

BIBLIOGRAPHY OF IPECACUANHA

By

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SCHOOL OF PHARMACY

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Tristaon, M.

(1601.)

(Ipecaya or Pigaya).

(A treatise of Brazil, p. ___.) (Purchas His. Pilgrims v. 4, chapt. 7., p. 1289; Reprint, 1906, v. 16., p. 478; U. S. Dispens., 21 ed., p. 588; Philos. Trans., 20, pp. 69-79.)

(A detailed account of the uses by the natives of Brazil are given.)

Marcgrave, G.

1648.

Ipecacuanha.

Historiae Brazilae Naturalum, 1 ed., p. 17; *ibid.*, 2 ed., p. ___; (Am. Jour. Pharm., 3, p. 184; U. S. Dispens., 2 ed., p. 376; *ibid.*, 10 ed., p. 415; *ibid.*, 12 ed., p. 480; *ibid.*, 13 ed., p. 493; *ibid.*, 14 ed., p. 512; *ibid.*, 15 ed., p. 813; *ibid.*, 17 ed., p. 749; *ibid.*, 19 ed., p. 669; *ibid.*, 20 ed., p. 599; Philos. Trans., 20, p. 78.)

A detailed description of the drug ipecac is given.

Piso, G.

1648.

Ipecacuanha.

De Indiae Utriusq. Renaturali & Med., 1 ed., p. 101; bk. 4., *ibid.*, 2 ed., p. 231; (Coxe's Am. Dispens., 1 ed., p. 249; *ibid.*, 4 ed., p. 159; *ibid.*, 7 ed., p. 174; U. S. Dispens., 20 ed., p. 599; *ibid.*, 21 ed., p. 593; Eclect. Dispens., pp. 134-135; Am. Jour. Pharm., 3, p. 192; Philos. Trans., 20, p. 78.)

Gives description of plant, lists several varieties, uses, and one plate.

Le Gras, ___

(1672.)

(Ipecac).

___ p. ___; (Eclect. Dispens., p. 134; U. S. Dispens., 21 ed., p. 588; Am. Dispens., 7 ed., p. 175; Am. Jour. Pharm., 3, p. 182.)

(He was the first to introduce ipecac root in France.)

Grenier, __ 1686.

(Cephaelis).

___ p. __; (Am. Dispens., 7 ed., p. 175.)

(He was the first to introduce the drug to France from Spain.)

—
Helvetius, J. 1686.

(Ipecacuanha).

Remedi Contre le Cows de Ventre __, p. __; (U. S. Dispens., 13 ed., p. 497; *ibid.*, 14 ed., p. 517; *ibid.*, 15 ed., p. 817; *ibid.*, 17 ed., p. 753; *ibid.*, 19 ed., p. 675; *ibid.*, 20 ed., p. 599; *ibid.*, 21 ed., p. 593; Coxe's Am. Dispens., 7 ed., p. 178; Am. Dispens., 1 ed., p. 250; *ibid.*, 4 ed., p. 160; *ibid.*, 7 ed., p. 175; Natl. Dispens., 5 ed., p. 893; Am. Jour. Pharm., 3, p. 182.)

(The use of ipecac in treating dysentery is dealt with.)

—
Plukenett, L. 1691.

(Viola Surrecta).

Phytographia, p. __; (Am. Jour. Pharm., 3, p. 193.)

(This species of white ipecac is described.)

—
Baglivi, G. 1699.

(Ipecac).

De praxi Medica etc., p. __; (Coxe's Am. Dispens., 7 ed., p. 178.)

(Discusses use of ipecac in treating dysentery.)

—
Valentini, M. 1700.

(Ipecac).

Polychestra exotica in aurandis affectibus etc., p. 293:
(Coxe's Am. Dispens., 7 ed., p. 178.)

(Discusses a specific use for brown ipecac.)

Mangetus, J. 1704.

(Ipecac).

Bibliotheca pharmaceutica Medica etc., p. __; (Harris
Dessert. Med. et Chirug., p. __; Coxe's Am. Dispens.,
7 ed., p. 178.)

(Discusses the use of ipecac in treating haemorrhage,
and dysentery.)

Helvetius, J. F. 1707.

Ipecacuanha.

Traite des Maladies __, p. 170; (Coxe's Am. Dispens.,
7 ed., p. 178.)

Relates use of ipecac in treating severe cases of
dysentery.

Gohl, J. D. 1720.

(Ipecac).

Act. A. Medicum Berolousium 5 or 6, p. __; (Coxe's Am.
Dispens., 7 ed., p. 178.)

(The uses of ipecac as a specific in diarrhoea is
discussed.)

Harris, W. 1725.

(Ipecac).

*Dissert. Medicae et Chirugicae habitae in Amphitheatro
Collegii Regalis Medicum Londinensium*, p. __; (Am.
Dispens., 7 ed., p. 178.)

The uses of ipecac are described.

Dover, T.

1733.

(Ipecac).

(Bracklesby Econom. & Med. Obs., p. 160; Coxe's Am. Dispens., 7 ed., p. 178; *ibid.*, 9 ed., p. 197.)

The combining of opium and ipecac as an antispasmodic remedy is commented on.

Geoffroy, E. F.

1743.

(Ipecac).

Traite de la Mat. Med., 1 ed., v. 2., p. 161; (Coxe's Am. Dispens., 7 ed., p. 178.)

(Discusses the methods of administering ipecac, and the amounts to be given.)

Neumann, C.

1752.

De Ipecacuanha odor der Ruhr Wurzel.

Chemiae Medicae, v. 2, pt. 3, p. 172; (Coxe's Am. Dispens., 1 ed., p. 250; *ibid.*, 4 ed., p. 160.)

Discusses name, commercial varieties, history and preparation, and also determines the amount of alcoholic and aqueous extractions of ipecac.

Linne, C.

1753.

Spermacoce Verticillus.

Species Plantarum, 1 ed., v. 1, p. 102; (Am. Jour. Pharm., 3, p. 195.)

The above plant is mentioned with references and synonyms.

Linne, C.

1753.

Spermacoci hexandra.

Species Plantarum, 1 ed., v. 1, p. 455; (Am. Jour. Pharm., 3, p. 196.)

Gives scientific synonyms with references.

—
Gianella, C.

1754.

De admirabili ipecacuanha virtuate in curandis febris tum autumnalibus tum lentis, tum aliis sive continuis sive intermittentibus sedem in primis viis habentibus. Pataire.

— p. —; (Am. Dispens., 7 ed., p. 178.)

(The uses of the ipecac are discussed.)

—
Pyl, S.

1756.

Of the powers of ipecacuanha in very small doses.

Med. Observations Inquiries, 1, p. 240; (Coxe's Am. Dispens., 7 ed., p. 178.)

The medicinal uses of ipecac are commented on.

—
Brocklesby, R.

1762.

Dover's Powders.

Economical and Med. Observations etc., p. —; (Coxe's Am. Dispens., 7 ed., p. 179.)

Speaks of value of above preparation.

—
Akenside, M.

1767.

Ipecacuanha.

A commentary on the dysentery, or the bloody flux. Trans. by J. Ryan, p. —; (Coxe's Am. Dispens., 7 ed., p. 179.)

Recommends ipecac to be used for the relief of convulsions and asthma.

—

Bancroft, E.

1769.

Ionidium Marcucci.

Essay on the Natural History of Guiana, p. 402; (Am. Jour. Pharm., 7, p. 186; U. S. Dispens., 5 ed., p. 402; *ibid.*, 10 ed., p. 419; *ibid.*, 12 ed., p. 484; *ibid.*, 13 ed., p. 491; *ibid.*, 14 ed., p. 516; *ibid.*, 15 ed., p. 817; *ibid.*, 17 ed., p. 753; *ibid.*, 19 ed., p. 671; *ibid.*, 20 ed., p. 595; *ibid.*, 21 ed., p. 590.)

Compares ipecac and ionidium as uses are nearly the same due to similarity in constituents.

Dalberg, N.

1770.

(*Ipecac*).

Mem. of Swed. Acad., __. p. 316; (Coxe's Am. Dispens., 7 ed., p. 178.)

(Comments on the various uses of ipecac are given.)

Aublet, F.

1775.

(*Viola itoubri*).

Hist. des plantes de la Guiane française, etc., V. __, p. __; (Am. Jour. Pharm., 3, p. 194; U. S. Dispens., 15 ed., p. 813; *ibid.*, 17 ed., p. 750.)

(The "white Ipecac of Guiana" is said to be the root of the above plant.)

Jackuin, N. J.

1780.

Hybanthna scandens.

Select stupium Americanum historia, p. __; (Am. Jour. Pharm., 3, p. 193.)

The root of the above plant is known as white Ipecac of Galipons.

Lindsay, A.

1781.

De plantarum incrementi causis.

D. Edinburgi, 8, p. 43; (U. S. Dispens., 15 ed., p. 814; ibid., 17 ed., p. 750; ibid., 19 ed., p. 671; ibid., 20 ed., p. 594.)

The ability of the plant ipecac to undergo rapid germination is commented upon.

—
Linné, C. Jr.

1781.

(Viola Ipecacuanha).

Linné Syst. Veget., v. 3, p. 804; U. S. Dispens., 2 ed., p. 376; ibid., 3 ed., p. 366; ibid., 5 ed., p. 399; ibid., 10 ed., p. 376; ibid., 12 ed., p. 480; ibid., 13 ed., p. 493; ibid., 14 ed., p. 513; ibid., 15 ed., p. 813; ibid., 19 ed., p. 671; ibid., 21 ed., p. 589; King's Am. Dispens., 18 ed., v. 2, p. 1074; Natl. Dispens., 2 ed., p. 875; ibid., 3 ed., p. 839; ibid., 5 ed., p. 895; Am. Jour. Pharm. 3, p. 194.)

Lists several varieties of viola ipecac and numerous references.

—
Linné, C. Jr.

1781.

(Psychotria emetica).

(Suppl Plantarium, p. ___; (U. S. Dispens., 2 ed., p. 376; ibid., 3 ed., p. 366; ibid., 5 ed., p. 399; ibid., 10 ed., p. 415; ibid., 12 ed., p. 480; ibid., 13 ed., p. 493; ibid., 14 ed., p. 513; ibid., 15 ed., p. 813; ibid., 19 ed., p. 670; ibid., 21 ed., p. 588; Coxe's Am. Dispens., 7 ed., p. 174; Am. Jour. Pharm., 3, p. 184.)

(Gives a description of this species of ipecac.)

—
Mutis, J. C.

1781.

(Peruvian Ipecacuanha).

Linné, C. Jr. Supplementum plant., v. ___, p. ___; (U. S. Dispens., 3 ed., p. 370; ibid., 5 ed., p. 401; ibid., 10 ed., p. 418; ibid., 12 ed., p. 480; ibid., 13 ed.,

p. 493; *ibid.*, 14 ed., p. 513; *ibid.*, 15 ed., p. 813; *ibid.*, 17 ed., p. 749; *ibid.*, 19 ed., p. 671; *ibid.*, 21 ed., p. 589; *Coxe's Am. Dispens.*, 1 ed., p. 249; *ibid.*, 4 ed., p. 159; *ibid.*, 7 ed., p. 174; *King's Am. Dispens.*, 18 ed., v. 2, p. 1074; *Natl. Dispens.*, 2 ed., p. 785; *ibid.*, 3 ed., p. 839; *ibid.*, 5 ed., p. 895; *Am. Jour. Pharm.* 3, pp. 183-194.)

(A complete description of this species is given, listing its uses, etc.)

Stoll, M. 1787.

(Ipecac).

Rationis Medendi, pt. 1, p. 192; (*Coxe's Am. Dispens.*, 7 ed., p. 178.)

(The qualities of ipecac as an efficient emetic are given.)

Vandelli, D. 1788.

(*Pombalis Ipecacuanha*).

Flora luritanicae et braziliensis specimen, etc., p. 96; (*Am. Jour. Pharm.*, 3, p. 195.)

The habitat, a complete description of the drug, and uses are given.

Cullen, W. 1789.

Ipecacuanha.

Mat. Med., v. 2, p. 477; *Am. ed.*, p. 331; (*Am. Dispens.*, 7 ed., p. 176; *Thacher's Am. Dispens.*, 2 ed., p. 243; *ibid.*, 4 ed., p. 253; *Eclect. Dispens.*, p. 134.)

Comments on the therapeutic uses of ipecac, source, etc.

Schreber, J. C. 1789.

(*Callicocco Ipecac*).

Plantarum verticillatarum unilabiatarum et species et genera, p. ___; (U. S. Dispens., 15 ed., p. 813; *ibid.*, 19 ed., p. 670; Am. Jour. Pharm., 3, p. 184.)

(First applied the name *Gallicocco* to the species later described and named *Cephaelis* by Schwartz.)

Duncan, A. 1791.

Ipecacuanin.

Edinburgh Dispensatory, 3 ed., p. 211; (King's Am. Dispens., 6 ed., p. 211; *ibid.*, 8 ed., p. 202; *ibid.*, 10 ed., p. 202; *ibid.*, 18 ed., p. 1071.)

A complete history of the plant ipecac is given.

Swartz, O. 1797.

(Ipecac).

Flor Ind. Occidentalis, v. 1, p. 435; (U. S. Dispens., 15 ed., p. 813; *ibid.*, 17 ed., p. 750; *ibid.*, 19 ed., p. 670; *ibid.*, 21 ed., p. 589; Coxe's Am. Dispens., 7 ed., p. 173; Am. Jour. Pharm., 3, p. 184.)

