BIBLIOGRAPHY

OF

MYRRH

BY

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A THESIS SUBMITTED FOR THE DEGREE OF

GRADUATE IN PHARMACY

UNIVERSITY OF WISCONSIN

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(Ca. 1550 B. C.)

Myrrh.

Papyrus Ebers; (Guillaumin, Pharmakognostische Rundeschau, v. 1, p. 4; Arch. f. d. Geschichte d. Naturw. u. d. Tecknik, 1, p. 87; Schw. Wochenschr. f. Chem. u. Pharm., 1910, p. 473; Gildemiester & Hoffmann, Die Aetherischen Oele, p. 636.)

Among numerous vegetable drugs, myrrh is listed as being in use at that time.

Moses. (Ca. 1320 B. C.)

Myrrh.

Bible, O. T. Exodus, Chap. 30, v. 22; (Flueckiger & Hanbury, Pharmacographia, 2 ed., p. 141; Leyel, The Magic of Drugs, p. 248; Flueckiger, Pharm. d. Pflanzenreiches, 2 ed., p. 35; Ibid., 3 ed., p. 42; Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 636; Guibourt, Histoire Naturelle des Drogues Simples, 6 ed., v. 3, p. 510.)

"Moreover the Lord spake unto Moses, saying, Take thou also unto thee principal spieces, of pure myrrh five hundred shekels, and of sweet cinnamon half so much, even two hundred and fifty shekels, and of sweet calamus two hundred and fifty shekels."

Moses. (Ca. 1320 B. C.)

Myrrh.

Bible, O. T., Exodus, Chap. 30, v. 34; (Flueckiger & Hanbury, Pharmacographia, 2 ed., p. 141; Phar. Jour., 91, p. 116; Flueckiger, Pharm. des Pflanzenreiches, 2 ed., p. 35; Ibid., 3 ed., p. 42; Gildemiester & Hoffmann, Die Aetherischen Oele, p. 636.)

"And the Lord said unto Moses, Take unto thee sweet spices, stacte, and onycha, and galbanum; these sweet spices with pure frankincense: of each shall there be a like weight."

Moses. (Ca. 1320 B. C.)

Myrrh.

Bible, O. T., Genesis, Chap. 37, v. 25; (Pharm. Jour., 91, p. 116.)

"And they sat down to eat bread: and they lifted up their eyes and looked, and behold, a company of Ishmeelites came from Gilead with their camels bearing spicery and balm and myrrh, going to carry it down to Egypt."

Moses. (Ca. 1320 B. C.)

Myrrh.

Bible, O. T., Genesis, Chap. 43, v. 11; (Flueckiger & Hanbury, Pharmacographia, 2 ed., p. 141; Flueckiger, Pharm. d. Pflanzenreiches, 1 ed., p. 35; Ibid., 3 ed., p. 42.)

"And their father Iserael said unto them, If it must be so now, do this, take the best fruits in the land in your vessels, and carry down the man a present, a little balm, and a little honey, spices, and myrrh, nuts and almonds."

Solomon. (Ca. 1015 B. C.)

Myrrh.

Bible, O. T. Canticles, Chap. 1, v. 13; (Flueckiger & Hanbury, Pharmacographia, 2 ed., p. 141; Flueckiger, Pharm. d. Pflanzenreiches, 2 ed., p. 35; Ibid., 3 ed., p. 42; Gildemiester & Hoffmann, Die Aetherischen Oele, p. 636.)

"A bundle of myrrh is my well beloved unto me: he shall lie all night betwixt my breasts."

Solomon. (Ca. 1015 B. C.)

Myrrh.

Bible, O. T., Canticles, Chap. 3, v. 6; (Flueckiger & Hanbury, Pharmacographia, 1 ed., p. 125; Ibid., 2 ed., p. 141; Pharm. Jour., 91, p. 116; Flueckiger, Pharm. d. Pflanzenreiches, 2 ed., p. 35; Ibid., 3 ed., p. 42; Gildemiester & Hoffmann, Die Aetherischen Oele, p. 636.)

"Who is this that cometh out of the wilderness like pillars of smoke, perfumed with frankincense of the merchant."

(Solomon.) (Ca. 1015 B. C.)

Myrrh.

Bible, O. T., Proverbs, Chap. 7, v. 17; (Flueckiger & Hanbury, Pharmacographia, 2 ed., p. 141; Flueckiger, Pharm. d. Pflanzenreiches, 2 ed., p. 35; Ibid., 3 ed., p. 42; Gildemiester & Hoffmann, Die Aetherischen Oele, p. 636.)

"I have perfumed my bed with myrrh, aloes and cinnamon."

Korah, Sons of. (Ca. 1000 B. C.)

Myrrh.

Bible, O. T. Psalms, Chap. 45, v. 8; (Pharm. Jour., 91, p. 116; Gildemiester & Hoffmann, Die Aetherischen Oele, p. 636.)

"All thy garments smell of myrrh, and aloes, and cassia, out of the ivory palaces, where by they have made thee glad."

Theophrastus. 373-288 B. C.

(Myrrha.)

Historia Plantarum Lib, 9, c. 4; (Flueckiger & Hanbury, Pharmacographia, 1 ed., p. 126; Ibid., 2 ed., p. 142; Triller, Dispensatorium Pharmaceuticum Universale sive Thesaurus, p. 243; Gildemiester & Hoffmann, Die Aetherischen Oele, p. 636.)

("Speaks of myrrh as of 2 kinds, solid and liquid.")

Agatharchides, K. Ca. 104 B. C.

(Myrrha.)

Geopraphi graeci minores; (Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 635.)

The early Egyptian name for myrrh "punt" or "Phun" cannot be distinguished from olibanum, both products were obtained in the same area and used for the same purpose.

Pliny, C. S. (40-79 A. D.)

(Myrrha.)

Naturalis historiae, liber, Lib. 12, p. 15, 16, 30, 35, and Lib. 14, p. 15; (Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 636; Exercit. Plin., p. 368 & Alibi; Triller, Dispensatorium Pharmaceuticum Universale sive Thesaurus, p. 243.)

See Papyrus Ebers, 1550 B.C. Reference for data.

Arrian. Ca. 60 A. D.

Myrrha.

The Periplus of the Erythraean Sea, p. 112; Gildemiester & Hoffmann, Die Aetherischen Oele, p. 636; Flueckiger & Hanbury, Pharmacographia, 2 ed., p. 761.)

Reviews the botanical origin, product used, gathering, kinds and derivation of the word myrrh. Isolated data is found on pages: 4, 25, 26, 31, 57, 62, 77, 78, 80, 87, 102, 105, 113, 114, 116, 120, 122, 123, 132, 139, 145, 164, 165, 169, 214, 217, 218 and 236.

Mark, J. (Ca. 67-70 A. D.)

Myrrh.

Bible, N. T., St. Mark, Chap. 15, v. 23; (Flueckiger & Hanbury, Pharmacographia, 2 ed., p. 141; Flueckiger, Pharm. d. Pflanzenreiches, 2 ed., p. 35; Ibid., 3 ed., p. 42; Gildemiester & Hoffmann, Aetherischen Oele, 1 ed., p. 636.)

"And they gave him to drink wine mingled with myrrh: but he recieved it not."

St. John. (Ca. 80-95 A. D.)

Myrrh.

Bible, N. T., St. John, Chap. 19, v. 20; (Flueckiger & Hanbury, Pharmacographia, 2 ed., p. 141; Flueckiger, Pharm. d. Pflanzenreiches, 2 ed., p. 35; Ibid., 3 ed., p. 42.)

"And there came also Nicodemus, which at the first came to Jesus by night, and brought a mixture of myrrh and aloes, about an hundred pound weight."

Lucian of Samosata. (1496)

(Myrrha.)

Opera, Drapetui, p. 1,(Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 636.)

See Papyrus Ebers 1550 B.C. Reference for data.

Plutarch, -- (1509)

(Myrrha.)

Moralia Isis et Osiris, v. 386; (Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 636.)

See Papyrus Ebers 1550 B. C. Reference for data.

Apuleius, S. (1521)

(Myrrha.)

Metamorphoseon, Lib. 8 & 10; (Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 636.)

See Papyrus Ebers 1550 B. C. Reference for data.

Dioscorides, P. 1537

Myrrha.

Medica Materia, Libri Sex, ed., of J. Ruellio, p. 25; (Ibid., Kuhn-Sprengel ed., 1829; v. p. 78; Gildemiester & Hoffmann, Dies Aetherischen Oele, p. 636.)

Gives a description of the tree, its habitat, method of collection, description of drug and its properties.

Athenaeus, N. (1557)

(Myrrha.)

Dipnosophistarum, lib. 15, p. 101 & 464; (Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 636.)

See Papyrus Ebers 1550 B. C. for data.

Herodotus, -- (1570)

(Myrrha.)

Historiarum liber 9, Lib. 107; (Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 636.)

See Papyrus Eber 1550 B. C. Reference for data.

Diodorus, S. (1578)

(Myrrha.)

Bibliotheca Historica, Lib. 5, Chap. 41 & Lib. 19, Chap. 94; (Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 636.)

See Papyrus Ebers 1550 B.C. Reference for data.

Diodorus, S. (1578)

(Myrrha.)

Bibliotheca Historica, Lib. 19, Chap. 24; (Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 635.)

See Agatharchides , 104 B. C. reference for data.

Alpin, P. 1619

(Myrrha.)

Dialogue du baume, Traduction, p. 76; (Guibourt, Histoire Naturelle des Drogues Simples, 6 ed., p. 510.)

The original was not available.

Bauhin, G. 1671

Myrrha.

Theatri Botanici, p. 501; (Matthiole, p. 60; Guibourt, Naturelle des Drogues Simples, 6 ed., p. 510.)

Gives various synonyms for the plants yielding myrrh.

Becker, S. A. (1676)

De Myrrha.

Dissertation, ---; (Triller, Dispensatorium Pharmaceuticum Universale sive Thesaurus, p. 243.)

The original was not available.

Riedlini, V. 1682

(Myrrha.)

Mens. Majo, Observations, 16, p. 139; (Triller, Dispensatorium Pharmaceuticum Universale sive Thesaurus, p. 243.)

The original was not available.

Ludovici, D. 1685

Myrrha.

De Pharmacia Moderno Seculo, p. 199.

Among drugs of bitter taste, myrrh is discussed.

Polisius, G. S. 1688

Myrrhologia.

(Triller, Dispensatorium Pharmaceuticum Universale sive Thesaurus, p. 243.)

The original was not available.

Riedlini, V. 1695

(Myrrha.)

Lin. Med. Ann., p. --; (Triller, Dispensarorium Pharmaceuticum Universale sive Thesaurus, p. 243.)

The original was not available.

Zornio, B. 1714

(Myrrha.)

Botanologica Medica etc., p. 452; (Triller, Dispensatorium Pharmaceuticum Universale sive Thesaurus, p. 243.)

The original was not available.

Tournefort, J. P. 1716

Myrrh.

Materia Medica, or a Description of Simple Medicine, 2 ed., p. 159.

The description, uses and preparations of myrrh are given.

Vignolius, J. 1724

(Myrrh of the Ancients.)

Liber Pontificalis, v. 1, p. 95; (Flueckiger & Hanbury, Pharmacographia, 1 ed., p. 126; Ibid., 2 ed., p. 142; Flueckiger, Pharmakognosie des Pflanzenreiches, 2 ed., p. 36; Ibid., 3 ed., p. 43.)

(No drug of modern times has been identified as the liquid myrrh of the ancients. The ancient myrrh was very plentiful as it was used in large quantities as offering by an Egyptian city.)

Hermann, P. 1726

(Myrrha.)

Cynofura. Materiae Medicae etc., p. 279; (Triller, Dispensatorium Pharmaceuticum Universale Thesaurus, p. 243.)

The original was not available.

Chishull, E. 1728

(Myrrha.)

Antiquitates Asiaticae etc., p. 71; (Flueckiger, Pharmacognosie des Pflanzenreiches, 2 ed., p. 36; (Ibid., 3 ed., p. 42; Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 636.)

(The king of Syria in 243 B. C. offered myrrh at the Appollo temple in Milet.)

Geoffroy, E. F. 1741

(Myrrha.)

Fractatus de Mat. Med., v. 2, p. 635; (Triller, Dispensatorium Pharmaceuticum Universale xive Thesaurus, p. 243.)

The original was not available.

Celsius, S. 1745

(Myrrha.)

Hierobotanicon, v. 1, p. 529; (Triller, Dispensatorium Pharmaceuticum Universale sive Thesaurus, p. 243.)

The original was not available.

Pringle, J. (1750)

Myrrha.

De Castrensibus Morbis, p. --;(Triller, Dispensatorium Pharmaceuticum Universale Thesaurus, p. 243.)

The original was not available.

Neumann, C. 1752

De Myrrh Odor von der Myrrhe Chymiae Medicae etc.

v. 2, pt. 3, p. 375; (Coxe, Am. Dispens., 1 ed., p. 459; Ibid., 4 ed., p. 374; Ibid., 6 ed., p. 406; Ibid., 7 ed., p. 420; Ibid., 8 ed., p. 437; Ibid., 9 ed., p. 481; Wood & Bache, U.S. Dispens., 2 ed., p. 445; Ibid., 3 ed., p. 436; Ibid., 4 ed., p. 450; Ibid., 5 ed., p. 475; Ibid., 6 ed.,p. 475; Ibid., 7 ed., p. 475; Ibid., 8 ed., p. 475; Ibid., 9 ed., p. 489; Ibid., 10 ed., p. 489; Ibid., 11 ed., p. 510; Ibid., 12 ed., p. 558; Ibid., 13 ed., p. 572; Ibid., 15 ed., p. 971; 16 ed., p. 1006; Ibid., 17 ed., p. 893; Ibid., 20 ed., p. 718; Ibid., 21 ed., p. 714; Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 637.)

