in Austr., sp. gr. .870; Belg., sp. gr. .853—911; Dan., sp. gr. .850—870; Fr. (*Genièvre*), Ger., Norw. and Swed., sp. gr. not given; Hung., sp. gr. .840—900; Ital. (*Essenza di Ginepro*), sp. gr. .850; Jap., sp. gr. .860—880; Port. (*Essencia de Zimbro*), sp. gr. .855—879; Russ., sp. gr. .850—900; Span. (*Esencia de Enebro*); Swiss, sp. gr. .850—860; U.S., sp. gr. .850—890; not in Dutch or Mex.

Description.—Colourless or pale-greenish yellow, with the characteristic odour of the fruit, and a warm, aromatic, bitterish taste.

Test.—Sp. gr. .865 to .890. The Oil is soluble, with slight turbidity, in 4 times its own volume of a mixture of equal parts of Absolute Alcohol and Alcohol (90 p.c.).

Preparation.

SPIRITUS JUNIPERI.—SPIRIT OF JUNIPER. (ALTERED.)

Oil of Juniper, 1; Alcohol (90 p.c.) a sufficient quantity. To the Oil of Juniper add enough of the Alcohol to form 20 of the Spirit of Juniper. If the solution be not clear, agitate with a little Powdered Tale, and filter. = (1 in 20).

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

Dose.—20 to 60 minims.

This Spirit of Juniper contains two and a half times the proportion of Oil of Juniper present in the Spirit of Juniper of the British Pharmacopœia of 1885.

Foreign Pharmacopœias.—Official in Fr. and Jap., 1 in 50; Russ., 1 in 100; all by weight; U.S., 1 in 20; Austr., Ger. and Swiss, 1 fruit in 4, by distillation; Span., 3 fruit in 19 by distillation; Dutch, Port. and U.S., have a compound spirit; not in the others.

Not Official.

KAMALA.

Syn.—GLANDULÆ ROTTLERÆ.

A fine, granular, mobile, brick-red powder, consisting of the minute glands and hairs obtained from the surface of the fruits of *Mallotus Philippensis*.

Solubility.—Scarcely mixing with water, but about 60 p.c. of a sample (containing 6 p.c. of ash) was soluble in, and formed a red-coloured solution with Absolute Alcohol, Chloroform, or Ether; and was for the most part soluble in Liquor Potasse; sparingly in Petroleum Spirit.

Medicinal Properties.—Anthelmintic and purgative. Successfully given in tænia. *Pr.* lii. 373.

Dose.—30 to 120 grains.

Prescribing Notes.—The powder is usually given suspended in Gruel, Mucilage, Treacle, or Syrup; it will of itself expel the worm, or it may be prescribed along with Liq. Ext. of Male Fern. A purgative should, however, follow.

Foreign Pharmacopœias.—Official in Austr.; Dutch; Ger., Hung.; Jap. (10 p.c. of ash); Russ. and Swiss (6 p.c. of ash); Hung. has also Kamala Depuratum; Ital.; Mex.; Port.; Swed.; U.S. (8 p.c. of ash); not in the others.

Test.—On ignition in air it should yield 4 or 5, or at most 10 p.c. of ash.

The pure drug does not yield more than 2 p.c. of ash, but most commercial samples give from 20 to 50 p.c.—*P.J.* (3) xv. 654; (3) xviii. 678; (3) xxii. 394, 894. Six commercial samples examined showed a variation in ash from 6.1 to 69.2.—*C.D.* '95, i. 274.

Preparation.

TINCTURA KAMALÆ.—Kamala, 1; Alcohol (60 p.c.) 5; macerate seven days, and strain.

Dose.—1 to 2 fl. drm.

KAOLINUM.

KAOLIN.

[NEW.]

N.O. Syn.—CHINA CLAY; PORCELAIN CLAY.

A native aluminium silicate, powdered, and freed from gritty particles by elutriation.

A fine white clay, derived from the decomposition of the felspar of granitic rocks; extensive tracts of it occur in Cornwall. When finely ground and washed it is used as a form of Fuller's Earth.

Has been used in Germany for many years as an **excipient for pills** of the easily