A description of this ipecac is given.

Willdenow, C. L. 1797.

Psychotria emetica.

Linné Species plantarum, 4 ed., v. 1, pt. 30, p. 968; (Am. Dispens., 1 ed., p. 249; *ibid.*, 4 ed., p. 159; *ibid.*, 7 ed., p. 173.)

Synonyms by other authors, with references, and a detailed description of the plant is given.

Gomez, B. A. 1801.

(Ipecac).

Mem. sobre a Ipecacuanha fusca do Brazil, etc. (U. S. Dispens., 2 ed., p. 376; *ibid.*, 3 ed., p. 366; *ibid.*,

5 ed., p. 402; *ibid.*, 10 ed., p. 415; *ibid.*, 12 ed., p. 480; *ibid.*, 13 ed., p. 493; *ibid.*, 14 ed., p. 513; *ibid.*, 15 ed., p. 813; *ibid.*, 17 ed., p. 749; *ibid.*, 19 ed., p. 670; *ibid.*, 21 ed., p. 589; *Am. Jour. Pharm.*, 3, pp. 184-189.)

(Several species of Brazilian ipecac are discussed.)

Brotero, F. A.

1802.

Callicocca Ipecacuanha.

Linn. Trans. Lond., 6, p. 137; (*U. S. Dispens.*, 2 ed., p. 376; *ibid.*, 3 ed., p. 366; *ibid.*, 5 ed., p. 399; *ibid.*, 10 ed., p. 416; *ibid.*, 12 ed., p. 480; *ibid.*, 13 ed., p. 493; *ibid.*, 14 ed., p. 513; *ibid.*, 15 ed., p. 813; *ibid.*, 17 ed., p. 749; *ibid.*, 19 ed., p. 669; *ibid.*, 20 ed., p. 594; *ibid.*, 21 ed., p. 588; *Eclect. Dispens.*, 1 ed., p. 133; *Coxe's Am. Dispens.*, 1 ed., p. 249; *ibid.*, 4 ed., p. 159; *ibid.*, 7 ed., p. 174; *King's Am. Dispens.*, 18 ed., v. 2, p. 1071; *Nat. Dispens.*, 2 ed., p. 784; *ibid.*, 3 ed., p. 837; *ibid.*, 5 ed., p. 893; *Am. Journ. Pharm.*, 3, p. 183.)

Lists origin, descriptions, and illustrations of this species of ipecac.

Decandolle, A.

1802.

Differentes especes d Ipecacuanha.

Recherches Botanico, 4, p. 179; (*Coxe's Am. Dispens.*, 4 ed., p. 159; *ibid.*, 7 ed., p. 174; *Eclect. Dispens.*, p. 133; *Am. Journ. Pharm.*, 3, p. 183.)

Comments on the derivation of the word *Cephaelis* is given, also describes a number of varieties of ipecac.

Despres, __, Bouriat, __, Boullay, __.

1803.

Rapport Sur. Un Memoire du citoyen Dubric l'aine.

Annales de Chimie, 46, p. 32; (*Eclect. Dispens.*, p. 135.)

Methods of administering ipecac, and preparation of syrup is given.

Gomez, B. A.

1803.

Richardsonia braziliensis.

Observ. Bot. Med. Braziliae Plantis, p. ___; (Am. Jour. Pharm., 3, p. 196.)

Richardsonia brasiliensis is described and is said to yield the undulated ipecac.

—
Ventenant, E. P.

1803.

(*Ionidium Strictum*).

Jardin de La Malmaison, v. 1, p. 27; (Am. Jour. Pharm., 3, pp. 194-195.)

Several different species of ipecac are listed, and a description of each given.

—
Barton, B. S.

1804.

(*Ipecacuanha*).

Phil. Med. & Phys. Jour., 1, p. 171; (Coxe's Am. Dispens., 1 ed., p. 249.)

Believes that the *ipecacuanha* belongs to the genus *Callicocca*.

—
Duncan, A. Jr.

1805.

Cephaelis Ipecacuanha.

Edinb. New Dispens., 1st Am. ed., p. 184; (Thacher's Am. Dispens., 2 ed., p. 242; *ibid.*, 4 ed., p. 252.)

Comments on the uses, doses, and general effects of ipecac.

—
Persoon, C. H.

1805.

Cephaelis Emetica.

Synopsis Plantarum, v. 1, p. 203; (King's Am. Dispens., 18 ed., v. 2, p. 1071.)

Gives a brief description of the plant and several references.

Coxe, J.

1806.

Cephaelis Ipecacuanha.

(Am. Dispens., 1 ed., p. 249; *ibid.*, 4 ed., p. 159; *ibid.*, 7 ed., p. 173.)

Gives the official Latin title, English title, habitat, part of plant used, history, uses, preparations, description of plant, and constituents.

Lemery, N.

1807.

Ipecacuanha.

Dict. des Drogues Simples et Composés nouv. ed., Morelot, n. 1., p. 738; (Am. Jour. Pharm., 3 ed., p. 188.)

Describes a greyish red variety commonly known as red ipecac, also other varieties.

Poiret, J. L.

1807-1809.

(*Viola heterophylla*).

Encyclopedie, methodique, botanique, v. 8, p. __; (Am. Jour. Pharm., 3, p. 193.)

(Speaks of the above plant as yielding white ipecac of China.)

Committee.

1808.

Ipecacuanha.

Pharmacopoeia Mass. Med. Soc., p. 17.

Gives the official Latinized title, abbreviations, botanical source, and parts used.

Irvine, W.

1810.

(Ipecac).

Some observations upon diseases, etc., p. ___; (Coxe's Am. Dispens., 4 ed., p. 160; Eclect. Dispens., 1 ed., p. 134; King's Am. Dispens., 18 ed., v. 2, p. 241; Thacher's Am. Dispens., 2 ed., p. 251.)

(Aqueous extracts of ipecac are more emetic than alcoholic, and bark extracts more than wood extracts.)

—
Woodville, W.

1810.

Ipecacuanha.

Med. Botany, 2 ed., v. 4, p. 810; (Coxe's Am. Dispens., 1 ed., p. 249; *ibid.*, 4 ed., p. 159; Natl. Dispens., 2 ed., p. 784; *ibid.*, 3 ed., p. 837.)

A detailed description of the plant is given, including a colored illustration, and references.

—
Stokes, J.

1812.

Psychotria Ipecacuanha.

Bot. Mat. Med., v. 1, p. 365; (U. S. Dispens., 20 ed., p. 594.)

Assigns the above name to the plant yielding ipecac, according to the British Pharmacopoeia.

—
Aitken, —

Before 1813.

(Ipecac).

— p. ___; (Thacher's Am. Dispens., 2 ed., p. 242; *ibid.*, 4 ed., p. 253.)

Asserts that fifteen grains of jalap and two or three grains of ipecac purge more than the same amount of jalap alone.

Thacher, J.

1813.

(Ipecacuanha).

Am. Dispens., 2 ed., p. 241; *ibid.*, 4 ed., p. 251.

Gives two official Latin titles, parts used, habitat, uses, and method of administration.

Tussac, F. R.

1813.

(Ipecac).

Flora Antilloum, 1 ed., p. __; (U. S. Dispens., 21 ed., p. 589.)

(Reviews work done on the classification of the ipecacs, but his results have not been generally known.)

Committee.

1816.

Ipecacuanha.

Pharmacopoeia of the New York Hospital, p. 20.

Lists scientific name, common name, part used, etc.

Sec. d' Nat. et d' agr.

(1816-1819).

(Ipecacuanha).

Norweau Dictionnaire d' Histoire Naturelle, 1 ed., v. __, p. __; *ibid.*, 2 ed., v. __, p. __; (Coxe's Am. Dispens., 7 ed., p. 174.)

(Lists a number of American plants known by the name of "Ipecacuanha".)

Majendie, F., Pelletier, J.

1817.

Recherches chimi ques et physiologiques sur l' Ipecacuanha. (U. S. Dispens., 2 ed., p. 378; *ibid.*, 5 ed., p. 400; *ibid.*, 10 ed., p. 417; Guibourt, Hist. abreg. d drogues simples, v. 1, p. 514; *ibid.*, 2, p. 514; U. S.

Dispens., 12 ed., pp. 482-483; *ibid.*, 13 ed., pp. 495-496-497; *ibid.*, 14 ed., pp. 514-515-516; *ibid.*, 15 ed., pp. 815-816-817; *ibid.*, 17 ed., pp. 751-753; *ibid.*, 19 ed., p. 671; *ibid.*, 20 ed., pp. 595-597; *ibid.*, 21 ed., pp. 590-591; *Ecler. Dispens.*, p. 134; *Am. Dispens. Coxe's*, 7 ed., p. 175; *King's Am. Dispens.*, 18 ed., v. 2, p. 1073; *Nat. Dispens.*, 2 ed., p. 784; *ibid.*, 3 ed., p. 838; *ibid.*, 5 ed., p. 894.)

The results of a chemical and physiological investigation of the drug is given.

Bucholz, C.

1818.

Neue Analyze der Brechwurzel .

Almanch oder Lafchem. Buch., 39, p. 69; (*U. S. Dispens.*, 12 ed., p. 482; *ibid.*, 13 ed., p. 495; *ibid.*, 14 ed., p. 515; *ibid.*, 15 ed., p. 815; *ibid.*, 17 ed., p. 751.)

Lists the constituents that were found upon examining, using different types of solvents.

Humbolt, A.

1818.

(*Cephaelis Ipecacuanha*).

Genera et species, etc., v. 3, p. 276; (*U. S. Dispens.*, 12 ed., p. 481; *ibid.*, 13 ed., p. 494; *ibid.*, 14 ed., p. 513; *ibid.*, 15 ed., p. 814; *ibid.*, 17 ed., p. 750; *ibid.*, 19 ed., p. 670; *ibid.*, 20 ed., p. 595; *ibid.*, 21 ed., p. 590; *Am. Jour. Pharm.*, 3, p. 184.)

A comparison of various geographical forms of ipecac is recorded.

Richard, A.

1818.

Cephaelis Ipecacuanha.

Bull. de La Facul. de Med., 4, p. 92; *Hist. Ipecac*, 21 P. t. L. (*U. S. Dispens.*, 2 ed., p. 376; *ibid.*, 3 ed., p. 367; *ibid.*, 5 ed., p. 401; *ibid.*, 12 ed., p. 483; *ibid.*, 13 ed., p. 494; *ibid.*, 14 ed., p. 513; *ibid.*, 15 ed., p. 813; *ibid.*, 17 ed., p. 749; *ibid.*, 19 ed., p. 669; *ibid.*, 20 ed., p. 594; *ibid.*, 21 ed.,

p. 588; King's Am. Dispens., 18 ed., v. 2, p. 1071; Nat. Dispens., 2 ed., p. 783; *ibid.*, 3 ed., p. 837; *ibid.*, 5 ed., p. 893; *ibid.*, 5 ed., p. 895; Am. Jour. Pharm., 3, p. 184.)

Botanical origin, and complete description of this variety is given.

Jussieu, A. 1820.

Sur la famille des plantes Rubiacées.

Memoires der Museum O Nat. Hist., 6, p. 402; (Am. Jour. Pharm., 3, p. 184.)

Discusses various species of ipecac.

Merat, F. 1820.

Sur l' ipecacuanha blanc.

Bull. Fac. de Med. de Par., 7, pp. 89-92; (Am. Jour. Pharm., p. 184.)

A description of this variety of ipecac is recorded.

Pelletier, J. P. 1820.

Psychotria Emetica.

Jour. de Pharm., 12, p. 262; (Am. Jour. Pharm., 3, pp. 187-190.)

The results of an analysis of the above drug is given.

Richard, A. 1820.

Des différentes espèces d' ipecacuanha do commerce, etc.

Jour. de Pharm. et de Chim., 6, p. 261; (Am. Jour. Pharm., 3, p. 188; *ibid.*, 45, p. 170; U. S. Dispens., 21 ed., p. 589.)

In a dissertation discusses the botanical origin constituents, and therapeutics of several commercial varieties of ipecac.

Virey, J. 1820.

Eclaircissement sur l'histoire naturelle et medicale des ipecacuanhas.

Jour. De Pharm., 6, p. 267; (Am. Jour. Pharm., 3, p. 184.)

A description of the whole plant, from which ipecac is obtained.

Clark, T. Before 1821.

(Ipecac).

___ p. ___; (Coxe's Am. Dispens., 4 ed., p. 161; *ibid.*, 7 ed., p. 177; Thacher's Am. Dispens., 2 ed., p. 244; *ibid.*, 4 ed., p. 254.)

(Comments on the use of a decoction of the root of ipecac in treating piles and dysentery.)

Guibourt, N. J. 1822.

Des racines d' Ipecacuanha.

Histoire abrege des Drogues Simples, 2 ed., v. 1, p. 298; *ibid.*, 3 ed., v. 1, p. 506; (Am. Jour. Pharm., 73, p. 59.)

Discusses different varieties of ipecac and reports on a new variety called Carthagena.

Pelletier, J., Dumas, J. B. 1823.

Recherches sur la composition elementaire et sur quelques proprietes caracteristiques des bases salifiables organiques.

Ann. de Chim. et de Phys., Ser. 2, v. 24, p. 180; (Am. Jour. Pharm., 57, p. 532.)

Methods of extracting emetine from ipecac are given, also results of analyses of the alkaloid.