Gives the history, description, kinds, physical properties, uses, constituents and preparations of myrrh.

Chomel, P. J. B. 1761

Myrrhe.

Abrege De L'Histoire des Plantes Usuelles, v. 1, p. 246.

Gives synonymy with references, description, uses and preparations of myrrh.

Lewis, W. 1761

Myrrha.

An Experimental History of the Materia Medica, p. 382; (Ibid., German ed., p. 393.)

Gives the product used, description, properties, uses, constituents and preparations of myrrh.

Spielmann, J. R. 1763

(Myrrh Oil.)

Institutiones Chemiae praelectionibus academicis adommodatae, Argentorati, p. 221; (Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 636.)

(Worked upon the production of myrrh oil from myrrh.)

Loeseke, J. L. L. 1764

(Myrrha.)

Mat. Med., 3 ed., p. 404; (Triller, Dispensatorium Pharmaceuticum Universale sive Theaurus, p. 243.)

The original was not available.

Triller, D. W. 17 64

Myrrha.

Dispensatorium Pharmaceuticum Universale sive Thesaurus, p. 243.

Gives a description of myrrh and the tree it comes from together with early references.

Linne, C. A. 1772

Myrrha.

Materia Medica per. Regna Tria Naturae, 2 ed., p. 235.

Gives the official title, product used, properties, uses and preparations of myrrh.

Niebuhr, K. 1772

(Myrrha.)

Beschreibung von Arabien, p. 282 & 286; (Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 635.)

See Agatharchides Ca. 104 B. C. reference for data.

Forskal, P. 1775

(Myrrha.)

Flora Agyptiaco Arabica etc., p. 80, Catal p. 110; (Bentley & Trimen, Medicinal Plants, 1, pt. 60; Tschirch, Handbuch der Pharmacie, 1 ed., v. 3, p. 1120.)

("B. Kataf was discovered by Forskal in his fruitful journey in southern Arabia in 1763; his A. Kataf is doubtless the same species, and to it also isprobably to be referred Hemprichia erythraea, Ehrenb. originally Arabia, and since by Schweinfurth on the opposite Nubian shore, at Ras Tausi.")

(Editor.) (1787)

(Myrrha.)

Liber Quotidianus Contrarotulatoris Garderobae .... Edwardi 1, p. 27 & 28; (Flueckiger & Hanbury, Pharmacographia, 1 ed., p. 126; Ibid., 2 ed., p. 141.)

Bruce, J. 1790

(Myrrh.)

Travels to Discover the Source of the Nile, v. 5, p. --; (Coxe, Am. Dispens., 1 ed., p. 459; Ibid., 4 ed., p. 374; Ibid., 6 ed., p. 406; Ibid., 7 ed., p. 420; Ibid., 8 ed., p. 437; Ibid., 9 ed., p. 481; Newton & Hing, Eclectic & General Dispens., 1 ed., p. 216.)

(Advances his reasons for concluding that myrrh is obtained from a species of Mimosa.)

Duncan, A. & A. Jr. 1791

(Myrrha.)

Edinburgh New Dispensatory, 3 ed., p. 233; (Ibid., 4 ed., p. 201, Sr.; 1st Worcester ed., p. 263; Ibid., 3 ed., p. 395; Ibid., 4 ed., p. 317; Ibid., 6 ed., p. 339; Ibid., 7 ed., p. 195; Ibid., 10 ed., p. 221; Coxe, Am. Dispens., 1 ed., p. 459; Ibid., 4 ed., p. 374.)

Reviews the product used, habitat, properties, constituents, like substances and medicinal uses of myrrh.

Gmelin, J. F. 1803

Myrrhe.

Geschichte der Pflanzengifte, p. 132.

Myrrh is listed as one of four antidotes from the vegetable kingdom.

Hatchett, C. (Before 1806)

(Myrrh.)

----------, -----, p. ---(Coxe, Am. Dispens., 1 ed., p. 460; 4 ed., p. 374; Ibid., 6 ed., p. 407; Ibid., 7 ed., p. 420; Ibid., 8 ed., p. 437; Ibid., 9 ed., p. 481; Duncan Jr., Edinburgh New Dispens., 4 ed., p. 318.)

(Myrrh is soluble in alkalies.)

Trommsdorff, J. B. 1806

Myrrha sive Myrrha Rubra.

Handbuch der Pharmaceutischen Waarenkunde, p. 516; (Ibid., 3 ed., p. 487.)

Gives a description, handling, habitat and uses of myrrh.

Buchanan, F., (Hamilton, F.) 1807

(Myrrh.)

A Journey from Madras through Mysore, Canara and Malabar, v. 2, p. 8; (Pharm. Jour., 49, p. 143; Am. Jour. Pharm., 61, p. 508.)

(Describes a species of myrrh about which little is known, which he believes to be a Rhus.)

Morelot, S. 1807

Myrrhe.

Nouveau Dictionnaire General des Drogues, Simples et Composses, v. 2, p. 88.

Gives the product used, source, properties, composition and uses of myrrh.

Trommsdorff, J. B. 1807

Myrrhen.

Die Apotheker Kunst etc., v. 2 p. 854; (Stille & Maisch, Natl. Dispens., 1 ed., p. 932; Ibid., 2 ed., p. 948; Ibid., 3 ed., p. 1009; Ibid., 5 ed., p. 1068.)

Describes myrrh, commercial varieties, constituents, and discusses its preparations and their uses.

Branconnot, H. 1808

Analyse Comparii des Gommes-Resines.

Annal-de Chim. et de Phys., 68, p. --;(Coxe, Am. Dispens., 4 ed., p. 374; Ibid., 6 ed., p. 406; Ibid., 7 ed., p. 420; Ibid., 8 ed., p. 437; Ibid., 9 ed., p. 481; Newton & King, Eclectic and General Dispens., 1 ed., p. 216; Wood & Bache, U.S. Dispens., 2 ed., p. 445; Ibid., 3 ed., p. 437; Ibid., 4 ed., p. 450; Ibid., 5 ed., p. 474; Ibid., 6 ed., p. 475; Ibid., 8 ed., p. 475; Ibid., 9 ed., p. 489; Ibid., 10 ed., p. 488; Ibid., 11 ed., p. 510; Ibid., 12 ed., p. 559; Ibid., 13 ed., p. 572; Ibid., 15 ed., p. 970; Ibid., 16 ed., p. 1006; Ibid., 17 ed., p. 893; Tschirch, Handbuch der Pharmacie, 1 ed., v. 3, p. 1127; Bergmann, Uber die Heerabol Myrrha, p. 20; Gildemiester & Hoffmann, Die Aetherischen Oele, p. _37.)

Gives the results of his analysy of several gum-resins, including myrrh, and concludes that myrrh consists chiefly of a particular gum with some resin.

Branconnot, H. 1809

Vergleichende Untersuchung der Gummiharze.

Trommsdorff's Jour. d. Pharm., 18, pl. 1, p. 183; (Gildemiester & Hoffmann, Die Aetherischen Oele, p. 637.)

Gives botanical synonymy, habitat, properties, composition, extracts formed by various solvents with myrrh, and gives the results obtained.

Vauquellin, L. N. 1809

Analyse de la racine de la Vitiver Andropogen Schaenanther envojie de l'gleae France, par in Gommet en 1808.

Annales de Chim. et de Phys., 72, p. 304; (Coxe, Am. Dispens., 4 ed., p. 374; Ibid., 6 ed., p. 406; Ibid., 7 ed., p. 420; Ibid., 8 ed., p. 438; Ibid., 9 ed., p. 482; Jour. de Pharm. et de Chim., 14, p. 60.)

An alcoholic extract of the root of Andropogen Sdhornanthus, was a thick brown oil, of exactly the same smell of myrrh, which if united to gummy matter would exactly resemble myrrh.

Pelletier, J. 1811

De la Myrrhe.

Ann. de Chim. et de Phys., 80 p. 45; (Tschirch, Handbuch der Pharm., 1 ed., v. 3, p. 1127; Bergmann, Uber die Heerabol Myrrha, p. 20; Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed. p. 637.)

Gives the habitat, description, compesition and also the observations made by Branconnot.

Pfaff, C. H. 1814

Myrrhe.

Syst. d. Mat. Med., v. 3, p. 298; (Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1127; Bergmann, Uber die Heerabol Myrrha, p. 7 & 21.)

Gives the habitat, properties, other sorts and their properties, composition, preparations and uses of myrrh with findings of other investigators.

Murray, J. 1815

Myrrha.

System of Materia Medica and Pharmacy, v. 1, p. 327; (Am. ed., p. 326; Ibid., 6 ed., p. 326.)

Reviews the sources, description, properties, composition, uses, dose and preparations of myrrh.

Jaenicke, ---.(Berlin) 1816

Chemische Untersuchung der Myrrhe und des Bdellium.

Berliner, Jahrb. Pharm., 17, p. 240; (Tschirch, Handbuch der Pharmacie, 1 ed., v. 3, p. 1127; Bergmann, Uber die Heerabol Myrrha, p. 21.)

Gives the scientific name, habitat, properties, analysis of and other sorts of myrrh.

Brandes, R. 1819

Vorlaufige Naehricht ueber eine neue Analyse der Myrrhe und des Bimsteins.

Buchner's Repertorium f. der Pharm., 5, p. 154; (Stille & Maisch, Natl. Dispens., 1 ed., p. 931; Ibid., 2 ed., p. 948; Ibid., 3 ed., p. 1009; Ibid., 5 ed., p. 1068; Wood & Bache, U.S. Dispens., 2 ed., p. 445; Ibid., 3 ed., p. 437; Ibid., 4 ed., p. 450; Ibid., 5 ed., p. 475; Ibid., 6 ed., p. 475; King & Newton, Am. Dispens., 6 ed., p. 158; Ibid., 8 ed., p. 154; Ibid., 10 ed., p. 154; Ibid., 15 ed., p. 154; Ibid., 16 ed., p. 154; Tschirch, Handbuch der Pharmacie, 1 ed., v. 3, p. 1127; Alman. f. Scheidekunstler und Apotheker, p. 51; Bergmann, Uber die Heerabol Myrrha, p. 21; Gildemiester & Hoffmann, Die Aetherischen Oele, p. 637.)

In a letter to the editor, communicates the results of a preliminary investigation of myrrh with various solvents, and lists the various constituents.

Chevallier, A., Richard, A & Guillemin, J. A. 1828

Myrrhe.

Dictionnaire des Drogues, v. 3, p. 542.

Gives the product used, habitat, botanical origin, properties, constituents, uses, dose and substitutes of myrrh.

F'ee, A. L. A. 1828

Myrrhe.

Cours d'Histoire Naturelle Pharmaceutique etc., v. 1, p. 641; (Coxe, Am. Dispens., 9 ed., p. 481; Wood & Bache, U.S. Dispens., 2 ed., p. 444; Ibid., 3 ed., p. 436; Ibid., 4 ed., p. 449; Ibid., 5 ed., p. 474; Ibid., 6 ed., p. 474; Ibid., 7 ed., p. 474; Ibid., 8 ed., p. 474; Ibid., 9 ed., p. 488; Ibid., 10 ed., p. 488; Ibid., 11 ed., p. 510; Ibid., 12 ed., p. 558; Ibid., 13 ed., p. 571; Ibid., 15 ed., p. 970; Ibid., 16 ed., p. 1005; Ibid., 17 ed., p. 892.)

(Myrrh is the juice of Balsamodendron Myrrha.)

Nees von Esenbeck, T. F. L. 1828

Balsamodendron Myrrha.

Plantae Medicinales, 2, Tab. 357; (Pharmakognosie des Pflanzenreiches, 1 ed., p. 33; Ibid., 2 ed., p. 38; Die Pflanzen der Pharmacopoea Germanica, p. 455; Besch. Offic. Pflanz. liv. 17; Flueckiger & Hanbury, Pharmacographia, 1 ed., p. 125; Ibid., 2 ed., p. 140; Handbucj der Medicinisch pharmaceutischen Botanik, 3, p. 122; Tschirch, Handbuch der Pharmacie, 1 ed., v. 3, p. 1120; Pharm. Jour., 76, p. 256; Wood & Bache, U.S. Dispens., 2 ed., p. 444; Ibid., 3 ed., p. 436; Ibid., 4 ed., p. 449; Ibid., 5 ed., p. 474; Ibid., 6 ed., p. 474; Ibid., 7 ed., p. 474; Ibid., 8 ed., p. 474; Ibid., 9 ed., p. 488; Ibid., 10 ed., p. 488; Ibid., 11 ed., p. 510; Ibid., 12 ed., p. 557; Ibid., 13 ed., p. 571; Ibid., 15 ed., p. 970; Ibid., 16 ed., p. 1005; Ibid., 17 ed., p. 892; Ibid., 20 ed., p. 716; Ibid., 21 ed., p. 713; King, Am. Dispens., 18 ed., v. 2, p. 1298; Bergmann, Uber die Heerabol Myrrha, p. 10; Fristedt, Organisk Pharmakolgi, p. 196.)

Gives the scientific name, varieties, description, constituents, and a full page illustration with an explanation.

Bonastre, J. F. 1829

Sur une Nouvelle espece de myrrhe, et analys de cette substance.