Martius, C. F.

1824.

Cephaelis Ipecacuanha.

Spec. Mat. Med. Brazil, p. 4; t. L., (U. S. Dispens., 2 ed., p. 376; *ibid.*, 3 ed., p. 367; *ibid.*, 4 ed., p. 399; *ibid.*, 10 ed., p. 416; *ibid.*, 10 ed., p. 419; *ibid.*, 12 ed., p. 483; *ibid.*, 13 ed., p. 494; *ibid.*, 14 ed., p. 513; *ibid.*, 15 ed., p. 813; *ibid.*, 17 ed., p. 750; *ibid.*, 19 ed., p. 670; *ibid.*, 19 ed., p. 671; *ibid.*, 21 ed., p. 588; Am. Jour. Pharm., 3, pp.181-187.)

A Complete description, including uses, methods of collection, etc., are given.

Martius, C. F.

1824.

Die Brech wurzeln brasiliens.

Specimen Materiae Medicae brasil, p. 14; (Report of d Pharm., 22, p. 1; Archiv. d Pharm., 18 ed., p. 265; Am. Jour. Pharm., 3, p. 195.)

A detailed account of ten different ipecacs of Brazil.

Berzelius, J.

1825.

Vegetabilische Chemie.

Berzelius Jahresbericht, 4, p. 179; (U. S. Dispens., 12 ed., p. 483; *ibid.*, 13 ed., p. 496.)

A method is given for obtaining emetine by treating the powdered root with dilute sulphuric acid, and precipitating with magnesia.

Hilaire, Saint A.

1825 or 1829.

(Ionidium species).

Flora brasiliae merideanales, v. 1 or 2, p. ___; (Am. Jour. Pharm., 3, p. 194; U. S. Dispens., 12 ed., p. 483; *ibid.*, 13 ed., p. 496; *ibid.*, 14 ed., p. 516; King's Dispens., 18 ed., v. 2, p. 1074.)

Descriptions of several species of the above genus are given.

Guibourt, N. J. B. 1826.

Des racines d' Ipecacuanha.

Histoire abrege des Drogues Simples, 2 ed., v. 1, p. 298; (Am. Jour. Pharm., 73, p. 59; U. S. Dispens., 5 ed., p. 402; *ibid.*, 10 ed., p. ___; *ibid.*, 12 ed., p. 484; *ibid.*, 13 ed., p. 496; *ibid.*, 14 ed., p. 516; *ibid.*, 15 ed., p. 816; *ibid.*, 19 ed., p. 671; *ibid.*, 20 ed., p. 595; Am. Jour. Pharm., 3 ed., p. 187.)

Gives a general account of ipecac and differs from Pelletier in the naming of the brown ipecac *Psychotria emetica*.

Thomson, A. T. 1826.

Cephaelis.

London Dispens., 4 ed., p. 246; (Coxe's Am. Dispens., 7 ed., p. 174.)

Discusses ipecac as to botanical origin, description of the plant, varieties, history, qualities, medicinal properties, uses, and preparations.

An American Physician. 1827.

Cephaelis.

Eclectic Dispens., 1 ed., p. 133.

Gives two scientific names, four Latin titles, four common names, description of plant, habitat, history, properties, qualities, uses, and official preparations of ipecac are given.

Paulitzky, H. F. Before 1827.

(Ipecac).

___ p. ___; (Coxe's Am. Dispens., 7 ed., p. 179; *ibid.*, 9 ed., p. 197.)

(Relates advantages of using ipecac in treating uterine hemorrhages and rheumatism.)

Pringle, ___ 1827.

(Ipecac).

___ p. ___; (Eclectic Dispens., 1 ed., p. 136; Coxe's Am. Dispens., 7 ed., p. 176.)

(The benefits derived from using ipecac in treating dysentery are given.)

Stephenson, J., Churchill, J. 1827.

(Ipecac).

Med. Botany, v. 1, p. ___; (Natl. Dispens., 2 ed., p. 784; *ibid.*, 3 ed., p. 837.)

(A description of the drug is given, with an illustration.)

Cleghorn, ___ Before 1831.

(Ipecac).

___ p. ___; (Eclectic Dispens., p. 135; Am. Dispens., 7 ed., p. 176.)

(The dose and method of administering ipecac in treating dysentery is given.)

Griffith, R. E. 1831.

Notes on Ipecacuanha.

Am. Jour. Pharm., 3, p. 181; (U. S. Dispens., 5 ed., p. 402; *ibid.*, 10 ed., p. 419; *ibid.*, 12 ed., p. 484; *ibid.*, 13 ed., p. 497; *ibid.*, 14 ed., p. 516; *ibid.*, 15 ed., p. 817.)

A lengthy detailed summary of early work done on this drug is given including a number of references, with one plate.

Kunth, K. S. 1831.

Ionidium ituba.

__ p. __; (Am. Jour. Pharm., 3, p. 195.)

A brief description of the plant is given.

Merat, F., De Lens, A. J. 1831.

Ipecacuanha Strie.

Dict. de Matiere Medicale, v. 3, p. 643; (Am. Jour. Pharm., 45, p. 170; U. S. Dispens., 21 ed., p. 588.)

A description of the striated ipecac obtained from *Psychotria emetica* is given.

Richard, A. 1831.

Cephaelis Ipecacuanha.

Dict. des Drogues, v. 3, p. 256; (Am. Jour. Pharm., 3, p. 184.)

Description of plant, method of collection, etc., appears.

Sprengel, K. Before 1832.

(Ipecac).

Hist. de La Med., v. 5, p. 468; (Coxe's Am. Dispens., 7 ed., p. 178.)

(Mentions treating cases of dysentery with a decoction of ipecac.)

Wight, R., Arnott, G.

1834.

(Naregania Alata).

Prodomus Florae Peninsulae Indiae Orientalis, v. 1, p. —;
(King's Am. Dispens., 18 ed., v. 2, p. 1077; Nat.
Dispens., 3 ed., p. 840.)

(A description of this false ipecac is given, also
its uses and dose.)

Griffith, R. E.

1835.

Ionidium Marcucci.

Am. Jour. Pharm., 7, p. 186; (U. S. Dispens., 10 ed.,
p. 419; *ibid.*, 12 ed., p. 489; *ibid.*, 13 ed., p. 497;
ibid., 14 ed., p. 516; *ibid.*, 15 ed., p. 817; *ibid.*,
17 ed., p. 753; *ibid.*, 21 ed., p. 590.)

The root of the above plant is similar in medi-
cinal properties to that of ipecac.

Soubeiran, E.

1835.

Sur la Lixiviation appliquee aux matieres d'
origini vegetale et animale.

Bull. gen. de Therap., v. 9, p. 382; (Am. Jour.
Pharm., 8, p. 225.)

States that in lixiviation ipecac is to be com-
pressed tolerably firmly.

Wood, G. B., Bache, F.

1836.

Ipecacuanha U. S.

(U. S. Dispens., 3 ed., p. 366; *ibid.*, 5 ed., p. 398;
ibid., 10 ed., p. 415; *ibid.*, 2 ed., p. 375; *ibid.*,
12 ed., p. 480; *ibid.*, 13 ed., p. 493; *ibid.*, 14 ed.,
p. 512; *ibid.*, 15 ed., p. 812; *ibid.*, 17 ed., p. 749;
ibid., 19 ed., p. 669; *ibid.*, 20 ed., p. 594; *ibid.*,
21 ed., p. 588.)

Gives two scientific names, four official Latin titles, four common names, origin of word, description of the plant, history, habitat, constituents, medical properties, uses, and official preparations.

Gay, M. 1837.

Ipecacuanha Privé De La Substance Nauseuse.

Jour. de Chemie Med., Ser. 2, 3, p. 501; (Am. Jour. Pharm., 11, p. 82.)

Describes a method of getting rid of nauseous taste of ipecac.

Turnhill, J. 1842.

Cases treated at Wolverhampton Dispensory and Casualty Hospital.

London Lancet., v. 2, p. 74; (U. S. Dispens., 5 ed., p. 402; *ibid.*, 10 ed., p. 420; *ibid.*, 12 ed., p. 485; *ibid.*, 13 ed., p. 498; *ibid.*, 14 ed., p. 516.)

The use of ipecac as a counter-irritant is discussed.

(Curtis, W.) 1844.

(*Cephaelis Ipecacuanha.*)

Bot. Mag. N. S. v. 17, pl. 4083; (U. S. Dispens., 10 ed., p. 416; *ibid.*, 13 ed., p. 494; *ibid.*, p. 513; *ibid.*, 15 ed., p. 813; *ibid.*, 17 ed., p. 750; *ibid.*, 19 ed., p. 670.)

(A description of the plant is given, in connection with a colored plate.)

Redwood, T. 1849.

On drug grinding.

Pharm. Jour., 8, p. 218; (Am. Jour. Pharm., 21 ed.,

p. 31.)

Lists results obtained from forty-two drugs using different systems of grinding, data on ipecac is included.

Weddell, H. A.

1849.

Note Sur Le Cephaelis Ipecacuanha.

Ann. des Sciences Naturelles, ser. 3, v. 11, p. 193;
(Am. Jour. Pharm., 73, p. 59.)

The botanical source of the official reorganized drug Rio Ipecacuanha is given as above, giving numerous references.

Guibourt, N. J.

1850.

Cephaelis.

Histoire Naturelle des Drogues Simples, 4 ed., v. 3,
p. 82; (Am. Jour. Pharm., 73, p. 59.)

Gives descriptions of several varieties of ipecac, their botanical and geographical source, and some other points.

Weddell, H.

1850.

Sur Le Cephaelis Ipecacuanha.

Rep. d Pharm., 6, p. 55; (Jour. de Pharm., ser. 3, v. 16,
p. 34; U. S. Dispens., 12 ed., p. 480; *ibid.*, 13 ed.,
p. 494; *ibid.*, 14 ed., p. 512; *ibid.*, 15 ed., p. 813;
ibid., 17 ed., p. 749; *ibid.*, 19 ed., p. 669; *ibid.*,
20 ed., p. 594; Am. Jour. Pharm., 22, p. 138; Pharm.
Jour., 9, p. 332.)

Origin of name, habitat, method of cultivation, and general description is given.

Willick, E.

1851.

Ueber die wurzel die Cephaelis Ipecacuanha.

Chem. Central Blatt., 22, p. 55; (U. S. Dispens., 10 ed., p. 417; *ibid.*, 12 ed., p. 482; *ibid.*, 13 ed., p. 495; *ibid.*, 14 ed., p. 515; *ibid.*, 15 ed., p. 815; *ibid.*, 17 ed., p. 751; *ibid.*, 19 ed., p. 673; *ibid.*, 20 ed., p. 597; *ibid.*, 21 ed., p. 592; King's Am. Dispens., 18 ed., v. 2, p. 1073; Natl. Dispens., 1 ed., p. 784; *ibid.*, 2 ed., p. 784; *ibid.*, 3 ed., p. 838; *ibid.*, 5 ed., p. 894; Pharm., Jour. 10, p. 608; Am. Jour. Pharm., 23, p. 352.)

Gives the composition of ipecac root as follows: fat, volatile oil, gum, starch, pectin, emetin, woody fibre, and ipecacuanhic acid.

Rochleder, F.

1852.

Ueber die naturliche Familie der Rubiaceae.

Bericht akad. der wissensch. zu wein math. Phys. Chem. v. 8, pp. 3-17; (Chem. Gas., 10, p. 286; Am. Jour. Pharm., 25, p. 242; Annal de Chemie., 37, pp. 265-269; Liebig Annal., 83, pp. 64-82; Erdm. Jour. Prak. Chem., 58, pp. 103-118.)

A study of nine drugs in the Rubiaceae family, among which is ipecac. The paper deals chiefly with the acids found in the different members.

Procter, W.

1853.

Carthagens Ipeca.

Am. Jour. Pharm., 25, p. 474; (U. S. Dispens., 10 ed., p. 417; *ibid.*, 12 ed., p. 482; *ibid.*, 13 ed., p. 495; *ibid.*, 15 ed., p. 514.)

The firm of Haskell, Merrick, and Bull of New York contributed a specimen of grey Carthagens ipecac, which is described in detail.

Carson, J.

1856.

Ipecacuanha Plants.

Am. Jour. Pharm., 28, p. 287.

Received living ipecac plants from Brazil, and were placed in the greenhouse of Prof. Wood. These were the first specimens of this plant to reach this country.

Hayne, F. G. 1856.

Cephaelis Ipecacuanha.

Med. Bot., v. 8, p. 20; (U. S. Dispens., 3 ed., p. 370; *ibid.*, 5 ed., p. 401; *ibid.*, 10 ed., p. 418; *ibid.*, 12 ed., p. 483; *ibid.*, 13 ed., p. 496; *ibid.*, 14 ed., p. 516; *ibid.*, 15 ed., p. 816.)

A detailed description of the species, its varieties, uses, with full page illustration of the drug is given.

Lindley, J. 1856.

Cephaelis.

Med. & Econ. Bot., p. 238; (King's Am. Dispens., 6 ed., p. 211; *ibid.*, 8 ed., p. 202; *ibid.*, 10 ed., p. 202; *ibid.*, 18 ed., v. 2, p. 1071; U. S. Dispens., 10 ed., p. 419; *ibid.*, 12 ed., p. 484; *ibid.*, 13 ed., p. 497; *ibid.*, 14 ed., p. 516; *ibid.*, 15 ed., p. 671; *ibid.*, 19 ed., p. 671; *ibid.*, 20 ed., p. 595; *ibid.*, 21 ed., p. 590.)

Gives the botanical source, and a complete description of the whole plant.

Pecholier, K. 1862.

(Emetine).

Bull. de Therap., 17, 64, __p. __; (Natl. Dispens., 3 ed., p. 840.)

(Experimental work shows effect of emetine on lungs.)

Reich, H. 1863.

Betrachtung der verschiedenen Sortm der Rad. Ipecacuanha mit Berucksichtigung und Beschreibung des

pharmakognostischen, etc.

Archiv. der Pharm., ser. 2, v. 113, p. 193; (King's Am. Dispens., 18 ed., v. 2, p. 1072; Natl. Dispens., 3 ed., p. 839; *ibid.*, 5 ed., p. 895; Am. Jour. Pharm., 73, p. 58; U. S. Dispens., 15 ed., p. 815; *ibid.*, 17 ed., p. 751; *ibid.*, 19 ed., p. 673; *ibid.*, 20 ed., p. 597; *ibid.*, 21 ed., p. 592.)

Discusses in detail a number of botanical and chemical characteristics of the various ipecacs of commerce.

King, J.

1864.

Cephaelis Ipecacuanha.

Am. Dispens., 6 ed., p. 210; *ibid.*, 8 ed., p. 201; *ibid.*, 10 ed., p. 201; *ibid.*, 18 ed., v. 2, p. 1071.

Gives the official Latin title, part used, description of drug, history, properties, uses, doses, and official preparations of ipecac.

B(aillon), H.

1865.

Ipecacuanha.

Dict. de Science de Medicale, ser. 4, 16, p. 591; (Am. Jour. Pharm., 3, p. 184.)

Records description of numerous species of ipecac, botanical origin, medicinal uses, etc.

Hooker, W.

Before 1865.

(*Ionidium parviflorum* Ventenat.)

___ p. ___; (U. S. Dispens., 12 ed., p. 484; *ibid.*, 13 ed., p. 497; *ibid.*, 14 ed., p. 516; *ibid.*, 15 ed., p. 817; *ibid.*, 17 ed., p. 753; *ibid.*, 19 ed., p. 671; *ibid.*, 20 ed., p. 595.)

(The root of a species of *Ionidium* growing in Quito and named by Bancroft, *Ionidium Marcucci*, was found to be the above plant.)

Durant, J. J. 1866.

(Mudar, a substitute for Ipecacuanha in the Treatment of Dysentery.)

Indian Med. Gazette, 1, p. ___; (Am. Jour. Med. Science, p. ___; Am. Jour. Pharm., 39, p. 62.)

The above drug, Mudar, is used as a substitute for ipecac.

—

Covell, T. 1867.

A Contribution to the Statistics of Drug Powdering.

Am. Jour. Pharm., 39, p. 116.

A list of forty drugs, giving the yield and loss of weight by drugs prepared by certain different powdering methods is given, including data on ipecac.

—

Vogl, A. 1867.

Zur Pharmacog. der Ipecacuanha.

Zeitschrift der oesterr. Apoth. Vereines, 5, p. 461; (Am. Jour. Pharm., 45, p. 171; Jahresbericht d' Pharmacog., 2, p. 64.)

Discusses the above drug as a form of minor striated ipecac, also describes other varieties.

—

Anderson, T. 1869.

Cultivation of Ipecacuanha in India.

Gazette of India, Jan. 23, p. ___; (Am. Jour. Pharm., 42, p. 436; Pharm. Jour., 30, p. 170.)

A strong representation to the Government on the advisability of introducing the cultivation of the ipecac plant in India in an analagous to cinchona.

—

Attfield, J. 1869.

The Assay of Ipecac.

Pharm. Jour., 11, p. 141; (Am. Jour. Pharm., 45, p. 170.)

The striated ipecac contains sugar, and is of no distinct value. A table is given showing the percent of pure emetine, and other constituents are listed.

Guibourt, N. J. B. 1869.

Racines d' l' Ipecacuanha.

Hist. Nat. des Drogues Simples 6 ed., 3, p. 94; (Am. Jour. Pharm., 45, p. 170.)

Several varieties of ipecac are described and illustrations given.

Lefort, M. J. 1869.

Recherches sur la preparations, les propriétés et la composition de l' emetine.

Jour. de pharm. et de Chim., ser. 4, v. 9, p. 241; (Am. Jour. Pharm., 49, p. 307; *ibid.*, 65, p. 485.)

Discusses the history, preparation, and chemical composition of emetine.

Lefort, M. J. 1869.

Examen Comporatif des ipecacuanhas des Brasil et de la Nouvelle-Grenade on de Carthagene.

Jour. de pharm. et de Chem., ser. 4, v. 9, p. 167; (U. S. Dispens., 13 ed., p. 498; *ibid.*, 14 ed., p. 517; *ibid.*, 15 ed., pp. 815-817; *ibid.*, 19 ed., p. 671; *ibid.*, 17 ed., p. 751; King's Am. Dispens., 18 ed., v. 2, p. 1072; Nat. Dispens., 2 ed., p. 784; *ibid.*, 3 ed., p. 838; *ibid.*, 5 ed., p. 894; Am. Jour. Pharm., 41, p. 305.)

Results given from examining specimens of ipecac from Brazil and from New Grenada.

Durand, G. 1870.

Etude des differentes racines d' Ipecacuanha de

Commerce.

Jour. d. Pharm. et d Chim., 95, p. 404; (Am. Jour. Pharm., 45, p. 113.)

Results obtained upon examining different specimens of striated ipecac are given.

Thenot, L.

1870.

De la Cellule Vegetable, de son importance au point de Vue de la matiere medicale.

Thesis de Ecole de Pharm. de Paris, (Am. Jour. Pharm., 45, p. 113.)

Among many other drugs discusses the difference between two forms of striated ipecac.

Menier, C.

1871.

Etude Bot. Chim. et Microphique, pp. 28; (Am. Jour. Pharm., 45, p. 113.)

Submitted all true and false ipecacs to microscopical examination, recording his results.

Balfour, J. H.

1872.

Remarks on the Ipecacuanha plant, as cultivated in the royal Botanic Gardens of Edinburgh.

Trans. Roy. Soc. Edin., v. 26, p. 781; Pharmacographia, 2 ed., p. 370; (Am. Jour. Pharm., 64, p. 162; *ibid.*, 45, p. 171.)

Two different varieties of ipecac were propagated.

Duckworth, D.

1872.

Notes on the Pharmacy of Ipecacuanha.

Pharm. Jour., 31, p. 721; (Am. Jour. Pharm., 44, p. 230.)

Relates work done on ipecac, involving physiological and therapeutical action of the drug.

King, H. 1872.

Ipecacuanha Cultivation in India.

Pharm. Jour., 32, p. 328; U. S. Dispens., 14 ed., p. 514.

The results of experimental work, pertaining to cultivation of ipecac in India are given.

Planchon, G. 1872.

Note sur les Ipecacuanhas stries.

Jour. de pharm. et de chim., ser. 4, 16, p. 404; *ibid.*, 17 ed., p. 19; (Pharm. Jour., 32, p. 521; Am. Jour. Pharm., 45, p. 112; *bull. sec. lot. France*, 19, p. 105; U. S. Dispens., 14 ed., p. 516; *ibid.*, 15 ed., p. 817; *ibid.*, 17 ed., p. 752; *ibid.*, 19 ed., p. 671; *ibid.*, 20 ed., p. 594; *ibid.*, 21 ed., p. 590; King's Am. Dispens., 18 ed., v. 2, p. 1074; Nat. Dispens., 2 ed., p. 785; *ibid.*, 3 ed., p. 839; *ibid.*, 5 ed., p. 895.)

A number of unofficial varieties of ipecac are dealt with.

Pocklington, H. 1872.

The Microscope in Pharmacy.

Pharm. Jour., 31, p. 921; (Am. Jour. Pharm., 45, p. 171.)

The results of a microscopical examination of the roots of *Cephaelis Ipecacuanha* and *Psychotria emetica* are given.

Zenoffsky, O. 1872.

Die quantitative Bestimmung des Alkaloidgehaltes der Ipecacuanha, des aconitum, der nicotine, und des conium.

Pharm. Zeitg Russl., 11, p. 43; (Natl. Dispens., 2 ed., p. 784; *ibid.*, 3 ed., p. 838; *ibid.*, 5 ed., p. 894.)

The emetine content of ipecac is using Mayer's reagent in titrating.

(Director).

1873.

(Ipecac).

Ann. Rpt. Roy. Bot. Gardens of Calcutta May 31, 1873; p. ___; (U. S. Dispens., 20 ed., p. 595; Flueckiger and Handburg Pharmacographia, 1 ed., p. 33; *ibid.*, 2 ed., p. 373.)

(A Dr. King was first to attempt to cultivate ipecac in India in 1866.)

Dragendorff, G.

1874.

Ipecacuanha.

Werthbestimmung einiger starkwirdender Drogen, __ p. __; (Am. Jour. Pharm., 48, p. 359.)

Methods for the assay of ipecac are given, also records results from numerous samples.

Mercer, M. J.

1874.

The adulteration of Powdered Ipecacuanha.

Pharm. Jour., 33, p. 569; (Jour. de Pharm. et de Chem., 19, p. 479; U. S. Dispens., 14 ed., p. 515; *ibid.*, 15 ed., p. 815; *ibid.*, 17 ed., p. 751; *ibid.*, 19 ed., p. 673.)

A method for telling if ipecac powder has been adulterated with almond powder.

Ringer, S., Murrell, W.

1874.

On Ipecacuanha spray in winter cough and bronchitic

asthma.

The Lancet, v. 2, p. 338.

Records results obtained in treating numerous patients, with severe colds, with a spray containing ipecac.

Glenard, M. A.

1875.

Recherches sur l'emetine.

Jour. de pharm. et chim., ser. 4, v. 22, p. 175; (Am. Jour. Pharm., 57, p. 532.)

A process for extracting emetine using ether as a solvent is described.

Glenard, A.

1876.

Recherches sur l'Alcaloide de l' ipecacuanha.

Ann. de chim. et de phys., ser. 5, v. 8; p. 233; (U. S. Dispens., 15 ed., p. 815; *ibid.*, 17 ed., p. 751; Am. Jour. Pharm., 73, p. 61.)

Discusses the results of analyses of the alkaloids of ipecac.

Hanbury, D.

1876.

Ipecacuanha.

Science Papers, pp. 191, 340, 343, 414; (U. S. Dispens., 19 ed., p. 671; Am. Jour. Pharm., 45, p. 170.)

Records descriptions of several varieties, method of cultivation, habitat, etc.

King, H. S.

1876.

Ipecacuanha and Vanilla cultivation in India.

Pharm. Jour., 36, p. 433; (Am. Jour. Pharm., 49, p. 38.)

Propagation of the plant in India, and uses of the drug are related.

Rutherford, W., Vignal, W. 1876.

Experiments on the biliary secretion of the dog.

Jour. Anat. Physiol., 10, p. 253; (Natl. Dispens., 2 ed., p. 783; *ibid.*, 3 ed., p. 840.)

Relates the results of experiments, carried out on dogs, with high doses of powdered ipecac.

Stewart, T. M. 1876.

Valuation of Powdered Ipecac Root and Dover's Powder, as Found in the Market.

(Am. Jour. Pharm., 48, p. 359.)

In a contribution from the School of Pharmacy of the University of Michigan, records the results of determining the amount of emetine in the above product.

Lefort, J., Wurtz, F. 1877.

Memoire sur la preparation et la composition de l'emetine.

Jour. de pharm. et de chim., ser. 4, v. 25, p. 16; (Ann. de chim. et de phys., ser. 5, v. 12, p. 277; Am. Jour. Pharm., 57, p. 533; *ibid.*, 65, p. 486; *ibid.*, 73, p. 62; U. S. Dispens., 15 ed., p. 815; *ibid.*, 17 ed., p. 751.)

A process of extracting emetine from ipecac, which varies slightly from Glinard's method.

Power, F. B. 1877.

Notes upon a reaction of emetia.

Am. Jour. Pharm., 49, p. 391; (Natl. Dispens., 2 ed.,

p. 784; *ibid.*, 3 ed., p. 839; *ibid.*, 5 ed., p. 894; U. S. Dispens., 15 ed., p. 815; *ibid.*, 17 ed., p. 752.)

Reactions of acetic acid and chlorinated lime on emetine are given.

Carriger, — 1878.
(Ipecac).

New York Med. Jour., 28, p. —; (Natl. Dispens., 5 ed., p. 897.)

Comments on the medicinal use of ipecac, when administered to confined women.

Foulkrod, J. K. 1878.

The physiological action of Ipecac and its alkaloids.

Inaugural Thesis, Univ. of Penn., Phil. Med. Times, 8, p. 553; (Natl. Dispens., 2 ed., p. 786; *ibid.*, 3 ed., p. 840.)

A number of experiments, relative to the physiological uses of ipecac and emetine, are given.

Podwysotszki, V. 1879.

Beitrage zur Kenntniss des Emetins.

Archiv. exper. Pathol., 11, p. 231; (Pharm. zeitg f. Russl., 19, p. 1; Pharm. Jour. 40, p. 642; Am. Jour. Pharm., 57, p. 533; *ibid.*, 65, p. 486; *ibid.*, 73, p. 63; Nat. Dispens., 3 ed., p. 839; *ibid.*, 5 ed., p. 895; U. S. Dispens., 15 ed., p. 815; *ibid.*, 17 ed., p. 752; King's Am. Dispens., 18 ed., v. 2, p. 1072.)