Jour. de Pharm., 21, p. 281; (Nouvelle Bibliotheque, Aout; N. Am. Med. & Surg. Jour., p. ---; Am. Jour. Pharm., 2, p. 84.)

Reviews the history of myrrh and describes new types, and compares them with genuine myrrh with analyrical data.

(Buchner, J. 1829

Ursprung der Myrrhe.

Buchner's Repertorium f. Pharm., 32, p. 307; (Tschirch, Handbuch der Pharm., 1 ed., v. 3, p. 1120; Bergmann, Uber die Heerabol Myrrha, p. 7.)

Gives the botanical origin for myrrh according to various authors.

Ehrenberg, C. G. (1829)

(Myrrha.)

Linnaea, 4, p. 390; (Tschirch, Handbuch der Pharmacie, 1 ed., v. 3, p. 1120.)

The original was not available.

Bonastre, J. F. 1830

Ueber eine neue art von Myrrhe, nebst Analyse dieser Substanz.

Buchner's Pepertorium f. Pharm., 4, p. 293; (Tschirch, Handbuch der Pharmacie, 1 ed., v. 3, p. 1127; Bergmann, Uber die Heerabol Myrrha, p. 7 & 22; Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 637.)

Gives the scientific name, habitat, properties, description and the results of his analysis of myrrh.

Bonastre, J. F. 1832

A dissertation on some Ancient Plants of Egypt.

Lond. Med. & Physical Jour., 13, p. ---; (Am. Jour Pharm., 5, p. 140.)

Reports on the analysis of a new species of the "myrrh of Commerce" and its habitat.

Harley, J. 1832

(Myrrha.)

Royle Mat. Med., 2 ed., p. 384; (Bentley & Trimen, Medicinal Plants, 1, p. 60.)

The original eas not availble.

Nees von Esenbeck, C. H. & Ebermaier, C. H. 1832

Balsamodendron Myrrha nob. Link.

Handbuch der Botanik, v. 3, p. 122; (Bentley & Trimen, Medicinal Plants, v. 1, pt. 60.)

Gives the habitat, description of the plant, allied species, method of handling the gum, physical properties, adulterations, constituents and uses.

Kunth, K. S. 1834

Balsamodendron Myrrha Ehrenb.

Anleitung zur Kenntnifs summtlicher in der Pharmacopoeia Borussica aufgefurhten Officinellen Gewachse nach naturlichen Familien, p. 463; (Stille & Maisch, Natl. Dispens., 1 ed., p. 931; Ibid., 2 ed., p. 947; Ibid., 3 ed., p. 1008; Ibid., 5 ed., 1068; Wood & Bache, U.S. Dispens., 2 ed., p. 444; Ibid., 3 ed., p. 436; Ibid., 4 ed., p. 449; Ibid., 5 ed., p. 474; Ibid., 6 ed., p. 474; Ibid., 7 ed., p. 474; Ibid., 8 ed., p. 474; Ibid., 9 ed., p. 488; Ibid., 10 ed., p. 488; Ibid., 11 ed., p. 510; Ibid., 12 ed., p. 13 ed., p. 571; Ibid., 15 ed., p. 970; Ibid., 16 ed., p. 1005; Ibid., 17 ed., p. 892; Ibid., 20 ed., p. 716; Ibid., 21 ed., p. 713.)

The scientific name, description and habitat of myrrh are given.

Guibourt, N. J. B. G. 1836

De la Myrrhe.

Histoire Abregee des Drogues Simples, 3 ed., v. 2, p. 505; Ibid., 4 ed., v. 3, p. 357; Ibid., 6 ed., v. 3, p. 510; Flueckiger, Pharm. Pflanzenreiches, 3 ed., p. 39.)

Gives the habitat, botanical origin, commercial varieties, constituents and a full page illustration of the flowering and fruiting branch of the plant yielding myrrh.

Lindley, J. 1838

Protium Kataf, 336.

Flora Medica, p. 170; (Lindley, Medical Botany, p. 171.)

Reviews the botanical synonymy, habitat, description, of the plant, its uses and plants related to myrrh.

Planche, L. A. 1840

Sur une Substance Naturelle Exotique Simulant la Myrrhe et sur le Principe Particulier Qu'elle Renferme.

Jour. Pharm., 26, p. 501; (Am. Jour. Pharm., 12, p. 333.)

Discusses the physical properties, the action of water and ether on a substance resembling myrrh. Gives chemical properties of an apueous solution of the substance called "Myrrhoidine".

Ehrenberg, C. G. 1841

(Myrrh of Antiquity.)

De Myrrhae et Opocalpsi ab Hemprichio et Ehrenbergio in itinere per Arabiam et Habessiniam detectis plantis particulam primam offert; (Flueckiger & Hanbury, Pharmacographia, 2 ed., p. 140.)

("Bola, Bal or Bol ere names of the myrrh in Egyptian antiquity.")

Oken, S. M. 1841

(Sweet Myrrh.)

"Botan. u. Nat. Hist. der Pflanzen", p. 1799; (Drugg. Circ., 31, p. 113.)

("European sweet sicely is sometimes called myrrhis dulcis, aliteral translation of which gives the name above. It is occasionally employed in domestic practice in Europe. The root is used as an aromatic, stimulant, tonic and vulnerary.")

Winkler, E. 1842

Myrrha.

Vollstandiges Real-Lexikon der Medicisch-pharmaceutischen Vaturgeschichte und Rohwaarenkunde, v. 2, p. 115.

Gives several synonyms, discusses the botanical origin, description of several commercial varieties, habitat, constituents and preparations of myrrh.

Righini, G. 1844

Sur La Falsification De Quelques Produits Chemiques, Avec L'indication De Mogens economiques Propres a En Faire Reconnaitre La Purete.

Jour. de Chim. Med., 20, p. 333; (Chem. Gax., 3, p. 307; Wood & Bache, U.S. Dispens., 7 ed., p. 476; Ibid., 8 ed., p. 476; Ibid., 9 ed., p. 489; Ibid., 10 ed., p. 489; Ibid., 11 ed., p. 510; Ibid., 12 ed., p. 559; Ibid., 13 ed., p. 572; Ibid., 15 ed., p. 971; Ibid., 16 ed., p. 1006; Ibid., 17 ed., p. 893; Ibid., 20 ed., p. 718; Ibid., 21 ed., p. 715; King & Newton, Am. Dispens., 8 ed., p. 154; Ibid., 10 ed., p. 154; Ibid., 15 ed., p. 154; Ibid., 16 ed., p. 154; Am. Jour. Pharm., 17 ed., 239.)

If powdered myrrh is triturated for a quarter of an hour with sal-ammoniac powder, and then 15 times this weight of water added, in which it completely dissolves, the myrrh is pure.

Roth, R. 1844

Von Myrrhen.

Buchner's Repertorium, s. 2, v. 35, p. 19; (Hanbury's Science Papers, p. 499; Bentley & Trimen, Medicinal Plants, v. 1, pt. 60.)

Found 2 species of myrrh while traveling through Abyssinia. Describes them, the method of handling the gum, and how it is brought onto the market.

Ruickholdt, C. H. 1845

Chemische Analyse der Myrrha.

Pharm. Central-Blatt, 16, p. 314; (Archiv. der Pharmacie, 19, p. 1; Chem. Gaz., 3, p. 262; Am. Jour. Pharm., 17, p. 171; Pharm. Jour., 5, p. 376; Stille & Maisch, Natl. Dispens., 1 ed., p. 932; Ibid., 2 ed., p. 948; Ibid., 3 ed., p. 1009; Ibid., 5 ed., p. 1068; Wood & Bache, U.S. Dispens., 7 ed., p. 476; Ibid., 8 ed., p. 475; Ibid., 9 ed., p. 489; Ibid., 10 ed., p. 489; Ibid., 11 ed., p. 510; Ibid., 12 ed., p. 559; Ibid., 13 ed., p. 572; Ibid., 15 ed., p. 971; Ibid., 16 ed., p. 1006; Ibid., 17 ed., p. 893; Ibid., 20 ed., p. 718; Ibid., 21 ed., p. 715; Felter & Lloyd, Am. Dispens., 18 ed., v. 2, p. 1299; Proc. Am. Pharm. Assoc., 8, p. 61; Tschirch, Handbuch der Pharmacie, 1 ed., v. 3, p. 1120; Ibid., 2 ed., v. 3, p. 1127; Neues Repetertorium of Pharm., 16, p. 76; Bergmann, Uber die Heerabol Myrrha, p. 7, 22 & 58; Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 637.)

Describes myrrha electa, myrrha naturalis, myrrha indica, myrrha alba and myrrha and myrrha nova, and discusses in detail the nanlysis if the latter.

Bley, L. F. & Diesel, E. 1846

Ueber Myrrha und Unterscheidung derselben von Bdellium.

Archiv. der. Pharm., 93, p. 304; (Chem. Gaz., 4, p. 225; Am. Jour. Pharm., 18, p. 227; Stille & Maisch, Natl. Dispens., 1 ed., p. 931; Ibid., 2 ed., p. 948; Ibid., 3 ed., p. 1009; Ibid., 5 ed., p. 1068; Wood & Bache, U.S. Dispens., 7 ed., p. 476; Ibid., 8 ed., p. 476; Ibid., 9 ed., p. 489; Ibid., 10 ed., p. 489; Ibid., 11 ed., p. 510; Ibid., 12 ed., p. 559; Ibid., 13 ed., p. 572; Ibid., 15 ed., p. 971; Ibid., 16 ed., p. 1006; Ibid., 17 ed., p. 893; Ibid., 20 ed., p. 718; Ibid., 21 ed., p. 715; King & Newton, Am. Dispens., 6 ed., p. 158; Ibid., 8 ed., p. 154; Ibid., 10 ed., p. 154; Ibid., 15 ed., p. 154; Ibid., 16 ed., p. 154; Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 637.)

Describes psuedo-myrrha which is frequently found with true myrrh, and gives tests by which the true myrrh may be identified.

Cruttenden, --- 1846

(Habitat of Myrrh.)

Trans. Bombay Geogr. Soc., 7, p. 123; (Flueckiger & Hanbury, Pharmacographia, 1 ed., p. 127; Ibid., 2 ed., p. 142; Bentley & Trimen, Medicinal Plants, 1, pt. 60.)

("Cruttenden who visited the Somali coast in 1843, says that myrrh is from the Wadi Nogal, southwest of Cape Gardafui, and that some trees are found on the mountains behind Bunde Myrayah.")

Hartung, --- & Schwarzkopf, --- 1846

Uber Verfalschung der Myrrhe mit Arabischen Gummi.

Archiv. der Pharm., 98, p. 312.

Had a sample of myrrh containing 15/16 if the true myrrh and 1/16 of gum acacia, and gives the method by which he tested for the myrrh.

Griffith, R. E. 1847

Balsamodendron Myrrha, Nees.

Medical Botany, p. 171.

Presents a description of the plant, its history, habitat, properties, constituents and medicinal properties of myrrh.

Heldy, W. 1847

Ueber die Natur des Santonins und die Gesetze der Harsbildung.

Ann. der Chem. u. Pharm., 63, p. 59; (Stille & Maisch, Natl. Dispens., 1 ed., p. 931; Ibid., 2 ed., p. 948; Ibid., 3 ed., p. 1009; Ibid., 5 ed., p. 1068; Canstadts Jahresb., 7, p. 118.)

Reports the results of an investigation of the constituents of the oil of myrrh, as compared with those of Ruickholdt.

Arrianos, P. (1849)

(Myrrha.)

Anabasis, Lib., p. 20 & 22; (Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 635.)

See Agatharchides reference, 104 B. C. for data.

Hooker, --- 1849

(Myrrha.)

Jour. Bot., 1, p. 257; (Bentley & Trimen, Medicinal Plants, 1, pt. 60.)

The original was not available.

Redwood, T. 1849

On Drug Grinding.

Pharm. Jour., 8, p. 218; (Am. Jour. Pharm., 12, p. 31.)

Gives data on the greatest loss, smallest loss in the grinding of various drugs including myrrh.

DeCandolle, A. 185-

(Species of Camphora.)

Mongraphiae Phanerogamerum Prodromi, 4, p. 9; (Wood & Bache, U.S. Dispens., 2 ed., p. 444; Ibid., 3 ed., p. 436; Ibid., 4 ed., p. 449; Ibid., 5 ed., p. 474; Ibid., 6 ed., p. 474; Ibid., 7 ed., p. 474; Ibid., 8 ed., p. 474; Ibid., 9 ed., p. 488; Ibid., 10 ed., p. 488; Ibid., 11 ed., p. 510; Ibid., 12 ed., p. 558; Ibid., 13 ed., p. 571; Ibid., 15 ed., p. 970; Ibid., 16 ed., p. 1005; Ibid., 17 ed., p. 892; Ibid., 20 ed., p. 716; Ibid., 21 ed., p. 713; Tschirch, Handbuch der Pharmacie, 1 ed., v. 3, p. 1120.)

(35 species of the genus Commiphora are descrubed in the above book.)

Douet, d'Qrcq, --- 1851

(Myrrha.)

Comptes de l'Argenterie des France, p. 19; (Flueckiger & Hanbury, Pharmacographia, 1 ed., p. 126; Ibid., 2 ed., p. 141; Flueckiger, Pharmakognosie des Pflanzenreiches, 2 ed., p. 36; Ibid., 3 ed., p. 43.)

("Myrrh again figures in the accounts of Geoffroi de Fleuri master of the ward robe (argentier) to Philippe le Long, king of France, where record is made of the purchase of '4 ounces d'estorat Calmite et mierre (myrrh).... encenz et laudanon' .. for the funeral of John, posthumous son of Louis X, A. D. 1316.")