Records results of his chemical investigation of emetine.

Stille, A., Maisch, J. 1879.

Ipecacuanha.

Natl. Dispens., 1 ed., p. 783; *ibid.*, 2 ed., p. 783;
ibid., 3 ed., p. 837; *ibid.*, 5 ed., p. 893.

Official Latin title, common name, part used,
source, constituents, substitutions, physiological
action, medicinal uses, and administration of ipecac
are discussed.

Barnes, J. B. 1880.

Ipecacuanha wine.

Am. Jour. Pharm., 40, p. 259; (U. S. Dispens., 15 ed.,
p. 816; *ibid.*, 17 ed., p. 752.)

Describes the method of preparation, the products
obtained, its uses, and dose.

Bentley, R., Trimen, H. 1880.

Cephaelis Ipecacuanha.

Med. Plants, v. 2, p. 145; (King's Am. Dispens., 18 ed.,
v. 2, p. 1071; Natl. Dispens., 2 ed., pp. 784, 875;
ibid., 3 ed., pp. 837, 840; *ibid.*, 5 ed., p. 893.)

Gives a description of plant, with a colored
illustration, medicinal properties, and uses.

Cook, — 1880.

(Ipecac).

Practitioner, 25, p. 104; (Natl. Dispens., 3 ed.,
p. 841; *ibid.*, 5 ed., p. 897.)

(Comments on the use of ipecac in treating
catarrhal jaundice, in increasing flow of bile, and
also other general uses.)

Fayrer, J. 1881.

Chronic Dysentery.

Med. Times and Gaz., 11, p. 143; (Natl. Dispens., 3 ed., p. 842; *ibid.*, 5 ed., p. 898.)

Discusses effect of treating dysentery with ipecac.

Müller, J. 1881.

Psychotria Ipecacuanha.

Martius Flora Brazil, 84, v. 6, pt. 5, p. 342; (King's Am. Dispens., 18 ed., v. 2, p. 1071.)

Gives a detailed description of the plant, with comments, and a folio plate number 52.

Pitkin, L. 1882.

On the use of ipecacuanha during labor.

Med. Record, 21, p. 601; (Natl. Dispens., 5 ed., p. 897.)

Relates instances where ipecac was administered to increase expulsive power of uterus.

Arndt, E. M. 1883.

Über eine fluchtige Base in der Brechwurzel.

Apoth. Zeitg., 3, p. 1036; (Am. Jour. Pharm., 61, p. 79; *ibid.*, 63, p. 93; Nat. Dispens., 5 ed., p. 895.)

Refers to various methods used in separating emetine. The most satisfactory ones are the ferric chloride, and the potassium carbonate methods.

Dymock, W. 1885.

(Naregamia Alata).

Vegetable Materia Medica of Western India, 20 ed., p. ___; (Pharm. Jour., 47, p. 318; Am. Jour. Pharm., 59, p. 575.)

(Comments on the uses of Gouneze ipecac, in-

digenous to India.)

Lyons, A. B.

1885.

A simple method of assaying crude ipecac.

Proc. Mich. Pharm. Assoc., 3, p. 185; (Am. Jour. Pharm., 57, p. 531; (U. S. Dispens., 17 ed., p. 753; *ibid.*, 19 ed., p. 674; *ibid.*, 20 ed., p. 598.)

Methods of assaying ipecac are given.

Naylor, A. H.

1885.

The Comparative Strength of Certain Preparations of Ipecacuanha.

Yrbk. Brit. Pharm. Conf., 23, p. 497; (Am. Jour. Pharm., 58, p. 25.)

Results recorded from work done on a wine, fluid-extract, and vingegar of ipecac.

Pennington, J.

1885.

A Simple Method of Assaying Crude Ipecac.

Am. Jour. Pharm., 57, p. 531; *ibid.*, 60, p. 529.

Fifteen samples of ipecac were assayed by Dr. Lyon's process.

Fluckiger, F. A.

1886.

Zur Werthbestimmung der Ipecacuanha.

Pharm. Zeitg., 31, p. 30; (Pharm. Jour., 46, p. 277; U. S. Dispens., 17 ed., p. 752; *ibid.*, 19 ed., p. 675; *ibid.*, 20 ed., p. 598; Natl. Dispens., 3 ed., p. 839.)

Comments on numerous tests for identity are given, also modified methods for assaying.

Jones, H. W.

1886.

Notes on the estimation of Emetine.

Pharm. Jour., 46, p. 277; (U. S. Dispens., 17 ed., p. 753; *ibid.*, 20 ed., p. 598.)

A modification of previous methods of assaying ipecac is given.

Lyons, A. B.

1886.

Assay of Ipecacuanha.

Pharm. Assaying, 1 ed., p. 108; (Am. Jour. Pharm., 71, p. 472.)

Methods of extraction and assaying are given.

Hooper, D.

1887.

Naugamia Alata, The Goanese Ipecac.

Am. Jour. Pharm., 59, p. 575.

A description of the plant, habitat, uses and chemical composition are discussed.

Kunz, H.

1887.

Beitrage zur Kenntniss des Emetins.

Jahrb. der Pharm., 22, p. 416; (Chem. ztg. Rep., p. 172; Archiv. d. Pharm., 225, p. 461; Pharm. zeitg., 32, p. 398; Pharm. Centrehl., 28, p. 423; Schnr. wochens f. Pharm., 25, p. 283; Rundsch f. d. Interesse d. Pharm., p. 566; King's Am. Dispens., 18 ed., v. 2, p. 1072; Am. Jour. Pharm., 73, p. 63; U. S. Dispens., 20 ed., p. 598; *ibid.*, 21 ed., p. 592; Natl. Dispens., 5 ed., p. 895.)

Describes work done in determining chemical formula of emetine.

Munn, H. E. 1887.

The Composition of the Ash of Ipecacuanha Root.

Pharm. Jour., 46, p. 898; (Am. Jour. Pharm., 59, p. 446.)

Records the results obtained from analysis of ash content of ipecac root.

Ransom, F. 1887.

Notes on the estimation of Ipecacuanha.

Yrbk. Brit. Pharm. Conf., 24, p. 450; (Am. Jour. Pharm., 59; p. 520.)

Describes method of extraction and records the results of numerous assays of ipecac.

Verardini, F. 1887.

Studi Chimico sperimentali sull azione della radice d' ipecacuanha dell émetine dell acido, etc., pp. 23, Bolagna.

Phila. Med. Times, 11, p. 430; (Natl. Dispens., 3, p. 841; *ibid.*, 5, p. 896.)

Discusses ipecac and its preparations in regards to their medicinal value.

Ransom, F. 1888.

Note on Cephaelis Tomentoso.

Pharm. Jour., 48, p. 259; (U. S. Dispens., 17 ed., p. 750; *ibid.*, 19 ed., p. 670; *ibid.*, 20 ed., p. 594; *ibid.*, 20 ed., p. 597; *ibid.*, 21 ed., p. 591.)

An assay of the above drug was completed and the results listed.

Tschirch, A., Ludtke, F. 1888.
Uber Ipecacuanha.

Archiv. der Pharm., 226, p. 441; (King's Am. Dispens., 18 ed., v. 2, p. 1072.)

records results of microscopical and chemical observations of true ipecac.

Baithwaite, J., Umney, J. C. 1889.

Standardization of Preparation.

Yrbk. Brit. Pharm. Conf., 26, p. 394; (Am. Jour. Pharm., 61, p. 529.)

Gives a method for the extraction of alkaloids of ipecac. The wine of ipecac is inferior in therapeutic value because of method of extraction. A method for standardizing ipecac preparations is also given.

Blunt, T. P. 1889.

Notes on a volumetric process for the assay of ipecacuanha wine.

Brit. Pharm. Conf., 26, p. 397; (Am. Jour. Pharm., 61, p. 530.)

A method for the assay of ipecac wine is given.

Watt, H. 1889.

Emetine.

Dictionary of Chemistry, 2 ed., v. 2, p. 431; (Am. Jour. Pharm., 65, p. 485.)

Discussion of the physical characters of the alkaloids of ipecac, their methods of preparations, etc.

Arndt, E. M. 1890.

Über Brechwurzel und Emetin.

Apoth. Zeitz., 5, p. 780; (Am. Jour. Pharm., 63, p. 94.)

Gives two methods for examining the drug, one quantitatively, and two qualitatively. Also refers to volatile alkaloid choline from drug.

Blunt, T. P. 1890.

An Attempt to Determine Emetine by Alkalimetric Titration.

Pharm. Jour., 49, p. 809; (Am. Jour. Pharm., 73, p. 65.)

Gives results of experiments carried out to determine amount of emetine in ipecac, as above mentioned.

Baillon, H. 1891.

Uragoga Ipecacuanha.

Dict. de Bot., v. 3, p. 133; (U. S. Dispens., 21 ed., p. 589.)

Lists several varieties of ipecac, including the above type, and one plate.

Fluckiger, F. A. 1891.

Radix Ipecacuanha.

Pharmacognosie Des Pflanzenreiches, 3 ed., p. 421; (King's Am. Dispens., 18 ed., v. 2, p. 1072.)

A general account with descriptions and uses of ipecac, and some of its constituents are given.

Holmes, E. M. 1891.

The Ipecacuanhas of English Commerce.

Yrbk. Br. Pharm. Conf., 30, p. 402; (U. S. Dispens., 17 ed., p. 753; *ibid.*, 19 ed., p. 671; *ibid.*, 20 ed., p. 595; *ibid.*, 21 ed., p. 590.)

Gives botanical sources and a description of a false ipecac, with data on other varieties of ipecac.

Hooper, D. 1891.

A New Alkaloid in Tylophora.

Pharm. Jour., 50, p. 617; (Natl. Dispens., 5 ed., 896, Am. Jour. Pharm., 63, p. 228.)

The method of isolating the alkaloid tylophorine is given, also description.

Caesar & Loretz. 1892.

Radix Ipecacuanha.

Geschäfts Bericht., ___, p. 48; (Apoth. Zeitg., 7, p. 464; Am. Jour. Pharm., 64, p. 568; *ibid.*, 65, p. 488; Pharm. Jour., 52, p. 267.)

Discusses the text of the German Pharmacopoeia, third edition, on ipecac and makes numerous comments, based on commercial material.

Hooper, D. 1892.

The value of the Unofficial Parts of Ipecacuanha.

Pharm. Jour., 51, p. 591; (Am. Jour. Pharm., 64, p. 162.)

Relates experimental work done showing that whole ipecac plant contains active emetic principle.

Keller, C. C. 1892.

Die Bestimmung der Emetins in Radix Ipecacuanha und in Extractum Ipecacuanha fluidum.

Schur. wochs f. ch. n. Pharm., 30, pp. 501-509; (Proc. Am. Pharm. Assoc., 41, p. 400; Am. Jour. Pharm., 65, p. 81; King's Am. Dispens., 18 ed., v. 2, p. 1073.)

Criticisms pertaining to Swiss Pharmacopoeia method of assaying ipecac root are given.

Kottmayer, G. 1892.

Über Emetin Bestimmung.

Pharm. Post., 25, pp. 913, 933; (Am. Jour. Pharm., 64, p. 520.)

Six methods for assaying ipecac for emetine content are given.

Sakurai, J. 1892.

Modification of Beckmann's Method of determining molecular weights of substances in solution.

Jour. Chem. Soc., 61, p. 989; (Am. Jour. Pharm., 73, p. 113.)

Data on the molecular weight determinations of ipecac alkaloids is included.

Attfield, J. 1893.

Reports on Two Samples of Ipecacuanha.

Pharm. Jour., 53, p. 48; (U. S. Dispens., 14 ed., p. 517; *ibid.*, 15 ed., p. 817; *ibid.*, 17 ed., p. 753; *ibid.*, 19 ed., p. 671; *ibid.*, 20 ed., p. 594; *ibid.*, 21 ed., p. 595; Am. Jour. Pharm., 65, p. 391.)

Was unable to determine what plant these were obtained from. Gives a description of drug and the percent of alkaloids present.

Dohme, A. R. 1893.

Recent Experiments with Ipecac Root.

Proc. Am. Pharm. Assoc., 41, p. 169; (King's Am. Dispens., 18 ed., v. 2, p. 1073; U. S. Dispens., 17 ed., p. 751.)

The article pertains to a description of drug, with diagrams showing location of alkaloids, also methods for assaying are given.

Keller, C. C. 1893.

Determination of Emetine in Ipecacuanha.

Pharm. Jour., 52, p. 592; (Am. Jour. Pharm., 65, p. 488.)

Method for the extraction of emetine and the results obtained, are given.

Paul, B. H., Cownley, A. J. 1893.

The Chemistry of Ipecac.

Pharm. Jour., 53, p. 61; *ibid.*, 54, p. 373; (Am. Jour. Pharm., 67, p. 256; *ibid.*, 65, p. 484; *ibid.*, 73, p. 215.)

A description of the alkaloid emetine also chemical properties, percentage variations in stems and roots, and general assay methods given.

Andree, A. 1894.

Weisse Ipecacuanha Zwischen Rad. Senegae.

Apoth. Zeitg., 9, p. 23; (Am. Jour. Pharm., 66, p. 143.)

States that white ipecac was found in a shipment of senega. It was probably due to the fact that the senega was growing near a section of white ipecac.

Merck, E. 1894.

Cephaelis Crystallista.

Berichte, no. 113, p. 50; Merck's Annual Report, no. 115, p. 47; (Am. Jour. Pharm., 73, p. 114.)

Carried out important research on the alkaloids of ipecac.

Rusby, H. H.

1894.

Observations of a Pharmacognosist in England.

Alumni Jour. New York College of Pharm., 1, p. 55;
(Am. Jour. Pharm., 66, p. 244.)

Methods given for fixing, including staining and picked over Carthagena ipecac, so as to pass government inspection is given.

Bird, F. C.

1895.

Acetic Extract of Ipecacuanha.

Yrbk. Brit. Pharm. Conf., 32, p. 402; (Am. Jour. Pharm., 67, p. 473.)

A record of experiments made to determine a method of preparing wine of ipecac, whereby the alkaloidal loss would be decreased.

Cripps, R. A.

1895.

Notes of a Research Upon Ipecacuanha.

Yrbk. Brit. Pharm. Conf., 32, p. 320; (Pharm. Jour., 55, p. 159; Am. Jour. Pharm., 67, p. 470; U. S. Dispens., 19 ed., p. 671; *ibid.*, 20 ed., p. 595.)

A lengthy discussion on the results obtained from experimental work with ipecac is given.

Dohme, A. R.

1895.

The Alkaloidal Value of Ipecac Stems.

Am. Jour. Pharm., 67, p. 489; (U. S. Dispens., 19 ed., p. 672; *ibid.*, 20 ed., p. 597; *ibid.*, 21 ed., p. 591.)

A detailed description of the drug, both microscopically and microcopically, and a method of assay is given.

Greenish, H.

1895.

The Histology of Ipecacuanha.

Pharm. Jour., 54, p. 685; (U. S. Dispens., 19 ed., p. 672; *ibid.*, 20 ed., p. 597; *ibid.*, 21 ed., p. 590.)

A detailed description of the whole plants of the different species is given, with twelve illustrations.

Greenish, H.

1895.

The Quality of Commercial Powder of Ipecacuanha.

Yrbk. Brit. Pharm. Conf., 32, p. 396; (Am. Jour. Pharm., 67, p. 472.)

Describes methods to distinguish between powdered Brazilian and Carthegena ipecac, and also between powdered ipecac root and stem.

Kehler, L. F.

1895.

Laboratory Notes.

Am. Jour. Pharm., 67, p. 29.

Discusses methods of assaying ipecac root, and gives results.

Locke, F. J.

1895.

(Ipecac).

Syllabus of Eclectic Mat. Med., etc., p. 24; (King's Am. Dispen., 18 ed., v. 2, p. 1074.)

(The emetic properties of ipecac are dwelt upon.)

Paul, P. H., Cownley, A. J.

1895.

The Action of Heat upon the Alkaloids of Ipecacuanha.

Pharm. Jour., 55, p. 2; (Am. Jour. Pharm., 67, p. 528.)

Cephaeline and emetine were subjected to heat tests, under various conditions and results given.

Paul, B. H., Cownley, A. J.

1895.

The Chemistry of Ipecacuanha.

Pharm. Jour., 54, p. 111; (Am. Jour. Pharm., 67, p. 226; *ibid.*, 73, p. 57; U. S. Dispens., 19 ed., p. 673; *ibid.*, 20 ed., p. 597; *ibid.*, 21 ed., p. 591; King's Am. Dispens., 18 ed., v. 2, p. 1072; *Jehres der Pharm.*, 19, p. 523.)

Results of different workers who studied the chemistry of ipecac are given, also the work done on a new alkaloid cephaeline is mentioned.

Ranwez, F., Campion, O.

1895.

Etude der faux Ipeca Cultive.

Anneles de Pharm., (Lowain), 1, p. ___; (*Jour. d. Pharm.*, 135, pp. 298, 347; *Tschirsch. Handb. d. Pharmacognosie*, 1 ed., v. 3, p. 706; U. S. Dispens., 19 ed., p. 671; *ibid.*, 20 ed., p. 595.)

A detailed description of this false ipecac, a monocotyledonous plant *cryptocoryne spiralis*, is given with several illustrations.

Wild, R. B.

1895.

The Pharmacology of the Ipecacuanha Alkaloids.

Pharm. Jour., 55, p. 435; (Am. Jour. Pharm., 68, p. 352; *ibid.*, 73, p. 114; U. S. Dispens., 20 ed., p. 599.)

The medicinal use of the two alkaloids emetine and cephaeline are discussed.

Guareschi, I.

1896.

Alkaloide der Ipecacuanha.

Die Alkaloide, German transl., p. 526; (Am. Jour. Pharm., 71, p. 472.)

Assay results are given after using different types of menstrua.

Kebler, L. F. 1896.

Laboratory notes on Oil of Cassia, Elm Bark, Ipecac Root, Potassium Iodide, Reduced Iron and Saffron.

Am. Jour. Pharm., 68, p. 196.

Titration results obtained, by using a standardized acid solution, on ipecac root is given, in connection with the above mentioned article.

Paul, B. H., Cownley, A. J. 1896.

Brazilian and Columbian Ipecacuanha.

Pharm. Jour., 56, p. 321; (Am. Jour. Pharm., 68, p. 352.)

A method is listed for the assay of Brazilian and Columbian ipecacs, and the results given pertaining to alkaloidal content of each type.

Engler, A., Prantl, K. 1897.

Cephaelis.

Die Pflanzler Familien, ser. 4, v. 4, p. 119; (U. S. Dispens., 19 ed., p. 670; *ibid.*, 20 ed., p. 594.)

Records data on different species of ipecac, with numerous references.

Lloyd, J. W. 1897.

Cephaelis Ipecacuanha.

West. Drugg., 19, p. 346; (King's Am. Dispens., 18 ed., v. 2, p. 1071; U. S. Dispens., 20 ed., p. 597; *ibid.*, 21 ed., p. 591.)

A botanical description, historical notes, cultivation, chemical constituents, allied species and adulterations of ipecac are given.

Schneider, A.

1897.

Comparative study of Rio and of Carthagens Ipecac.

Am. Drugg., 30, p. 290; (U. S. Dispens., 19 ed., p. 672; *ibid.*, 20 ed., p. 597; *ibid.*, 21 ed., p. 590; King's Am. Dispens., 18 ed., v. 2, p. 1072.)

Records the results of microscopical observations of Rio and Carthagens ipecac.

Hesse, O.

1898.

On Emetine and Cephaeline.

Pharm. Jour., 61, p. 98; (Am. Jour. Pharm., 73, p. 114; U. S. Dispens., 20 ed., p. 598; *ibid.*, 21 ed., p. 592.)

The chemical formulas are given for the two alkaloids, based upon recorded data.

Whiffen, W. G.

1898.

Manufacture of Emetine.

Chem. and Drugg., 53, p. 694; (U. S. Dispens., 19 ed., p. 674; *ibid.*, 20 ed., p. 598; *ibid.*, 21 ed., p. 592.)

A method was patented in Germany for the manufacture of emetine.

Wilson, H.

1898.

The Assay of *Extractum Ipecacuanhae Liquidum*.

Pharm. Jour., 61, p. 3; (Am. Jour. Pharm., 71, p. 73.)

Assay results of a strong liquid extract are recorded.

Bird, F. C.

1899.

Miscible Liquid Extracts of Ipecacuanha.

Yrbk. Brit. Pharm. Conf., 36, p. 357; (Am. Jour. Pharm., 71, p. 444.)

Gives a method for carrying out liquid extractions of ipecac, and results obtained using different solvents.

Farr, E. H., Wright, B.

1899.

The Assay of the Official Extract, Wine, and Vinegar of Ipecacuanha.

Yrbk. Brit. Pharm. Conf., 36, p. 337; (Am. Jour. Pharm., 71, p. 442.)

Different methods of assay were carried out, and the results compared.

Guyer, G.

1899.

The B. P. Preparation of Ipecacuanha.

Pharm. Jour., 63, p. 622; (Am. Jour. Pharm., 72, p. 83.)

Assay work on the wine, fluidextract and crude drug is tabulated.

Hooper, D.

1899.

Note on Ipecacuanha Cultivation in India.

Pharm. Jour., 62, p. 384; (Am. Jour. Pharm., 71, p. 606.)

Records results of growing ipecac in India, especially with phosphates.

Kilpatrick, —

(Before 1900).

(Indian Ipecac).

— p. —; (King's Am. Dispens., 18 ed., v. 2, p. 1077.)

(A brief account on the administration of the leaves of Indian ipecac is given.)

Naylor, A. H., Bryant, J. G. 1899.

The Assay of the Liquid Extract and Wine of Ipecacuanha of the B. P.

Pharm. Jour., 63, p. 86; (Am. Jour. Pharm., 71, p. 446.)

Several methods are listed for the assay of the liquid extract, and wine of ipecac.

Palengie, — (Before 1900.)

(Emetine).

— p. —; (U. S. Dispens., 19 ed., p. 671.)

(The percentage of emetine in samples is given.)

Umney, J. C., Swinton, R. 1899.

Johre Ipecacuanha.

Pharm. Jour., 63, p. 89; (Am. Jour. Pharm., 71, p. 449; Yrbk. Brit. Pharm. Conf., v. 36, p. 348; U. S. Dispens., 20 ed., p. 597; *ibid.*, 21 ed., p. 581.)

States that the johore ipecac resembles psychotria emetica, and lists percentage of alkaloids present.

Beile, A. 1900.

(Ipecac).

Bull. Soc. de Pharm. de Bordeaux, 46, p. 171; (U. S. Dispens., 20 ed., p. 597; *ibid.*, 21 ed., p. 591.)

Indian ipecac is inferior to Brazilian, yielding only 0.54% of emetine.

Kraemer, H.

1900.

A So-called Ipecac.

Proc. Am. Pharm. Assoc., 48, p. 214; (U. S. Dispens., 20 ed., p. 597; *ibid.*, 21 ed., p. 590.)

A detailed description of the sample is given, also illustrations.

La Wall, C., Pursel, C.

1900.

Laboratory Notes.

Proc. Penn. Pharm. Assoc., 23, p. 160; (Am. Jour. Pharm., 72, p. 377.)

Records the results of assaying a sample of three thousand pounds of Carthagenia ipecac.

Gordin, H. M.

1901.

Assay of Crude Drugs.

Am. Jour. Pharm., 73, p. 215.

Discusses a method of assay for ipecac.

Paul, B. H., Cownley, A. J.

1901.

The Chemistry of Ipecacuanha.

Am. Jour. Pharm., 73, pp. 57, 107; (U. S. Dispens., 19 ed., p. 673; *ibid.*, 20 ed., p. 597; *ibid.*, 21 ed., p. 591.)

Chemical history, uses, methods of extraction, and numerous results of other chemists upon the drug, are given.

Pursel, R., Graham, W.

1901.

Laboratory Notes.

Am. Jour. Pharm., 73, p. 55.

The results of assaying nineteen samples of Carthage-
na ipecac show that the variety is equal to Rio ipecac,
if not superior.

Kobert, R.

1902.

Ipecacuanha root and its active principles.

Merck's Am. Report, 16, p. 103; (Am. Jour. Pharm., 76,
p. 216.)

Various constituents obtained from ipecac are
listed, with amounts, methods of extracting, and numer-
ous references.

Lowin, C.

1902.

Beitrage zur Kenntnis der Ipecacuanha uber die
Ipecacuanha Alkaloide.

Arch. Inter. de Pharmacod., 11, p. 9; (U. S. Dispens.,
19 ed., 673; *ibid.*, 20 ed., p. 598; *ibid.*, 21 ed.,
p. 592.)

Verifies the experiments of Paul and Crownly on
the alkaloids of ipecac.

Willert, M. I.

1902.

Progress in Pharmacy.

Am. Jour. Pharm., 74, p. 91.

Discusses the difference between Brazil and Cartha-
gena Ipecacs. Brazilian root contains more emetine,
while the Carthagena variety contains more cephaeline.

Barclay, J.

1903.

Ipecac Root.

Pharm. Jour., 70, p. 135.

Compares the alkaloidal content of Johore and Brazilian ipecacs.

Beckurts, H. 1903.

The Alkaloidal assay of certain drugs and their galenical preparations.

Pharm. Jour., 70, p. 424; (U. S. Dispens., 19 ed., p. 672.)

Several drugs were assayed among them ipecac, and the results given for the different methods.

Caesar & Loretz. 1903.

Radix Ipecacuanha.

Geschäfts - Bericht., 1903, p. 48; (U. S. Dispens., 20 ed., p. 598; *ibid.*, 21 ed., p. 592; *ibid.*, 19 ed., p. 673.)

Carried out twenty assays to determine the amount of alkaloids present in different specimens of ipecac.

Karsten, G. 1903.

Radix Ipecacuanha.

Lehrbuch der Pharmacog., 1 ed., p. ___; *ibid.*, 2 ed., p. 68; (U. S. Dispens., 19 ed., p. 669; *ibid.*, 20 ed., p. 599; *ibid.*, 21 ed., p. 588; King's Am. Dispens., 18 ed., v. 2, p. 1072.)

A description of the drug; and a comparison with other related drugs is given, with figures nos.55-59.

Keinura, T. 1903.

Beitrage zur Kenntnis der Ipecacuanha.