Meyer, E. 1852

(Myrrha.)

Botanische Erlauterungen zu Strabous Geographie, p. 139; (Flueckiger, Pharm. des Pflanzenreiches, 2 ed., p. 36; Ibid., 3 ed., p. 42; Gildemiester & Hoffmann, Die Aetherischen Oele, p. 635.)

The original was not available.

Scheiden, M. J. 1852

Balsamodendron Kataf, Kunth.

Handbuch der Medicinisch-pharmaceutischen Botanik, p. 289.

Discusses the above scientific name, habitat of the plant yielding myrrh, and the product used.

Vaughan, J. 1852

Myrrh.

Pharm. Jour., 12, p. 226; (Stille & Maisch, Natl. Dispens., 1 ed., p. 931; Ibid., 2 ed., p. 948; Ibid., 3 ed., p. 1008; Ibid., 5 ed., p. 1068; Wood & Bache, U.S. Dispens., 12 ed., p. 558; Ibid., 13 ed., p. 572; Ibid., 15 ed., p. 970; Ibid., 16 ed., p. 1005; Ibid., 17 ed., p. 893; Ibid., 20 ed., p. 717; Bentley & Trimen, Medicinal Plants, 1, pt. 60.)

Deals briefly with the habitat, sale and cost of myrrh.

(Editor.) 1853

(Circular of Instructions to the Special Examiners of Drugs.)

North American, (June 14 th.) ---, p. ---; (Am. Jour. Pharm., 25, p. 303.)

("Myrrh when affording 30 per cent. of pure myrrh resin and 50 per cent. of gum, is entitled to entry.")

Procter, W. Jr. On behalf of Committee. 1853

Report on the circular of Instructions issued by the Secretary of the Treasury under date of June 4, 1853.

Proc. Am. Pharm. Assoc., 4, p. 28.

"The standard of myrrh is based on the proportion of resin and gum. The quality of myrrh depends much on the portion of the volatile oil. A better means of judging myrrh is from the amount of semi-fluid oleo-resin resulting from the evaporation of the ethereal tincture of myrrh."

Vaughan, J. 1853

Notes Upon the Drugs Observed at Aden, Arabia.

Am. Jour. Pharm., 25, p. 149; (Pharm. Jour., 12, p. 226; Flueckiger & Hanbury, Pharmacographia, 1 ed., p. 127; Ibid., 2 ed., p. 143.)

Gives the exact location of the habitat, handling and trade of myrrh.

Wiggers, A. 1853

Balsamodendron Myrrha, Nees.

Grundriss der Pharmacognosie, p. 471.

Gives the botanical origin, habitat, trade, composition, test, properties and other sorts of myrrh.

Campagne, P. J. 1854

Mirre.

Handbuch voor Droogesten en Apothekers -- Leerlingen, p. 387.

Reviews synonyms, commercial varieties, botanical origin, constituents and preparations of myrrh.

Martiny, E. & J. 1854

(Myrrha Indicus.)

Encyklop. der med-pharm. Rohwaarenkunde, v. 2, p. 98 & 101; (Flueckiger & Hanbury, Pharmacographia, 1 ed., p. 129; Ibid., 2 ed., p. 145.)

("Bissa Bol (Bhesabol, Bysabole), Habaghadi or Habbakhade of the Somalis, formerly called East India Myrrh. The drug is of African origin, but of the plant which yields it, nothing is known.")

Guillain, C. 1856

(Myrrha.)

Documents sur l'histoire, la Geogr. et le Commerce de l'-Afrique Ocientale, v. 3, p. 350; (Flueckiger & Hanbury, Pharmacographia, 2 ed., p. 145; Flueckiger, Pharmakognosie Des Pflanzenreiches, 2 ed., p. 37; Ibid., 3 ed., p. 44.)

Tells how myrrh from the interior of north eastern Africa enters into commerce.

Berg, O. 1857

Myrrha.

Pharmaceutische Waarenkunde, 1 ed., p. 521; Ibid., 2 ed., p. 548; Ibid., 3 ed., p. 516.

Gives several synonyms for myrrh with a description of the plant yielding it, its habitat, commercial varieties and constituents.

Reil, W. 1857

Myrrhenol.

Materia Medica der Reinen Chemischen Pflanzenstoffe, p. 227.

Gives various characteristics of the volatile oil of, and the hydrocarbons obtained from myrrh.

Schleiden, M. J. 1857

Gummi-Resina Myrrha.

Handbuch der Medicinisch-pharmaceutischen Botanik, p. 458.

Presents data on the botanical origin, Pharmacopoeias official in, physical properties and the tincture of myrrh.

Hekemeijer, W. J. E. 1858

(The Gums of Myrrh.)

----------, p. ---; (Stille & Maisch, Natl. Dispens., 1 ed., p. 931; Ibid., 2 ed., p. 948; Ibid., 3 ed., p. 1009; Ibid., 5 ed., p. 1068.)

(The gum present in myrrh is of 2 kinds, 1 being precipitated by neutral, and the other by basic acetate of lead.)

Hooker, W. J. & Hanbury, D. 1859

Botanical and Pharmacological Inquiries and Desiderata.

Admiralty Manual of Scientific Inquiry, 3 ed., p. ---; (Hanbury, Science Papers, p. 175.)

The habitat of three varieties of myrrh is given. "It is a point of much interest to determine with accuracy the plants which afford these several sorts of myrrh, and for this end, it is earnestly requested that those who have any opportunity for investigating the subject will not neglect to do so."

Lessing, M. B. 1859

Myrrha.

Kurzer Abriss der Materia Medica, p. 225.

Reviews the botanical origin, composition, preparations, form, uses and dose of myrrh.

Runge, --- 1859

(Myrrha.)

Adjurationen, Exercismen, Benedictionen, &c., in Mittheilungen der antiquar. Gesellschaft in Zurich, v. 12, p. 187; (Flueckiger & Hanbury, Pharmacographia, 2 ed., p. 141; Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 636; Flueckiger, Pharm. des Pflanzenreiches, 3 ed., p. 43.)

("In a manuscript of the Monastary of Rheinau, near Schaffhausen, Switzerland, we also find that, apparently in the 11th century, myrrh as well as olibanum was used in ordeals in the 'judicium aquae bullientis'.")

Komas, -- 1860

(Myrrha.)

Indopleustes, Topographia Christiana in Mignes Patrologiae cursus completus. Series graeca v. 88, p. 374; (Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 635.)

See Agatharchides reference, 104 B. C. for data.

Berg, O. 1862

Die Balsamodendron-Arten der Berliner Herbarien.

Bot. Zeit., 20; p. 153; (Bentley & Trimen, Medicinal Plants, 1, pt. 60; Stille & Maisch, Natl. Dispens., 1 ed., p. 931; Ibid., 2 ed., p. 947; Ibid., 3 ed., p. 1008; Ibid., 5 ed., p. 1068; Wood & Bache, U.S. Dispens., 15 ed., p. 970; Ibid., 16 ed., p. 1005; Ibid., 17 ed., p. 892; Ibid., 20 ed., p. 716.)

Lists the species of Balsamodendron in the Berliner Herbarien with the history of the genus, and other species of myrrh.

Warncke, T. S. 1862

Myrrha.

Laeren om Laegemidlernes physiologiske Virkninger of Therapeutiske Anoendelse, p. 114.

Lists the preparations in which myrrh is used.

Gladstone, J. H. 1863

(Myrrh Oil.)

Chem. Soc. Jour., s. 2, v. 2, p. 1; (Jahresb. fur Chemie, 1863, p. 545; Wood & Bache, U.S. Dispens., 16 ed., p. 1006; Ibid., 17 ed., p. 892; Ibid., 20 ed., p. 718; Ibid., 21 ed., p. 715; Flueckiger & Hanbury, Pharmacographia, 1 ed., p. 122; Ibid., 2 ed., p. 144; Bergmann, Uber die Heerabol Myrrha, p. 58; Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 638.)

("The oil of myrrh is a yellowish, rather viscid liquid, neutral to litmus, having a strong odor of myrrh, and a sp. gr. of 0.988 at 13° C.")

Wigand, A. 1863

Myrrha.

Lehrbuch der Pharmacognosie, 1 ed., p. 232; Ibid., 4 ed., p. 346.

Gives the botanical origin, habitat, properties, tests, composition and related substances of myrrh.

Oliver, D. 1864

(Myrrha.)

Flora of Tropical Africa, 1, p. 326; (Flueckiger, Pharm. des Pflanzenreiches, 2 ed., p. 33; Ibid., 3 ed., p. 39; Bentley & Trimen, Medicinal Plants, 1, pt. 60; Flueckiger & Hanbury, Pharmacographia, 1 ed., p. 125; Ibid., 2 ed., p. 141; Tschirch, Handbuch der Pharmacie, 1 ed., v. 3, p. 1120; Bergmann, Uber die Heerabol Myrrha, p. 10.)

(Considers Bergs plant (B. Ehrenbergianum) the same as B. Opalbalsamum Kth., a tree or shrub yielding myrrh, found by Schweinfurth on the Besharren mountains not far from the coast between Saikin and Edineb.)

Cockayne, F. O. 1865

(Myrrha.)

Leechdoms &c. of Early England, v. 2, p. 295 & 297; (Flueckiger & Hanbury, Pharmacographia, 1 ed., p. 125; Ibid., 2 ed., p. 141.)

("Thus myrrh is recommended in the Anglo-Saxon Leech-books to be used with frankincense in the superstitious medical practice of the 11th Century.")

Hager, H. 1865

Notizen zur Analyse von Geheimmitke, besonders denjenigen, welcke Drastica erethaltan.

Pharm. Centralhalle, 6, p. 58; (Canstadt's Jahresb., 25, p. 71; Stille & Maisch, Natl. Dispens., 1 ed., p. 931; Ibid., 2 ed., p. 948; Ibid., 3 ed., 1009; Ibid., 5 ed., p. 1068.)

Among 7 drugs, reports the solubility of myrrh in 4 different solvents.

Berg, O. 1866

Balsamodendron Myrrha Nees.

Pharmazeutische Botanik, p. 360.

A description and habitat of the myrrh plant are given.

Hlasiwetz, H. & Barth, L. 1866

Ueber einige Harze.

Annalen der Chem. u. Pharm., 139, p. 82;(Stille & Maisch, Natl. Dispens., 3 ed., p. 1009; Ibid., 5 ed., p. 1068; Jahresb. der Pharmacog. etc., 26, p. 138; Tschirch, Handbuch der Pharmacie, 1 ed., v. 3, p. 1127; Bergmann, Uber die Heerabol Myrrha, p. 23; Flueckiger, Pharmakognosie Des Pflanzenreiches, 3 ed., p. 39.)

(The alcohol soluble portion of myrrh when fused with caustic potash, yielded only proto-catechuic and Pyro-catechuic Acids.)

Marchand, S. 1866-7

(Myrrha.)

Recherches sur l'Organisation des Burseracees, p. 42, pl. 1; (Adanosonia, 7, p. 261, pl. 8; Flueckiger & Hanbury, Pharmacographia, 1 ed., p. 126; Ibid., 2 ed., p. 142; Bentley & Trimen, Medicinal Plants, 1, pt. 60; Tschirch, Handbuch der Pharmacie, 1 ed., v. 3, p. 1124; Flueckiger, Pharmakognosie des Pflanzenreiches, 2 ed., p. 33; Ibid., 3 ed., p. 39; Geissler & Moeller, Real-Enzyklopadie, p. 220.)

("Manchard who examined and figured the years growth of B. Myrrha, represents the gum-resin as chiefly deposited in cortical layers with little in the Medulla.")

Bruckner, B. 1867

Balsamodendron Ehrenbergianum.

Jahresberich der Pharm., 2, p. 156; (Flueckiger, Pharm. Des Pflanzenreiches, 2 ed., p. 33; Ibid., 3 ed., p. 40.)

Gives results found on the analysis of myrrh with data.

Bruckner, G. E. 1867

Untersuc. uber Gummi-Resina Myrrhae.

Neues Repetertorium of Pharm., 16, p. 76; (Tschirch, Handbuch der Pharmacie, 1 ed., v. 3, p. 1127; Bergmann, Uber die Heerabol Myrrha, p. 23.)

Separates myrrh into several groups by means of solvents and gives the hydrogen, carbon and oxygen content of each.

Carson, J. 1867

Myrrha.

Synopsis of the Course of Lectures on Materia Medica and Pharmacy, 4 ed., p. 130.

Gives the product used, botanical origin, habitat, properties, constituents, medicinal properties and preparations of myrrh.

Covell, F. J. 1867

A Constribution to the Statistics of Drug Powdering.

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

Discusses the results of powdering drugs for druggists, and gives a table showing the results with myrrh as well as other drugs.

Henkel, J. B. 1867

Gummi Resina Myrrhae.

Handbuch der Pharmacognosie, p. 435.

Gives the source, characteristics, chemical composition, tests and use of myrrh.

Committee. 1868

Report on the Drug Market -- Myrrh.

Proc. Am. Pharm. Assoc., 16, p. 325.

"For some reason the supply of this article is on the decrease, for the past 3 years the arrivals in England amounted to: 1865-- 251 cases, 1866 -- 96 cases and in 1867, 88 cases. Fine qualities of this article are very scarce."

Schweinfurth, G. A. 1868

Pflanzengeographische Skizze des gesammten Nil-Gebiets und Uferlander des Rothen Meeres.

Geogr. Mittheilungenm 1868, p. 127; (Flueckiger & Hanbury, Pharmacographia, 1 ed., p. 125; Ibid., 2 ed., p. 140)

Does not admit the identity of the plants B. Ehrenbergianum and Opalbalsamum.

Brown, O. P. 1870

Myrrh.

The Complete Herbalist, 1 ed., p. 107.

Presents the origin, description, history, government, virtues and dose of myrrh.

Vincent, W. 1870

(Myrrha.)

Commerce & Navigation of the Ancients, v. 2, p. 127, 128 & 129; (Flueckiger & Hanbury, Pharmacographia, 1 ed., p. 126; Ibid., 2 ed., p. 142; Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 636.)

(The myrrh of the ancients was not always obtained from Arabia. The author of the Periplus, who wrote about 64 A. D., records it to have been an export of Abalites, Malio and Mosyllon.)

Vincent, W. 1870

(Stacte.)

Commerce and Navigation of the Ancients, v. 2, p. 316; (Flueckiger & Hanbury, Pharmacographia, 1 ed., p. 126; Ibid., 2 ed., p. 142; Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 636.)

("The author of the Periplus of the Erythrean Sea represents it as exported from Muza in Arabia together with myrrh.")

Husemann, A. & Husemann, T. 1871

Myrrhe.

Die Pflanzenstolle, 1 ed., p. 1102; (Ibid., 2 ed., v. 2, p. 862.)

Reviews the botanical origin, synonyms, description, constituents, preparations and uses of myrrh.

Miles, S. B. 1871

On the Neighborhood of Bunder Marayah.

Jour. Roy. Soc., 42, p. 64; (Flueckiger & Hanbury, Pharmacographia, 2 ed., p. 146; Tschirch, Handbuch d. Pharmacie, 1 ed., v. 3, p. 1120; Flueckiger, Pharmakognosie, Des Pflanzenreiches, 2 ed., p. 37; Ibid., 3 ed., p. 44.)

Gums are the most important products of the above area. Describes the plant, time and method of collection and price of the gum myrrh.

Miles, S. B. & Munsinger, M. W. 1871

Excursion into the Interior of Southern Arabia.

Jour. Roy. Geograph. Soc., 41, p. 236; (Sprenger, Alte Geographie Arabiens, p. 313; Flueckiger & Hanbury, Pharmacographia, 1 ed., p. 127; 2 ed., p. 143.)

"The country produces no coffee, but the hills abound with myrrh trees, the gum of which is gathered by Somalies."

Shuttleworth, E. B. 1871

Utilization of Resiudes in making tincture of myrrh.

Canadian Pharm. Jour., 4, p. --; (Stille & Maisch, Natl. Dispens., 1 ed., p. 931; Ibid., 2 ed., p. 948; Ibid., 3 ed., p. 1009; Ibid., 5 ed., p. 1068; Felter & Lloyd, Am. Dispens., 18 ed., v. 2, p. 1299; Yrbk. Brit. Pharm. Conf., 8, p. 436.)

("Recommends it as making a good paste of unlimited keeping qualities; its adhesiveness is increased by the addition of a little molasses.")

Fristedt, R. J. 1873

Balsamodendron Myrrha Nees v. Es.

Organisk Pharmakologi, p. 196.

Gives the pharmacopoeias, a description of the plant, commercial varieties and the preparations of 4 European pharmacopoeias into which myrrh enters.

Hanbury, D. 1873

The Botanical Origin and Country of Myrrh.

Ocean Highways, Apr., --, p. --; (Pharm. Jour., 32, p. 821; Am. Jour. Pharm., 45, p. 314; Hanbury's Science Papers, p. 378; Yrbk. Brit. Pharm. Conf., 10, p. 49; Ibid., 16, p. 198; Flueckiger & Hanbury, Pharmacographia, 2 ed., p. 142; Stille & Maisch, Natl. Dispens., 1 ed., p. 931; Ibid., 2 ed., p. 948; Ibid., 3 ed., p. 1008; Ibid., 5 ed., p. 1068; Felter & Lloyd, Am. Dispens., 18 ed., v. 2, p. 1298; Bentley & Trimen, Medicinal Plants, 1, pt. 60; Vierteljahresschrift fur Praktische Pharmacie, 22, p. 560; Kohler, Medizinal Pflanzen, 1, p. 313; Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1120; Bergmann, Uber die Heerabol Myrrha, p. 15; Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 636.)

Discusses the origin and history of myrrh as well as describing the plant and its habitat. Wood cuts accompany the article.

Harris, W. D. 1873

(Habitat of Myrrha.)

Highlands of Aethiopia, v. 1, p. 426; (Ibid., v. 2, p. 414; Flueckiger & Hanbury, Pharmacographia, 1 ed., p. 127; Ibid., 2 ed., p. 142.)

("Major Harris saw the myrrh tree in Adel Dessert and in the jungle of the Hawash, on the way from Tajura to Shoa.")

Buri, --- (1874)

(The Volatile Oil of Myrrh.)

Flueckiger & Hanbury, Pharmacographia, 2 ed., p. 144; (Pharm. Jour., 36, p. 75; Stille & Maisch, Natl. Dispens., 1 ed., p. 931; Ibid., 2 ed., p. 948; Ibid., 3 ed., p. 1009; Ibid., 5 ed., p. 1068.)

Gives records and results of an analysis of the hydrocarbon isolated from oil of myrrh.

Cooke, M. C. 1874

(Myrrha.)

Report on Gums, Resins, Oleoresins and Resinous Products in the Indian Museum, or Produced in India, p. 67; (Bentley & Trimen, Medicinal Plants, 1, pt. 60; Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1123; Bergmann, Uber die Heerabol Myrrha, p. 15.)

The original was not available.

Ebers, --- 1874

(Kypphi.)

Zeitschrift fur Agyptische Sprache und Alterthumskunde, p. 106; Flueckiger, Pharmakonosie des Pflanzenreiches, 1 ed., p. 35; Ibid., 3 ed., p. 41.)

(The ancient Egyptians employed myrrh in embalming. The preparation was known as Kypphi.)

Flueckiger, F. A. & Hanbury, D. 1874

Myrrha.

Pharmacographia, 1 ed., p. 124; (Ibid., 2 ed., p. 140; Stille & Maisch, Natl. Dispens., 1 ed., p. 931; Ibid., 2 ed., p. 948; Bentley & Trimen, Medicinal Plants, 1, pt. 60; Pharmacographia, French Translation, 1 ed., p. 268; Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1120; Bergmann, Uber die Heerabol Myrrha, p. 31; Vogl, Commenter zur Osterreich ischen Pharmacopoe, 2, p. 444; Geissler & Moeller, Real-Enzyklopadie, 9, p. 220.)

Gives the botanical origin, history, secretion of, collection, description, chemical composition, commerce, uses and other varieties of myrrh.

Freyberger, H. M. 1874

Myrrha.

Die Organischen Drogen der neuen deutschen Reichspharmacopoe, p. 24.

Gives the product used, botanical origin, family and constituents of myrrh.

Smith, F. P. 1875

Oil of Myrrh.

Yrbk Brit. Pharm. Conf., 12, p. 217.

"A reddish oil, having the smell of myrrh, is said by Loureiro to be used in Cochin, China to dress ulcers. The Chinese are fond of making empyreumatic oils of various substances."

Butt, E. N. 1876

Spontaneous Development of Heat in Recently Powdered Myrrh.

Pharm. Jour., 36, p. 367.

Reports that heat is formed in powdered myrrh on standing.

Dymock, W. 1876

Notes on Myrrh and Its Allied Gum Resins.

Pharm. Jour., 35, p. 661; (Flueckiger & Hanbury, Pharmacographia, 2 ed., p. 145; Proc. Am. Pharm. Assoc., 24, p. 197; New Remedies, 5, p. 105; Yrbk. Brit. Pharm. Conf., 13, p. 198; Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1123; Dymock, Materia Medica of Western India, p. 155; Bergmann, Uber die Heerabol Myrrha, p. 24; Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 635; Flueckiger, Pharmakonosie des Pflansenreiches, 2 ed., p. 37; Ibid., 3 ed., p. 44.)

"The gum resins included by the writer under this head are true African myrrh, Arabian myrrh, Common African bdellium, scented African bdellium, Indian bdellium and Opaque bdellium. These drugs are brought to Bombay from Africa, Arabia and different parts of India, for selection and despatched to suitable markets in Europe, China and other countries."

Dymock, W. 1876

Balsamodendron Roxburghii.

Pharm. Jour., 36, p. 310; (Proc. Am. Pharm. Assoc., 25, p. 219; Bentley & Trimen, Medicinal Plants, 1, pt. 60.)

Describes in detail the structure of the stem of the plant from epidermis to the pith, and describes the exudation in the various stages of drying of Balsamodendron Roxburghii.

Dymock, W. 1876

Notes on Indian Drugs.

Materia Medica, W. India, p. 126; (Stille & Maisch, Natl. Dispens., 1 ed., p. 931; Ibid., 2 ed., p. 948; Ibid., 3 ed., p. 1009; Ibid., 5 ed., p. 1068; Pharm. Jour., 36; p. 491; Proc. Am. Pharm. Assoc., 25, p. 219; Geissler & Moeller, Real-Enzyklopadie, v. 9, p. 220.)

Persian myrrh occurs in very large masses of reddish brown color and translucent, very oily, and having an odor and taste resembling Somali myrrh. The Siamese myrrh is hardly distinguishable from the "Meetiua" of Arabia.

(Editor.) 1876

Myrrh.

Am. Jour. Pharm., 48, p. 273.

Describes myrrh as it comes into commerce, how it it is sorted, and tells where the different grades are shipped to. It also describes the impurities of myrrh.

Fristedt, R. J. 1876

(Myrrha.)

Pharm. Handelsblatt, p. 16, Aug. 16: (Flueckiger, Pharm. des Pflanzenreiches, 1 ed., p. 33; Ibid., 3 ed., p. 39.)

(The area on both sides of the Red Sea, from 22° N., south, even to Somali, in ancient medieval times yielded no myrrh.)

Haggenmacher, G. A. 1876

(Myrrha.)

Peoermanns Geographischen Mittheilungen, 1876, p. 19; (Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 636.)

See Agatharchides reference, 104 B. C. for data.

Brugh-Bay, H. 1877

(Myrrha.)

Geschichte Aegyptens unter den Pharaonen, p. 109, 110, 113, 281 & 314; (Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 636.)

See Agatharchides reference, 104 B. C. for data.

Cauvet, D. 1877

Myrrh.

Nouveaux Elements D'Histoire Naturelle Medicale, v. 2, p. 400.

Gives the botanical origin of myrrh with a full page illustration, habitat, collection, commercial varieties, constituents and preparations.

Hirschsohn, E. 1877

Beitrage zur Chemie der wichligeren Gummi-harze, Harze und Balsame.

Inaugural Dissertation; (Pharm. Zeitschr. f. Russland, 16, p. 1, 33, 65, 974; Schweiz. Wochenschr. f. Pharm., 16, p.--; Archiv. der Pharm., 210, p. 487; Ibid., 211, p. 55, 152, 247, 312, 434; Proc. Am. Pharm. Assoc., 26, p. 453: Tschirch, Handbuch der Pharm., 1 ed., v. 3, p. 1127.)

Presents data on the action of solvents on myrrh and similar substances.

Hunter, F. M. 1877

(Myrrh.)

Letters addressed 1877 to F. A. F.; Flueckiger & Hanbury, Pharmacographia, 1 ed., p. 124; Ibid., 2 ed., p. 140; (Pharm. Jour., 65, p. 443; Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1120; Briefliche Mittheilungen, p. --; Flueckiger, Pharm. d. Pflanzenreiches, 2 ed., p. 34; Ibid., 3 ed., p. 40.)

("Captain F. M. Hunter, Assistant Resident of Aden, informed us that the Arabian myrrh tree, the Didthin, is found not only in the southern provinces of Arabia, Yemen, and Hadramont, probably also in the southern part of Oman, but likewise on the range of hills which, on the African shore, runs parallel to the Samoli coast.")

Hildebrandt, J. M. 1878

(Ueber Weirauch und Myrrhe.)

Sitzungsber. Gesellsch. Naturforsch. Freunde, Berlin, v.-- p. 196;(Pharm. Jour., 38, p. 893; Wood & Bache, U.S. Dispens., 15 ed., p. 970; Ibid., 16 ed., p. 1005; Ibid., 17 ed., p. 892; Ibid., 20 ed., p. 716; Ibid., 21 ed., p. 713; Pharm. Jour., 65, p. 443; Bentley & Trimen, Medicinal Plants, v. 1, pt. 60; Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1120; Die Heilpflanzen der Verschiedenen Volker und Zeiten, p. 367; Bergmann, Über die Heerabol Myrrha, p. 8; Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 635; Flueckiger, Pharmakognosie des Pflanzenreiches, 2 ed., p. 33; Ibid., 3 ed., p. 39.)

(Presents evidence that the native name for Balsamodendron is "Didthin" and that for the gum resin is "Mol-Mol.")

Hildebrandt, H. M. 1878

(Myrrha.)

Briefliche Mittheilungen, (Letter); (Flueckiger, Pharm. des Pflanzenreiches, 2 ed., p. 33; Ibid., 3 ed., p. 39.)

(In a letter , gives several native names (in Samoli) for myrrh, method of collection and the extent of the industry.)

Perry, W. 1878

(Myrrh.)

Kew Garden Report, p. 40; (Kew Bulletin (1896) p. 87; Pharm. Jour., 65, p. 443.)

(Found that "Didthin" is the native name for Balsamodendron myrrha and the gum-resin is called "Mol-Mol".)