Arch. Inter. de Pharm. et therap., 25, p. 405; (U. S. Dispens., 21 ed., p. 593; Pharm. Jour., 70, p. 867; Am. Jour. Pharm., 75, p. 581.)

Records experimental work on Ipecacuanhic acid,
listing chemical and pharmacological properties.

Paterson, A. G. 1903.

The determination of Ash of Ipecacuanha.

Pharm. Jour., 70, p. 387; (U. S. Dispens., 19 ed.,
p. 673.)

Tells how to differentiate between Brazilian and
Columbian ipecac root.

Brandt, W. 1904.

Kurze Mitteilungen uber eine neue Verwechslung
der Radix Ipekakuanhae.

Apoth. Zeitg., 19, p. 102; (Am. Jour. Pharm., 76,
p. 289.)

Describes several roots that might be mistaken
for ipecac, and lists methods of distinguishing be-
tween true and false ipecacs.

Collin, M. 1904.

Sur les pouders d' Ipecacuanha.

Jour. de Pharm. et de Chem., 159, p. 293; (U. S. Dis-
pens., 20 ed., p. 597; *ibid.*, 21 ed., p. 591.)

The distinguishing of different varieties of
ipecac is carried out by microscopical examination
of the starch grains in medullary rays.

Hartwich, C. 1904.

Beitrage zur Kenntnis der Ipecacuanhawurzeln.

Archiv. d' Pharm., 242, p. 649; (U. S. Dispens.,
20 ed., p. 597; *ibid.*, 21 ed., p. 590.)

Describes work done on distinguishing various

types of ipecac, including false ipecacs, also two plates, and a number of references.

Mannich, C., Brandt, W. 1904.

Über die Wurzel von *Heteropteris pauciflora* Juss, eine neue der Fälschung der Ipecacuanha.

Ber. d. d. Gesell., 14, p. 297; (Jour. de Pharm. et de Chem., ser. 6, v. 2, p. 276; U. S. Dispens., 20 ed., p. 597.)

Upon examination the above plant was found to be an adulterated ipecac.

Braun, K. 1905.

Ipecacuanha-oder Breckwurzel.

Der Pflanzler, Tanga., v. 1, p. 50; (U. S. Dispens., 20 ed., p. 595.)

Discusses cultivation, method of collecting and treating, also historical and chemical data on ipecac.

Farwell, O. A. 1907.

Some Botanical Notes.

Drugg. Cir., 51, p. 459; (U. S. Dispens., 20 ed., p. 597.)

A description of a new ipecac plant found in South America is given, also assay results.

Holmes, E. M. 1909.

Note on Ipecacuanha Cultivation.

Pharm. Jour., 82, p. 765; (Am. Jour. Pharm., 81, p. 424.)

A systematic analysis of the plants to determine the soil requirements for successful cultivation.

Hartwich, C.

1911.

Die Rohstoffe des neuen Arzenibuches.

Ap. Zeitg., 26, p. 57; (U. S. Dispens., 20 ed., p. 597; ibid., 21 ed., p. 591.)

Comments on the ipecac monograph of the fourth edition of the German pharmacopoeia.

Schneider, A.

1911.

The quality and purity of vegetable drugs on the Pacific Coast.

Pacific Pharm., 5, p. 177; (U. S. Dispens., 20 ed., p. 597.)

A survey is given of the adulterants often found in ipecac root and powder.

Vedder, E.

1911.

A preliminary account of some experiments undertaken to test the efficacy of the ipecac treatment of dysentery.

Bull. Manilla Med. Soc., p. 111; (U. S. Dispens., 20 ed., p. 599; ibid., 21 ed., p. 593; Jour. Am. Med. Assoc., 62, p. 501.)

Discusses experimental work done on emetine and ipecac root, to show bactericidal virtues.

Beck, H. G.

1912.

Duodenal Medication of Ipecac in the treatment of Amebic Dysentery.

Jour. Am. Med. Assoc., 59, p. 210; (Am. Jour. Pharm., 85, p. 130.)

States that ipecac furnishes the best method of treating dysentery. Also gives numerous specific successful cases.

Derry, R.

1912.

Ipecacuanha.

Chem. and Drugg., 80, p. 822.

Discusses the propagation and cultivation of ipecac.

Finnemore, H., Braithwaite, D.

1912.

The glucocidal constituent of Ipecacuanha.

Yrbk. Br. Pharm. Conf., 49, p. 496; (U. S. Dispens., 20 ed., p. 597; *ibid.*, 21 ed., p. 592.)

Experimental data on obtaining a glucocide from ipecac is given.

Rodgers, L.

1912.

The rapid cure of amoebic dysentery and hepatitis by hypodermic injection of soluble salts of emetine.

Brit. Med. Jour., 1, p. 1424; (U. S. Dispens., 21 ed., p. 593.)

A discussion on the hypodermic administration of emetine in the treatment of amebic dysentery.

Tunmann, O.

1912.

Beitrage zur Mikrochemie einiger wurzeldrogen.

Gehe & Co. Handelsbericht., p. 165; (U. S. Dispens., 20 ed., p. 597; *ibid.*, 21 ed., p. 590.)

Description of the crystals obtained after submitting ipecac to a pyroanalysis.

Van der Wielen, P., Reens, E.

1912.

(Ipecacuanha.)

Pharm. Week., p. 989; (Pharm. Zentralh., 54, p. 1187;

Pharm. Jour., 92, p. 541; Am. Jour. Pharm., 86, p. 282.)

Ipecac was assayed by the methods used in ten different pharmacopoeias, and the results are tabulated.

Carr, F. H., Pyman, F. P. 1913.

The Alkaloids of Ipecacuanha.

Proc. Lond. Chem. Soc., 29, p. 226; (U. S. Dispens., 20 ed., p. 598; *ibid.*, 21 ed., p. 592.)

The chemistry of the alkaloids of ipecac is discussed, giving several references.

Flandin, C. 1913.

Gros abus dysenterique der foie ouvert dans les bronches, guerison par le treatment Chirurgical et les injections d'emetine.

La Press. Med., 21, p. 200; (U. S. Dispens., 20 ed., p. 599; *ibid.*, 21 ed., p. 594.)

A brief discussion on the use of ipecac in treating hemoptysis.

Hesse, O. 1914.

Beitrag zur Kenntnis der Alkaloide der echten Brechwurzel.

Annalen der Chem., 405, p. 1; (Am. Jour. Pharm., 86, p. 563; Pharm. Jour., 93, p. 425.)

Two new alkaloids of ipecac, ipecamine, and hydroipecamine are discussed.

Hesse, O. 1914.

The New Alkaloids Ipecamine and Hydroipecamine, From Ipecacuanha.

Jour. Am. Chem. Soc., 8, p. 2355; (Pharm. Jour., 93, p. 425; U. S. Dispens., 20 ed., p. 597; *ibid.*, 21 ed., p. 592.)

A detailed account of the new alkaloids, with their chemical formulas, is given.

Smith, A. J., Barrett, M. T. 1914.

The tonsils as a habit of oral endamebes.

Jour. Am. Med. Assoc., 63, p. 1746; (U. S. Dispens., 20 ed., p. 599; *ibid.*, 21 ed., p. 593.)

Discusses the use of emetine in treating Rigg's disease.

Vedder, E. B. 1914.

Origin and present status of the emetine treatment of amebic dysentery.

Jour. Am. Med. Assoc., 62, p. 501; (U. S. Dispens., 20 ed., p. 599; *ibid.*, 21 ed., p. 593.)

Relates number of experiments carried out in treating dysentery, with ipecac and emetine, giving references.

Windaus, A., Herman L. 1914.

Untersuchungen uber Emetine.

Apoth. Zeitg., 29, p. 443; (U. S. Dispens., 20 ed., p. 598.)

Regards the work done in trying to establish chemical formula for emetine.

Bass, C. C., Johns, F. M. 1915.

Ipecacuanha.

Jour. Am. Med. Assoc., 64, p. 553; (U. S. Dispens., 20 ed., p. 599; *ibid.*, 21 ed., p. 594.)

Reports on the uses of emetine and ipecac in treating pyorrhea. Proper doses, methods of administrating, duration of treatment, etc., were included.

Eggleston, C., Hatcher, R. 1915.

The seat of the emetic action of various drugs.

Jour. Phcol. Expt. Therap., 7, p. 225; (U. S. Dispens., 21 ed., p. 593.)

A discussion on the action of the alkaloid emetine found in ipecac, in connection with various other emetics.

Browne, H. 1917.

Emetoidine, A Study of its Pharmacology.

Jour. Am. Pharm. Assoc., 6, p. 1043; (U. S. Dispens., 21 ed., p. 592.)

Lists results that were obtained in studying the toxicity of emetine and emetoidine.

Waters, A., Koch, E. 1917.

Pharmacological studies of the ipecac alkaloids, and some synthetic derivatives of Cephaeline.

Jour. Phcol. Expt. Therap., 10, p. 73; (U. S. Dispens., 21 ed., p. 593.)

Lists three alkaloids, their chemical properties, toxicity, and other plants, giving a number of references.

Pyman, F. L. 1918.

Ipecacuanha Alkaloids.

Chem. & Drugg., 90, p. 212; (Am. Jour. Pharm., 90, p. 431; U. S. Dispens., 21 ed., p. 592.)

The source, method of preparation, and uses of isoemetine are dealt with.

Simon, S. K. 1918.

Comparative value of ipecac and its alkaloids in treatment of intestinal endamebiasis.

Jour. Am. Med. Assoc., 71, p. 2042; (U. S. Dispens., 21 ed., p. 593.)

Results are given from experimental work carried on in treating intestinal endamebiasis, with ipecac and its alkaloids.

Higgins, E. 1919.

Medicinal plants in Bahia.

U. S. Commerce Reports, Dec. 26, p. 1722; (Am. Jour. Pharm., 92, p. 182.)

A large number of Brazilian medicinal plants are listed, including ipecac, with a description of each.

Wielen, V. 1919.

De bereiding der joodbismuthverbindingen der alkaloiden uit Radix Ipecacuanha.

Pharm. Week. Blad., 56, p. 786; (Jour. Am. Pharm. Assoc., 8, p. 521; U. S. Dispens., 21 ed., p. 593.)

Method for the preparation of the above double salts of the alkaloids is given, also the chemical composition is discussed.

Huerre, R. 1920.

Recherches sur l'acidi ipecacuanhique et son

dosage dans les preparations d' ipecac.

Jour. de pharm. et de chim., ser. 7, v. 21, p. 425;
(Am. Jour. Pharm., 93, p. 55; U. S. Dispens., 21 ed.,
p. 592; Chem. & Drugg., 93, p. 45.)

Historical data, chemical properties, and practical uses of the acid are discussed.

Viehoever, A., Erving, C. 1921.

Alkaloids in Rhizomes and Roots of Ipecac.

Jour. Am. Pharm. Assoc., 10, p. 766; (U. S. Dispens.,
21 ed., p. 589.)

Detailed descriptions of the drug are given,
and the results of the assays on the specimens of
Carthagena and Rio Ipecac.

Thorpe, E. 1922.

Ipecacuanha.

Dictionary 2 ed., v. 3, p. 658; (Am. Jour. Pharm.,
65, p. 485.)

A complete description of the different species,
habitat, numerous references, and chemistry of the
alkaloids is given.

UNITED STATES PHARMACOPEIA

(1820-1920)

HISTORY

OF

IPECACUANHA

U.S.P. 1820, P. p. 38

Ipecacuanha	Callicocca ipecacuanha (Brotero)/
Ipecacuanha	Lin. Trans. VI p. 137/ Radix. The root./

U.S.P. 1830 (Phila.) P. p. 14

Ipecacuanha	Cephaelis ipecacuanha Rich./
Ipecacuanha	Hist. Ipec. 1. 21. Callicocco Ipecacuanha Bro./ Lin. Tr. Lin. Soc. VI p. 137/ Radix. The root.

U.S.P. 1830 (N. Y.) P. p. 40

Ipecacuanha Radix	Cephaelis Ipecacuanha
Ipecacuanha Root	Callicocco Ipecacuanha

Prop. In small wrinkled contorted pieces, externally dark coloured/ internally, of a grayish white; dense, brittle; fracture, smooth and resinous./ Odour faint and disagreeable; taste, bitter, sub acrid, mucilagenous;/ medicinal qualities extracted by alcohol and water; emetic pro-/perties depend on the presence of a peculiar principle denominated/ emetine.

Med. Oper. Emetic, expectorant, diaphoretic,/ stomachic. Dose, as/ an emetic, grs. X to dr. ss. of emetine, gr. ss. to gr. l.

U.S.P. 1840, P. p. 24

Ipecacuanha

Ipecacuanha

The root of *Cephaelis Ipecacuanha* (De Candolle)

U.S.P. 1850, P. p. 27

Ipecacuanha

Ipecacuanha

The root of *Cephaelis Ipecacuanha* (De Candolle)

U.S.P. 1860, P. p. 33

Ipecacuanha

Ipecacuanha

The root of *Cephaelis Ipecacuanha* (De Candolle)

U.S.P. 1870, P. p. 34

Ipecacuanha

Ipecacuanha

The root of *Cephaelis Ipecacuanha*

U.S.P. 1880, P. p. 187

Ipecacuanha

Ipecacuanha

Ipecac

The root of *Cephaelis Ipecacuanha*. A. Richard. (Nat. Ord.)

Rubiaceae),/ Coffeae.