Heyd, W. 1879

(Myrrha.)

Geschichte des Levantehandels im Mittelalter, v. 2, p. 893. (Flueckiger, Pharmakognosie des Pflanzenreiches, 2 ed., p. 33; 3 ed., p. 39.)

The original was not available.

Parker, R. H. 1879

Myrrh: Its Composition and Impurities.

Pharm. Jour., 39, p. 81; (Ibid., 76; p. 256; Proc. Am. Pharm. Assoc., 28, p. 189; Ibid., 29, p. 231; Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1123; Ibid., v. 3, p. 1127; Bergmann, Ueber die Heerabol Myrrha, p. 24; Vogl, Commentar zur Osterreichischen Pharmacopoe, 1892, v. 2, p. 444; Geissler & Moeller, Real-Enzyklopadae, 9, p. 220.)

Describes myrrh as it enters commerce, as to the type, soft and dry and its composition. He also describes the various "Spurious Gums" as to their physical properties.

Sayre, L. E. 1879

Myrrha.

Conspectus of Organic Materia Medica and Pharmacal Botany, p. 197.

Discusses the botanical origin, habitat, description, properties, tests and composition of myrrh.

Trimen, H. 1879

The Plants Affording Myrrh.

Pharm. Jour., 38, p. 893; (Proc. Am. Pharm. Assoc., 27, p. 260; Yrbk. Pharm. Brit. Pharm. Conf., 16, p. 197; Bentley & Trimen, Medicinal Plants, v. 1, pt. 60; Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1120; Bergmann, Ueber die Heerabol Myrrha, p. 8; Flueckiger, Pharmakognosie des Pflanzenreiches, 2 ed., p. 33; Ibid., 3 ed., p. 39; Vogl, Commentar zur Osterreichischen Pharmacopoe, 1892, v. 2, p. 442; Geissler & Moeller, Real-Enzyklopadie, 9, p. 220.)

Discusses the examination of many species of plants yielding myrrh and the habitat and description of some of the plants.)

Bentley, R. & Trimen, H. 1880

Balsamodendron Myrrha.

Medicinal Plants, v. 1, pt. 60; Wood & Bache, U. S. Dispens., 8 ed., p. 474; Ibid., 9 ed., p. 488; Ibid., 10 ed., p. 488; Ibid., 11 ed., p. 510; Ibid., 12 ed., p. 558; Ibid., 13 ed., p. 571; Ibid., 15 ed., p. 970; Ibid., 16 ed., p. 1005; Ibid., 17 ed., p. 892; Pharm. Jour., 62, p. 295; Am. Jour. Pharm., 71, p. 513; Stille & Maisch, Natl. Dispens., 1 ed., p. 931; Ibid., 2 ed., p. 947; Ibid., 3 ed., p. 1008; Ibid., 5 ed., p. 1067; Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1120.)

Gives a description, habitat, official product, and name, collection, characters, composition, medicinal properties, and uses with also a full page colored illustration.

Parker, R. H. 1880

Notes on Some "Spurious Gums" Imported with Myrrh.

Pharm. Jour., 40, p. 41; (Am. Jour Pharm., 52, p. 449; Drugg. Circ., 24, p. 162; Proc. Am. Pharm. Assoc., 29, p. 231; Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1120; Ibid., 1 ed., v. 3, p. 1127; Bergmann, Uber die Heerabol Myrrha, p. 24; Vogl, Commentar zur Osterreichischen Pharmacopoe, 1892, v. 2, p. 444.)

The "Spurious Gums" include Opaque bdellium, African bdellium, Opaque tasteless gum-resin, Yellow Tasteless gum-resin and bitter acrid gum. The above impurities of myrrh were examined to determine the moisture, ash, gum, and resin contained in them. The results of the analysis are contained in the article.

Revoil, G. 1880

(Myrrha.)

Voyages Acc. Cap des Aromates, etc., p. 136, 184, 227, 255, 259, 276 & 283; (Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 636; Flueckiger, Pharmakonosie des Pflanzenreiches, 3 ed., p. 40.)

See Agatharchides reference 104 B. C. for data.

Flueckiger, F. A. 1881

Myrrha.

Pharmakognosie des Pflanzenreiches, 2 ed., p. 38; (Ibid., 3 ed., p. 33; Arzneidrogen, v. 1, p. 333; Bergmann, Uber die Heerabol Myrrha, p. 12 & 14; Geissler & Moeller, Real-Enzyklopadae, v.9, p. 220.)

Reviews the scientific name, history, habitat, composition, properties, trade, description, uses and related products of myrrh.

Luerssen, C. 1882

Balsamea Myrrha Engl.

Handbuch d. Syst. Bot., v. 2, p. 701; (Kohler & Pabst, Medizinal Pflanzen, v. 1, p. 313.)

Lists the pharmacopoeias in which myrrh is official and also its preparations. Gives the habitat, handling, properties and composition of myrrh. A quarter page illustration also accompanies the article.

Campbell, M. & Crawford, J. 1883

Myrrha.

Synopsis of Natural Orders, p. 22.

Lists the preparations in which myrrh is used.

Campbell, M. & Crawford, J. 1883

Myrrha.

Synopsis of Natural Orders, p. 4.

Reviews the common name, official name, botanical origin, product used, medicinal properties, dose and habitat of myrrh.

Edes, R. T. 1883

Myrrha.

Therapeutic Handbuch U.S. Pharmacopoeia, 1 ed., p. 208.

Discusses the uses and dose of myrrh.

Flint, J. M. 1883

Myrrha.

Classification of the Materia Medica Collection of the U. S. National Museum, p. 464.

Myrrh is listed, giving its botanical source.

Luerssen, C. 1883

Myrrha.

Die Pflanzen der Pharmacopoea Germanica, p. 455.

Discusses the botanical origin, synonymy, description, habitat, (both geographical & eccological) with references, of myrrh.

Merrel, A. 1883

Myrrha.

A Digest of Materia Medica and Pharmacy, p. 320.

Gives the product used, constituents, preparations, uses and dose of myrrh.

Flueckiger, F. A. 1884

Myrrha.

Grundriss der Pharmakognosie, p. 89.

Reviews the botanical origin, habitat, history, properties and composition of myrrh.

Hedges, H. I. 1884

Myrrh.

Polyglot Index, p. 80.

Gives 6 names of myrrh in as many different languages.

Eichler, A. W. 1886

Burseraceae.

Syllabus der Vorlesungen uber Specielle und Medicinisch-Pharmaceutische Botanik, p. 49.

The plant yielding myrrh is a member of the above family; its scientific name and habitat are given.

Glazer, E. 1886

(Incense and Myrrh.)

Petermann's Mittheilungen, no. 1 & 2; (Am. Drugg., 15, p. 95.)

(The myrrh plant occurs along the whole western slope of the Serat range. While traveling through this region, the author collected samples of gums and gum resins used as incense there. "It is therefore to be hoped that the botanical origin of myrrh will shortly be definitely settled.")

Kremel, A. 1886

Gummiharze.

Pharmaceutische Post, 19, p. 467; (Bergmann, Uber die Heerabol Myrrha, p. 24.)

Gives the method for finding the resin content, ester number, acid and saponification numbers of gum resins with the results including 3 samples of myrrh.

Marme, W. 1886

Myrrha.

Lehrbuch der Pharmacognosie des Pflanzen und Thierrichs, p. 526.

Gives the botanical origin, habitat, description, properties, chemical composition, handling, uses and preparations of myrrh.

Escott, C. E. 1887

Chemical Notes--Myrrh.

Am. Jour. Pharm., 59; p. 68; (Proc. Am. Pharm. Assoc., 35, p. 173; Wood & Bache, U. S. Dispens., 16 ed., p. 1006; Ibid., 17 ed., p. 894; Ibid., 20 ed., p. 718.)

Describes the properties of solutions of myrrh extracted with various solvents and the results obtained as to the constituents and color tests.

Balfour, I. B. 1888

(Myrrha.)

Botany of Socotra, p. 53; (Tschirch, Handbuch der Pharm., 1 ed., p. 1120.

The original was not available.

(Editor.) 1888

Mode of Formation of Gums and Gum-Resins.

Pharm. Jour., 48, p. 108; (Am. Jour Pharm., 60, p. 506.)

Gum resins are secretions in the interior of the cell. Essential oils and gum resins are generally formed in a layer of epithelial cells lining the cavity or receptacle, which may be either of schizogenous or lysigenous origin, and into which they are diffused through the very thin sell walls of the epithelial cells.

Lescher, F. H. 1888

Drugs and their Commerce at Various Times.

Chem. & Drugg., 32, p. 545.

"Myrrh is mentioned as a perfume in the book of Proverbs."

Deflers,---- 1889

(Balsamodendron Abysinica var. simplicifolium.)

Voyage dans l'Yemen, p. ---; (Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1120.)

(The exudation from the stem of the above plant was resinous, but different from myrrh.)

Hartwich, C. 1889

Myrrha.

Real-Encyclopadie der Gesammten Pharmacie, 1 ed., v. 7, p. 215; (Handworterbuch der Pharmacie, v. 2, p. 176.)

Gives the scientific name, botanical synonymy, product used, habitat, trade, properties, composition, other sorts, tests and preparations of myrrh and also gives an illustration of a section of the plant producing the gum.

Hooper, D. 1889

Balsamodendron Buryi.

Pharm. Jour., 49, p. 143; (Am. Jour. Pharm., 61, p. 508.)

Gives the habitat of the plant described in Buckman's "Journey through Mysore, Canara and Malabar." Describes the gum-resin and chemical tests.

Tschirch, A. 1889

Balsamea Myrrha.

Angew. Anatomie, p. 481 & 347; (Tschirch, Handbuch der Pharm., 1 ed., v. 3, p. 1123; Bergmann, Uber die Heerabol Myrrha, p. 16; Vogl, Commentar zur Osterreichischen Pharmacopoe, 1892, v. 2, p. 442.)

Gives a cross section illustration of the myrrh plant stem with an explanation.

Dymock, W. & Warden, C. J. H. & Hooper, D. 1890

Burseraceae, Balsamodendron.

Pharmacographia Indica, v. 1, p. 307; (Am. Jour. Pharm., 69, p. 110.)

Discusses the habitat, history, uses, description, chemical composition and commerce of myrrh and its allied gums.

Glaser, E. 1890

Ptolemaus: Weitere Binnenstamme Arabiens. Puna. Somaliland. Geologische Veranderungen der Kusten.

Skizze d. Geschichte u Geogr. Arabiens, v. 2, p. 290; (Tschirche, Handbuch d. Pharm., 1 ed., v,3, p. 1120.)

Gives the natural habitat of myrrh.

Kohler, O. 1890

Beitrage zur Chemischen Kenntnish der Myrrhe.

Archiv. der Pharm., 228, p. 291; (Felter & Lloyd, Am. Dispens., 18 ed., v. 2, p. 1299; Am. Jour. Pharm., 62, p. 346, 441; Pharm. Jour., 49, p. 1059; Brit. Col. Drugg., 18, 2, p. 178; Nat. Drugg., 17, p. 24; Drugg. Circ., 34, p. 178; Proc. Am. Pharm. Assoc., 38, p. 449; Yrbk. Brit. Pharm. Conf., 27, p. 189; Arzneidrogen, v. 1, p. 333; Tschirch, Handbuch der Pharm., 1 ed., v. 3, p. 1127; Bergmann, Uber die Heerabol Myrrha, p. 28, 49, 58; Gildemiester & Hoffmann, Die Aetherischen Oele, 1 ed., p. 638.)

(Discusses the results of a chemical examination of a sample of selected myrrh from Somali.)

Macaulay, G. C. 1890

(Myrrha.)

Herodotus, Book 2, p. 153; (Spatula, 17, p. 407; Origin and History of all the Pharmacopoeial Vegetable Drugs, Chemicals and Preparations with Bibliography, 1, p. 219.)

(Myrrh was used by the Egyptians together with other spices for enbalming purposes.)

Kohler, E. & Pabst, G. 1890

Baksamodendron Myrrha Nees. v. Esenb.

Medizinal Pflanzen, v. 1, p. 311.

Reviews the scientific name, synonyms, description, botanical synonymy, habitat, name, history, anatomy, official product, composition, use, illustrations and preparations of myrrh.

Parke, Davis & Co. 1890

Myrrh.

Organic Materia Medica, 2 ed., p. 125.

Gives the botanical origin, uses, preparations with formulae, of myrrh.

Frischmuth, --- 1892

Untersuchungen uber d. Gummi des usw. Myrrhenharzes.

Diss. Dorpat. (Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1127; Bergmann, Uber die Heerabol Myrrha, p. 50.)

The original was not available.

Gottschling, --- 1892

(Test for Myrrh.)

Berliner, Drog. Zeit., 7, p. ---; (Drugg. Circ., 36, p. 180; Proc. Am. Pharm. Assoc., 41, p. 634; Dig. Crit. U. S. P. 1897, p. 110.)

(Recommends an easy method for detecting adulterations of bdellium.)

Maisch, J. M. 1892

Myrrha.

A Manual of Organic Materia Medica, 3 ed., p. 437; (Ibid., 5 ed., p. 453; Ibid., 6 ed., p. 428.)

Reviews the botanical origin, habitat, production, description, constituents, properties and impurities of myrrh.

Medecus, --- 1892

Raw and refined Myrrh Examined.

Brit. & Col. Drugg., 22, 2, p. 420.

Gives data found as to the principal constituents of myrrh.

Vogl, A. 1892

Myrrha.

Kommentar zur 7 e; Auflage der Osterr. Pharmacopoe, v. 2, p. 442; (Bergmann, Uber die Heerabol Myrrha, p. 12.)

Gives the scientific name, habitat, properties, constituents, tests, preparations of myrrh and gives a figure of a cross section of the stem with an explanation.

Schweinfurth, G. 1893

Uber Balsam und Myrrhe.

Berichte der Pharmaceutische Gesellschaft, 3, p. 218; (Am. Drugg., 24, p. 278; Am. Jour Pharm., 69, p. 111; Pharm. Jour., 53, p. 897; N. Eng. Drugg., 6, p. 331; Yrbk. Brit. Pharm. Conf., 31, p. 170; Wood & Bache, U. S. Dispens., 20 ed., p. 717; Ibid., 21 ed., p. 713; Arzneidrogen, v. 1, p. 333; Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1120; Bergmann, Uber die Heerabol Myrrha, p. 9; Gildemiester & Hoffmann, Die Aetherischen Oele, p. 637; Geissler & Moeller, Real-Enzyklopadae, v. 9, p. 220.)

Describes the tree, its habitat, method of production and description of the gum.

Karsten, H. 1893

Balsamodendron Nees Myrrha Engl.

Deutsche Flora, v. 2, p. 362; (Pabst & Kohler, Medizinal Pflanzen, v. 1, p. 313.)

Describes the plant, the gum resin and gives its properties, composition and uses.

Bent, J. T. 1894

Journey Into Hadramout.

Jour. Royal Geographical Soc., 4, p. 23; (Ibid., 3, p. 234 & 422; Chem. Drugg., 45, p. 614.)

Describes his trip on ("an exploring expidition in the almost unknown Valley of Hadramant, in southern Arabia, the classic country of myrrh and frankincense.")

(Editor.) 1894

Mecca Balsam and Myrrh.

Pharm. Jour., 53, p. 897.

Describes the myrrh tree as to its appearance and size. The habitat and method of obtaining the myrrh is discussed.

Engler, A. & Prantl, K. 1894

Commiphora Jacq.

Die Naturlichen Pflanzenfamilien, v. 3, pt. 4, p. 251, (Bot. Jaharb. (1912) p. 479; Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1120.)

Gives the habitat, botanical synonymy and a detailed description of the plant with illustrations.

Kohl, F. G. 1895

Balsamea Myrrha Engler.

Die Officinellin Pflanzen der Pharmacopoea Germanica, p. 100.

Reviews the botanical synonymy, description, habitat, production, official in, preparations, chemical composition, and gives an illustration with an explanation, of myrrh.

Sayre, L. E. 1895

Myrrha.

A Manual of Organic Materia and Pharmacognosy, p. 185.

The botanical origin, product used, botanical characteristics, habitat, description of the drug, constituents, action, uses and official preparations with a small illustration of the stem and leaves of myrrh.

Waggaman, S. 1895

Balsamodendron Myrrha.

A Compendum of Botanic Materia Medica, p. 313.

Reviews the botanical origin, eccological and geographical habitat, description of the plant, properties, uses and history of myrrh.

Altschul, J. 1896

Nach Autoren benannte Reactionen und Reagentien.

Pharm. Centralhalle, 37, p. 432; (Pharm. Era, 16, p. 367.)

Gives J. F. Bonastre's test as follows: ("Strips of filter paper are impregnated in the alcoholic solution, the sample of myrrh dried and diped into nitric acid. If the myrrh is genuine, a violet coloration ensues.")

Dyer, --- 1896

(Myrrh.)

Kew Bull., no. 111, p. 91; (Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1120; Bergmann, Uber die Heerabol Myrrha, p. 12.)

The original was not available.

Holmes, E. M. 1896

(Notes on the Trees Yielding Myrrh and Gum Arabic.)

Pharm. Jour., 57, p. 507; (Am. Jour. Pharm., 69, p. 110; Drugg. Circ., 41, p. 70; Proc. Am. Pharm. Assoc., 45, p. 561; Yrbk. Brit. Pharm. Conf., 24, p. 175; Tschirch, Handb. d. Pharm., 1 ed., v. 3, p. 1120; Bergmann, Uber die Heerabol Myrrha, p. 11; Geissler & Moeller, Real-Enzyklopadie, 9, p. 220; Dig. Crit. U.S.P., 1898, p. 85.)

The author describes 4 types of myrrh, and discusses his method of distinguishing between them and the true myrrh.

(Editor.) (1897)

(Myrrh of the Bible.)

Kew Bulletin, -- p. --; (Nat. Drugg., 27, p. 235; Bull. Pharm., 11, p. 461.)

("The Biblical word "myrrh", which is so frequently mentioned in connection with frankincense, is a mistranslation, and the substance used by the Hebrews is not at all the substance we know as myrrh. The ancients and new myrrh are compared and the habitat of the present myrrh is given,")

Hansen, A. 1897

Myrrha.

Drogenkunde, p. 170.

The botanical origin, habitat, description and composition of myrrh are discussed.

Tucholka, M. 1897

Ueber die Bisabol-Myrrha.

Pharm. Centralhl., 38, p. 500; (Pharm. Jour., 59, p. 457; Am. Jour. Pharm., 70, p. 111; Proc. Am. Pharm. Assoc., 46, p. 865; Yrbk. Brit. Pharm. Conf., 35, p. 179; Schim. Rep., p. 36; Wood & Bache, U. S. Dispens., 20 ed., p. 718; Ibid., 21 ed., p. 715; Archiv. d. Pharm., 235, p. 289; Arzneidrogen, v. 1, p. 333; Dissert. Zurich, 1897, p. 6; Tschirch, Handb. d. Pharm., 1 ed., v. 3, p. 1127; Dig. Crit. U.S.P. 1898, p. 85; Bergmann, Uber die Heerabol Myrrha, p. 14; Gildemiester & Hoffmann, Kie Aetherischen Oele, 1 ed., p. 637; Geissler & Moeller, Real-Enzyklopadae, v. 9, p. 220.)

Subjected Bisabol myrrh to analysis and gives the data obtained. The method of distinguishing Bisabol myrrh from the official myrrh is also described.

Attfield, J. 1898

Myrrh.

Report on the Progress of Pharmacy in Connection with the British Pharmacopoeia, p. 73; (Pharm. Jour., 65, p. 418.)

Gives the reasons why Commiphora cannot be retained as the generic name for myrrh.

Dieterich, K. 1898

Ueber einige seltenere Harze.

Pharm. Centralhl., 39, p. 58; (Am. Jour. Pharm., 71, p. 86; Pharm. Lour., 62, p. 321; Yrbk., Brit. Pharm. Conf., 36, p. 167; Arzneidrogen, v. 1, p. 332; Dig. Com., U.S.P., 1901, p. 109.)

(The exhausted alcoholic (96 %) extract dried at 100 degrees cent., should not leave a residue exceeding 7 grams; the alcoholic filtrate when evaporated to dryness and taken up with ether should give a red or violet color when bromine is added; the ash should not exceed 10 percent.)

Dieterich, K. 1898

Balsams, Resins, Gum-resins and Milky Juices.

Chem. Drugg., 53, 1898.

In comments and criticisms on the British Pharmacopoeia, "Here also the Pharmacopoeia should have fixed limits for ash and matter insoluble in alcohol. For ash, 10 per cent. as a maximum, and for the alcohol soluble portion 70 per cent. the highest figure."

Dragendorff, G. 1898

Commiphora Myrrha Engl.

Die Heilpflanzen der Verschiedenen Volker und Zeiten., p. 367; (Arzneidrogen, v. 1, p. 332; Bergmann, Uber die Heerabol Myrrha, p. 12.)

The habitat and relation to Balsamodendron Myrrha Nees, are given.

Holmes, E. M. 1898

Myrrh and Bdellium.

Pharm. Jour., 61, p. 546; (Proc. Am. Pharm. Assoc., 47, p. 576; Pharm. Jour., 62, p. 26; Arzneidrogen, v. 1, p. 333; Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p.1120; Bergmann, Uber die Heerabol Myrrha, p. 5, 14, 15; Geissler & Moeller, Real-Enzyklopadae, v. 9, p. 220; Dig. Com. U.S.P., 1901, p. 109.)

Lists the drugs which go by the name of myrrh and bdellium and describes each. He classifies the plants into 3 groups.

Berg, O.C. & Schmidt, C. F. 1899

Commiphora Abyssinica Engl.

Atlas der Officinellen Pflanzen, 2 ed., v. 3, p. 2.

A full page colored illustration with explanations, botanical synonymy and description of the above plant are given.

Farwell, O. A. 1899

Botany and Materia Medica, Source of Myrrh.

Bull. Pharm., 13, p. 254.

"Specimen of the gum, bark, and leaves of the true myrrh tree from Mr. and Mrs. Phillips, of Somaliland were collected from the same tree and prove that the plant digured by Bentley and Trimen in their 'Medicinal Plants' is the true myrrh tree."

Gildemeister, E. & Hoffmann, F. 1899

Myrrhenol.

Die Aetherischen Oele, 1 ed., p. 673; (Bergmann, Uber die Heerabol Myrrha, p. 58.)

Gives common names in three languages, botanical origin, history, characteristics, constituents of the volatile oil of myrrh with references.

Phillips, L. & Mrs. 1899

Botanical Source of Myrrh.

Pharm. Jour., 62, p. 295; (Proc. Am. Pharm. Assoc., 47, p. 576.)

Proves that the plant in "Medicinal Plants" by Bentley & Trimen is the one that yields the true myrrh.

Schelenz, H. 1899

Myrrha.

Pharmacognostische Karte.

Indicates on a map where the plant yielding myrrh grows.

(Editor.) 1900

The Materia Medica of the Pharmacopoeia, Myrrh.

Pharm. Jour., 65, pp. 235, 258.

Gives a description of the plant producing myrrh, its habitat, characteristics, test for and uses of myrrh.

Hauke, R. 1900

Untersuchung von Myrrha.

Oesterr. Jahreshefte fur Pharm., 1. p. 29; (Jour. Soc. Chem. Ind., 19, p. 933; Am. Drugg., v. 37, p. 341; Pharm. Zeit., 45, p. 335; Dig. Crit. U.S.P., 1901; Pharm. Era, 24, p. 596; Pharm. Jour., 66, p. 256; Proc. Am. Pharm. Assoc., 48, p. 653; Drugg. Circ., 45, p. 15; Arzneidrogen, v. 1, p. 333; Bergmann, Uber die Heerabol Myrrha, p. 29; Geissler & Moeller, Real-Enzyklopadie, v. 9, p. 220.)

(Gives tests by which myrrh can be distinguished from its substitutes.)

Holmes, E. M. 1900

The Vegetable Drugs of the U.S.P.

Pharm. Jour., 65, p. 443; (Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1120; Geissler & Moeller, Real-Enzyklopadie, v. 9, p. 220.)

Tries to clear up the existing uncertainty as to the right genus and species of myrrh.

Holmes, E. M. 1900

The Botany of the New German Pharmacopoeia, Myrrha.

Pharm. Jour., 65, p. 418.

Distinguishes between the plant which produces true myrrh and another which does not.

Merson, G. F. 1900

Commercial Myrrh and Powdered Myrrh.

Pharm. Jour., 64, p. 42; (Drugg. Circ., 44, p. 49; Wood & Remington, U.S. Dispens., 20 ed., p. 719; Ibid., 21 ed., p. 714; Proc. Am Pharm. Assoc., 48, p. 653; Brit. & Col. Drugg., 37, 1, p. 79; Chem. & Drugg., 56, p. 101; Yrbk. Brit. Pharm. Conf., 37, p. 151; Pharm. Jour., 75, p. 165; Pharm. Era, 23, p. 257; Tschirch, Handbuch. d. Pharm., 1 ed., v. 3, p. 1127; Geissler & Moeller, Real-Encyklopadie, v. 9, p. 220; Dig. & Com. U.S.P., 1901, p. 109.)

Gives the data found on the quantitative analysis of powdered and commercial myrrh, as to the ash, gum and resin constituents.

Moor, C. G. & Priest, M. 1900

The Ash of Brit. Pharm. Drugs.

Yrbk. Brit. Pharm. Conf., 37, p. 414;(Dig. & Com., U.S.P., 1901, p. 109.)

Presents figures on the ash determination of many samples of myrrh.

Tschirch, A. 1900

Myrrha.

Harze und Harzbehalter, p. 252; (Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1120; Ibid., 2 ed., p. 1127; Bergmann, Uber die Heerabol Myrrha, p. 29; Geissler & Moeller, Real-Enzyklopadie, v. 9, p. 220.)

Gives the botanical origin and lists the names of authors who have worked on myrrh and the constituents of myrrh.

Greenish, H. G. 1901

The Official Test for Myrrh.

Pharm. Jour., 67, p. 666; (Am. Drugg., 40, p. 11; Proc. Am. Pharm. Assoc., 50; Brit. & Col. Drugg., 40, 2, p. 555; Chem. & Drugg., 59, p. 965; Pharm. Review, 20, p. 82; Yrbk. Brit. Pharm. Conf., 39, p. 192; Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1120; Bergmann, Uber die Heerabol Myrrha, p. 29.)

"H. G. Greenish criticizes the various pharmacopoeias for both wrong and not fully described tests for myrrh. He describes a satisfactory test along the lines of the one generally used, vis. blue coloration with nitric acid, that is simple, explicit, and can be readily performed."

Berendes, J. 1902

Myrrhe.

Des Pedanios Dioskurides aus Anezarbos Arzeimittellehre, p. 79.

Gives the habitat, scientific name, composition and properties of myrrh.