About 4 inches (10 centimeters) long, and one-sixth of an inch (4 millimeters)/ thick, mostly simple, contorted, dull gray-brown or blackish, finely wrinkled;/ closely and irregularly annulated, and often transversely fissured; bark thick/ brittle, brownish, easily separated from the skin, whitish, tough ligneous, portion/ odor slight, peculiar, nauseous; taste bitterish, acrid, nauseating.

Preparations: Extractum Ipecacuanha Fluidum. Pulvis Ipecacuanha et opii/ Trochisci Ipecacuanha. Trochisci Morphinae et Ipecacuanha.

U.S.P. 1890, p. 220

Ipecacuanha

Ipecac

The root of *Cephaelis Ipecacuanha* (Brotero) A. Richard. (Nat. Ord./ Rubiaceae).

About 10 cm. long, and 4 or 5 mm. thick; mostly simple, contorted, dull/ grayish-brown or blackish, finely wrinkled, closely and irregularly annulated/ and often transversely fissured; bark thick brittle brownish, easily separated/ from the thin, whitish, tough, ligneous portion, odor slight, peculiar, nauseous; taste bitterish acrid, nauseating.

When Ipecac is sound and free from mouldiness its quality is proportionate/ to the thickness of the bark, and the thinness of the ligneous portion.

Preparations: Extractum Ipecacuanha Fluidum.
Pulvis Ipecacuanha et opii/ Trochisci Ipecacuanha. Trochisci Morphinae et Ipecacuanhae.

U.S.P. 1900, p. 250

Ipecacuanha

Ipecac

The dried root to which may be attached a portion of the stem not/ exceeding 7 cm. in length, of *Cephaelis Ipecacuanha* (Brotero) A. Rich./ Ord. (Family Rubiaceae), known commercially as Rio, Brazilian, or Para/ ipecac, or the corresponding portion of *C. Acuminata* Karsten, known/ commercially as Carthagen ipecac, yielding, when assayed by the/ process given below, not less than 1.75 percent of ipecac alkaloids.

Rio Ipecac - In pieces of irregular length, rarely exceeding 25 cm., stem/ portion 2 to 3 mm. thick, light gray-brown, cylindrical and smoothish; root-/ portion usually red-brown, occasionally blackish-brown, rarely gray-brown, 3 to/ 6 mm. thick, curved and sharply flexuous, nearly free from rootlets occasionally/ branched, closely annulated with thickened, incomplete rings,

and usually exhibiting transverse fissures, with vertical sides, through the bark; fracture short, the very thick, easily separable bark whitish, usually resinous, the thin tough wood yellowish-white, without vessels; odor very slight, peculiar, the dust sternutatory; taste bitter and nauseous, somewhat acrid.

Carthagena Ipecac - Similar to Rio Ipecac, but about one-half thicker, dull gray externally, with thinner merging annulae, and the fractured surface of the bark gray.

Assay of Ipecac	Ipecac is no 80 powder fifteen grammes 15 gms. Ether Chloroform Ammonia water Distilled water Normal Sulphuric acid V.S. Tenth-normal Sulphuric acid V.S. Fifteenth-normal Potassium Hydroxide V.S. Cochineal T.S. each a sufficient quantity
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Introduce the ipecac into an Erlenmeyer flask of 250 Cc capacity, add 115 Cc of ether and 35 Cc of chloroform, shake the flask during five minutes, and then add 3 Cc of ammonia water and again shake the flask at intervals during half an hour. Now add 10 Cc of distilled

water, shake the liquid until the powder collects in masses, and pour off 100 Cc of the clear ethereal solution into a measuring cylinder. Transfer the latter to a separatory, add 10 Cc of normal sulphuric acid V.S. and 10 Cc of distilled water. Shake the separatory moderately during two minutes, and when the liquids have separated, draw off the lower acid solution into a second separator. Repeat the shaking out of the ether solution with 3Cc of normal sulphuric acid V.S. and add 5 Cc of distilled water, drawing the acid solution into the second separator. Repeat the shaking out again, using 10 Cc of distilled water, and add the aqueous solution to the separator. Reject the ether in the separator, introduce a small piece of red litmus paper into the second separator, add enough ammonia to render the liquid alkaline, and 25 Cc of ether and shake the separator vigorously during one minute; draw off the alkaline aqueous liquid into another separator, and transfer the ether solution to a flask. Add 20 Cc of ether to the alkaline liquid in the separator, shake it for one minute, and, having allowed the liquids to separate, draw off the alkaline liquid into the other separator, and transfer the ether solution to the flask. Again shake out the alkaline liquid with 10 Cc of ether, and, when the fluids have separated, reject the alkaline liquid

and add the ether solution to the liquid in the flask. Distill/ the ether from the flask with the aid of a water-bath, and dissolve the alka-/loidal residue in 12 Cc of tenth-normal sulphuric acid V.S., warming it gently on a water-bath if necessary.

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U.S.P. 1910, p. 229

Ipecacuanha

Ipecac

Ipecac

Ipecacuanha radix P.I.

The dried root of *Cephaelis Ipecacuanha* (Brotero) A. Rich., known/ in commerce as Rio Ipecac, or of *Cephaelis Acuminata* Karsten, known in commerce as Carthagena Ipecac, (Fam. Rubiaceae), without the pres-/ence or admixture of more than 5 percent of stems or other foreign/ matter and yielding not less than 1.75 percent of the ether-soluble/ alkaloids of ipecac.

Rio Ipecac - In cylindrical pieces, curved and sharply flexuous, occasionally/ branched, from 3 to 15 cm. in length and from 2.4 to 4 mm. in thickness; exter-/nally dark brown, closely annulated, with thickened incomplete rings, and/ usually exhibiting transverse fissures with vertical sides; fracture of bark short,/ of wood tough, bark very thick, light brown, easily separable from the yellowish-/white wood; odor very

slight, distinctive, the dust sternutatory; taste bitter and nauseous, somewhat acrid.

Stems cylindrical, attaining a length of 10 cm. and a thickness of 2 mm., dark/ brown finely longitudinally wrinkled and with a few elliptical scars.

Carthagena Ipecac - Cylindrical or slenderly fusiform, more or less tortuous/ from 3 to 12 cm. in length and from 4 to 6.5mm. in thickness; externally grayish-brown, the annulations usually not so numerous as in Rio Ipecac, occasionally transversely fissured and with circular scars of roots; bark 2 mm. in thickness dark brown, smooth, somewhat horny, and easily separable from the light brown wood.

Stems attaining a length of 10 cm. and a thickness of from 2 to 3 mm. Cylindrical somewhat zigzag, due to the prominent nodes with their elliptical stem/ scars grayish or dark brown and longitudinally wrinkled; bark thin.

The powder from both varieties of ipecac is light brown; starch grains numerous, single or from 2 to 4 or more compound, the individual grains spherical or/ polygonal, from 0.003 to 0.017 mm. in diameter; calcium oxalate in raphides, from/ 0.015 to 0.04 mm. in length, few; tracheids with bordered pores. The stem bark shows a few slightly elongated stone cells, from 0.005 to/ 0.045 mm. in length with thick lignified walls and simple

branching pores./

Ipecac yields not less than 1.8 percent nor more than 4.5 percent of ash.

Assay - Introduce 10 gms. of Ipecac, in no. 80 powder, into a 250 mil flask/ add 100 mils of ether and proceed as directed under belladonnae Radix page 73/, third line of the assay, beginning with the word "Stopper". Modify the proc-/ess there given by using 50 mils of the ether solution representing 5 gms. of/ Ipecac, to complete the assay. Use ether instead of chloroform for the final/ shaking out of the alkaloids, and dissolve the alkaloid from the residue in 10 mils/ of tenth-normal sulphuric acid V.S.

Each mil of tenth-normal sulphuric acid V.S. consumed corresponds to 24/ milligrammes of the ether-soluble alkaloids of ipecac.

Preparations: Fluid extractum Ipecacuanha. Pulvis Ipecacuanha et Opii/. Syrupus Ipecacuanha (from fluid extract).

Average dose: Emetic, metric, 1gm.

Apothecaries: 15 grains.

U.S.P. 1920, p. 199

Ipecacuanha

Ipecac

Ipecac

Ipecacuanha Radix P.I.

Ipecac consists of the dried rhizome and roots of *Cephaelis Ipecacuanha* (Brotero) A. Richard, known in commerce as Rio or/ Brazilian Ipecac, or of *Cephaelis Acuminata* Karsten, known in com-/merce as Cartagena or Panama Ipecac (Fam. Rubiaceae).

Ipecac yields not less than 1.75% of the ether-soluble alkaloids/ of Ipecac and contains not more than 5 percent of its overground stems/ or more than 2 percent of other foreign organic matter.

Description and Physical Properties.

Underground Rio Ipecac - Roots in cylindrical pieces, mostly curved and sharply flexu-/ous, occasionally branched from 3 to 15 cm. in length, from 1 to 4 mm. in thick-/ness, reddish brown to dark brown, either smooth or closely annulated, with/ thickened, incomplete rings and usually exhibiting transverse fissures with/ vertical sides; bark of smooth root thin, approximately one-ninth of the diam-/eter of the root, that of the annulated root approximately two-thirds of the/ entire diameter; fracture of bark short, easily separable from the tough/ fibrous wood; odor distinctive, the dust sternutatory; taste bitter, nauseous/ and acrid. Rhizomes cylindrical, attaining a length of 10 cm. and a thickness of 2 mm., finely longitudinally wrinkled, with a few elliptical scars and a dis-/tinct pith approximately one-sixth of the entire diameter.

Structure of Rio Ipecac - Outer layers dark brown, consisting of several layers of/ cork cells, some showing distinct granular masses covering the tangential/ walls; cortex - grayish-white consisting chiefly of parenchyma cells filled with/ starch grains, a few containing raphides of calcium oxalate; wood, light/ yellow, consisting of tracheids with bordered or slit-like pores, modified/ medullary rays of prosenchymatic cells containing starch grains, the latter up/ to 0.01 mm. in diameter and a few lignified fibres with oblique slit-like pores/ and more or less attenuated ends.

Underground Cartagena Ipecac - As compared with Rio Ipecac, from 4 to 6.5 mm. in/ thickness; externally grayish-brown; annulations less numerous; single starch/ grains, in the average, larger in the medullary rays of the wood.

Powdered Ipecac - Light brown. Elements of Identification: the cork cells; the/ starch grains single and up to 5 to 7 compound, the single grains up to/ 0.015 mm. in diameter (Rio Ipecac) and up to 0.020 mm. in length/ and fragments of the porous tracheids.

Assay - Proceed by type Process A, taking 10 gms. of Ipecac, using 100 cc. of/ ether and decanting an aliquot portion of 50 cc., representing 5 gms. of Ipecac/. Use ether for the final extraction and determine the alkaloids volumetrically/. Each cc. of tenth-normal acid corresponds to 0.024 gms. of the ether-soluble/ alkaloids of Ipecac.

(Proximate assays, page 452.)

Preparations: Fluid extractum Ipecacuanha, Pulvis Ipecacuanha et Opii, Syrupus Ipecacuanhae (from fluid extract.)

		Metric	Apothecary
Average Dose:	Expectorant	0.06 gms.	1 gr.
	Emetic	1 gm.	15 gr.

Summary of the U.S.P. 1820-1920

data Ipecacuanha

Official

1820, '30 (Phila.), '30 (N.Y.), '40, '50, '60, '70,
'80, '90, 1900, '10, '20.

Official Latin Title

Ipecacuanha 1820, '30 (Phila.), '30 (N.Y.), '40, '50,
'60, '70, '80, '90, 1900, '10, '20.

Official English Title

Ipecacuanha 1820, '30 (Phila.), '40, '50, '60, '70,
Ipecacuan Root 1830 N.Y.
Ipecac 1880, '90, 1900, '10, '20.

Official Abbreviation

Ipecac 1910, '20.

Official Syn.

Ipecacuanha radix 1910, '20.

Scientific name

Callicocco ipecacuanha 1820.

Callicocco Ipecacuanha Brotero 1830 (Phila.)

Cephaelis Ipecacuanha Rich. 1830 (N.Y.) '40, '50,
'60, '70, '80, '90.

Cephaelis Ipecacuanha--Cephaelis Acuminata 1900, '10,
'20.

Family

Rubiaceae 1880, '90, 1900, '10, '20.

Part Used

The root 1820, '30 (Phila.), '40, '50, '60, '70, '80,

'90.

The dried root 1900, '10.

The dried rhizome and roots 1920.

Description

1880, '90, 1900, '10, '20.

Dose

Emetic grs. 10 to dr. ss.

Of emetine gr. ss to gr. 1 1830 (N.Y.)

Average dose Expectorant, 0.065 Gm.-65 milligrammes
(1 grain)

Emetic, 1 Gm. (15 grains) 1900

Average dose-Expectorant Metric 0.06 Gms., Apothe-
caries 1 grain. Emetic, 1 Gm., Apothecaries 15 grains
1920.

Official Preparations

Extractum Ipecacuanha Fluidum

Pulvis Ipecacuanha et Opii

1880, '90.

Trochisci Ipecacuanha

Trochisci Morphinae et Opii

Fluid extractum Ipecacuanha

Pulvis Ipecacuanha et Opii

1910, '20.

Syrupus Ipecacuanha (From Fluid extract)

Medicinal Operations

1830 (N.Y.)

Properties

1830 (N.Y.)

Approved by W. O. Richtmann

Assoc. Prof. of Pharmacognosy.