Kraemer, H. 1902

Myrrha.

A Course in Botany and Pharmacognosy, 1 ed., p. 249;(Ibid., 2 ed., p. 673; Ibid., 3 ed., p. 673; Ibid., 4 ed., p. 673.)

Reviews briefly the product used, habitat, production, commercial varieties, description, constituents and adulterations of myrrh.

Hauers, R. & Tollens, B. 1903

Ueber die Hydrolyse Peretosanhaltender Stoffe Mittels Verderennbts Saeuren und Mittel Sulfitflussikeit sorne ueber and solirury von Pentosans.

Ber. d. d. Chem. Ges., 36, 3312; (Arch. d. Pharm., 246, p. 70; Proc. Am. Pharm. Assoc., 56, p. 244.)

Has determined with certainty, the presence of galactose, xylose and arabinose among the products of hydrolysis.

Hays, F. B. 1903

A. Poem.

So. Drugg., --, --; (N. Engl. Drugg., 15, p. 24.)

She came to the drug store for myrrh,
And said to the yound man: "Kind syrrh,
I've expect'rated phlegm
On my handkercheif's hegm"--
But he sold her instead balsam fyrrh.

The fact is he thought she had phthisis,
And as on that he'd written a phthesis,
He now felt as though
He had a good shough
To tear some old ideas to phphisis.

Just then in walked the old Dr.,
And the language he used to shr.
She had a conniption,
He wrote a prescription,
And then for two dollars he Sr.

Hirschsohn, E. 1903

Trichloracetal-Chloralhydrate, ein Reagens auf Myrrhe.

Pharm. Centralhl., 44, no. 47, p. 809; (Wood & Lawall, U.S. Dispens., 20 ed., p. 718; Ibid., 21 ed., p. 715; Pharm. Ztg., 48, p. 96; Am. Drugg., 44, p. 47; Pharm. Jour., 72, p. 247; Proc. Am. Pharm. Assoc., 52, p. 730; Yrbk. Brit. Pharm. Conf., 41, p. 231; Pharm. Era, 31, p. 326; Drugg. Circ., 48, p. 35; Arzneidrogen, v. 1, p. 333.)

Gives the method for the preparation of a new reagent (trichloracetal-chloralhydrate) to be used for testing myrrh.

Tollens, B. & Hauers, R. 1903

Myrrhen-Gummi.

Ber. d. d. Chem. Ges., 36, p. 3312; (Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1127.)

Gives results obtained from the hydrolysis of myrrh gum, giving the resulting products and the reagents used.

Alcock, F. H. 1904

Myrrh and Its Official Preparations.

Pharm. Jour., 73, p. 894; (Brit. & Col. Drugg., 46, 2, p. 552; Chem. & Drugg., 65, p. 989.)

Gives history of the name, botanical origin, production, and composition of myrrh. Myrrh was taken from the name Mary, which means bitter.

Gadd, W. H. 1904

Myrrh.

Drugs, Their Production, Preparation and Properties, p. 100.

The botanical origin, babitat, purity limits, use and preparations of myrrh are reviewed.

Winckel, V. 1904

Uber das Angebliche Vorkommen des Phloroglucins in den Pflnazen.

Diss. Bern., p. 51; (Bergmann, Uber die Heerabol Myrrha, p. 33.

Lists the various portions of the oil of myrrh and obtained positive reactions with vanillin-hydrochloric acid.

Alcock, F. H. 1905

Notes on the Ash of Myrrh.

Pharm. Jour., 75, p. 128; (Yrbk. Brit. Pharm. Conf., 42, p. 422, Proc. Am. Pharm. Assoc., 54, p. 793; Brit. & Col. Drugg., 48, 2, p. 88; Chem. & Drugg., 67, p. 171; Apoth. Ztg., Ber., 20, p. 671; Dig. Com. U.S.P., 1905, p. 207; Arzneidrogen v. 1., p. 333; Pharm. Ztg., 50, p. 704; Bergmann, Uber die Heerabol Myrrha, p. 27.)

Gives results obtained from the determination of the ash content of myrrh.

(Committee.) 1905

(Quality of Commercial Myrrh.)

Pharm. Prax. 4, p. 38; (Dig. & Com. U.S.P., 1905, p. 207.)

("The revisors of Vienna pharmacies found myrrh adulterated with bdellium and bissabol myrrh.")

Dieterich, K. 1905

Myrrha.

Helfenberger Annalen, 18, p. 52; (Dig. & Com. U.S.P., 1906, p. 368.)

(Reports examining 2 samples of powdered myrrh which complied with the requiements of the Pharm. Germ. IV. with the exception of the ash content, 12.28 and 11.46 per cent., respectively.)

(Editor.) 1905

The Ash of Myrrh.

Drugg. Circ., 49, p. 315.

Presents data on the quantitative ash determination of myrrh.

Peters, E. J. 1905

(Weihrauch und Myrrhe.)

Wiener Illustrierte Gartenzeitung. p. 34; (Bot. Centralhl., 100, p. 93.)

(Presents a review of the plants producing myrrh and some reference to their cultivation.)

Schmitthenner, F. 1905

Myrrha.

Pharmakognosie des Pflanzen und Tierreiches, p. 102.

Gives the botanical origin, babitat, properties and composition of myrrh.

Tschirch, A. & Bergmann, W. 1905

Uber die Heerabol Myrrha.

Archiv. der Pharm., 243, p. 641; (Yrbk. Brit. Pharm. Conf., 43, p. 53; Arzneidrogen, v. 1, p. 333; Pharm. Zgt., 52, p. 941; Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1127.)

("Heerabol myrrh, from a species of Commiphora, contains 6 to 7 percent of thick honey-like essential oil, sp. gr. 1.046; 28 to 30 percent. of resinous matter soluble in alcohol; and 61 per cent. of gum and enzyme, soluble in water. The alcohol soluble resins are separable into A- & B- herabomyrrholol, and heraboresene. All of these are amorphous.")

Tschirch, A. & Stevens, A.B. 1905

Die Gummi Enzyme als Gummasen.

Pharm. Centrahalle, 46, p. 50; (Bergmann, Uber die Heerabol Myrrha, p. 52.)

Gives the results obtained from the test for gum including myrrh enzymes, in which a positive reaction was given for: pyrrol, Litmus and Guaiac.

Alcock, F.H. 1906

Tincture of Myrrh.

Pharm. Jour., 76, p. 406; (Dig. & Com. U.S.P., 1906, p. 368.)

Discusses observations made from an analysis of myrrh.

Bergmann, W. 1906

Uber die Heerabol Myrrha.

Dissertation Bern.; (Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1127.)

Gives the history, various sorts, composition, experiments and tests carried out by the above author and various other authors, of various extractions of myrrh and the results noted in all cases.

(Committee.) 1906

The British Pharmacopoeia.

Chem. & Drugg., 69, p. 864; (Dig. & Com. U.S.P., 1906, p. 368.)

("The ash limit should be 5 percent. Limit substance insoluble in alcohol and revise the color test.")

Francis, J. M. 1906

Myrrh.

Bull. Pharm., 20, p. 99; (Dig. & Com. U.S.P., p. 368.)

The commercial grades of myrrh yield from 43 to 59 per cent of alcohol-soluble matter and should average about 50 percent. The powdered myrrh generally averages much lower, and usually contains from 30 to 38 percent alcohol soluble matter.

Frerichs, G. 1906

Vorschlage fur die Neuausgabe des Deutschen Arzneibuches.

Apoth. Ztg., 21, p. 938; (Dig. & Com. U.S.P., 1906, p. 368.)

Myrrh should not contain not more than 6 per cent of ash.

Holmes, E. M. 1906

The Identity of the Myrrh Tree.

Pharm. Jour., 76, p. 254; (Yrbk. Brit. Pharm. Conf., 43, p. 103; Dig. & Com. U.S.P., 1906, p. 367; Arzneidrogen, v. 1, p. 333; Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1120.)

Discusses the origin of myrrh and the identity of the myrrh tree. He points out the reasons why myrrh cannot be the product either of C. playfarii, of C. Abysinica, or of C. schimperi, or of C. myrrha of Engler, and recounts the evidence why Balsamodendron myrrha Nees (von Commiphora myrrha Engler) should be considered as being the true myrrh plant. The article is illustrated by a number of cuts.

Lewinsohn, K. 1906

Ueber das Myrrhenol.

Archiv. der Pharm., 244, p. 412; (Dig. & Com. U.S.P., 1906, p. 368; Yrbk. Brit. Pharm. Conf., 44, p. 109; Schimmel & Co., Semi-Ann. Rept., apr., 1907, p. 72; Dig. & Com. U.S.P., 1907, p. 316; Pharm. Zeit., 51, p. 788; Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1127; Geissler & Moeller, Real-Enzyklopadie, v. 9, p. 220.)

Gives data obtained from the analysis of the oil of myrrh.

Naylor, W. A. H. 1906

Presidential Address. Progress in Pharmacopedics: Drugs and their Constituents.

Chem. Drugg., 69, p. 167; (Yrbk. Brit. Pharm. Conf., 43, p. 216; Pharm. Jour., 23, p. 77; Dig. & Com. U.S.P. & N.F., 1906, p. 368.)

Gives directions for testing for the purity of drugs including the ash, solubility in solvents, saponification number, oil etc.

Patch, E. L. 1906

Report of the Committee on Drug Adulterations.

Proc. Am. Pharm. Assoc., 54, p. 340; (Dig. & Com. U.S.P. & N.F., 1906, p. 368.)

Myrrh, "contained much foreign matter and cheap acacia.

Perrot, Em. & Frouin, H. 1906

Myrrhe.
Les Matieres Premieres Usuelles D'origine Vegetale, 2 ed., p. 32.

Gives the botanical origin of myrrh with the habitat, use and a map showing the places of production.

Tschirch, A. & Bergmann, W. 1906

The Constituents of Myrrh.

Archiv. d. Pharm., 243, p. 641; (Pharm. Jour., 76, p. 128; Proc. Am. Pharm. Assoc., 54, p. 793; Chem. & Drugg., 68, p. 617; Dig. & Com. U.S.P., 1905, p. 207.)

("Tschirch and Bergmann discuss the probable origin of the official myrrh, and suggest that until the origin of this drug can be definitely determined, it would be preferable to specify that it is derived from a variety of Commiphora indigenous to Northeast Africa. They also present an account of experimental work with a sample of myrrh of known origin.")

Weigel, G. 1906

Die neue Niederlandische Pharmakopoe.

Pharm. Centralh., 47, p. 419; (Dig. & Com. U.S.P. & N.F., 1906, p. 368.)

(" points out that the Ph. Ndl. requires that myrrh contain from 40 to 70 per cent of alcohol soluble material and not more than 5 per cent. of ash.")

Friedricks, O. 1907

Chemische Untersuchung der Heerabolmyrrhe.

Archiv. der Pharm., 245, p. 427, no. 6; (Wood & Remigton, U.S. Dispens., 21 ed., p. 715; Proc. Am. Pharm. Assoc., 56, p. 243; Yrbk. Brit. Pharm. Conf., 45, p. 124; Dig. & om. U.S.P. & N.F., 1907, p. 316; Arzneidrogen, v. 1, p. 333; Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1127.)

Discusses briefly the work done in connection with myrrh and reports the results of his examination of myrrh. Myrrh was found to consist of volatile oil, resin, gum and an enzyme. The volatile oil was present to the extent of 8.8 per cent.

Nelson, B.E. 1907

An Analytical Scheme for the Microscopical Examination of Drugs.

Merk's Report, 16, p. 219; (Dig. & Com. U.S.P. & N.F., 1907, p. 316.)

Discusses very briefly the description and constituents of the myrrh gum.

Roder, P. 1907

(Myrrha.)

Jahresbericht, Wien, p. 78; (Dig. & Com. U.S.P & N.F., 1907, p. 316.)

Reports that of 10 samples of myrrh examined, 8 samples exceeded the Austr. Pharm. standard, varying from 6 to 50 per cent of ash.

Tschirch, A. 1907

Myrrha.

Real-Enzyklopadie der Gesamten Pharmazie 2 ed., v. 9, p. 216; (Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1123; Bergmann, Uber die Heerabol Myrrha, p. 14.)

Gives the botanical synonymy, habitat, history, composition, figure of cross section of stem with an explanation and other sorts of myrrh.

Bolten, W. von 1908

Das Burseracin und seine Wirkungen.

Zeitschr. für Elektrochemie, 44, p. 24; (A poth. Zeit., 23; p. 47; Am. Drugg., 55, p. 10; Yrbk. Brit. Pharm. Conf., 45, p. 125; Chem. Ztg. Rep., 1908, p. 297.)

Gives properties and discusses Burserazin, the active ingredient of myrrh.

Caesar, & Loretz. 1908

Myrrha.

Geschafts-Bericht, p. 41; (Dig. Com. U.S.P. & N.F., 1907, p. 357.)

Believe that the commercial myrrh contains Somali myrrh which does not comply with the phrmacopoeial requirements, and that the 5 per cent, ash limit os too low.

Friedrichs, O. von 1908

Chemische Untersuchungen der scerabol-Myrrhe.

Bot. Centralbl., Cassel, 107, p. 638; (Dig. & Com. U.S.P. & N.F.V., 1908, p. 356; Archiv. d. Pharm., 245, p. 427.)

Reports a chemical examination of Heerabol myrrh.

Harvey, T. F. 1908

Pharmacopoeia Revision, Myrrha.

Chem. Drugg., 72, p. 904; (Dig. & Com. U.S.P. & N.F., 1908, p. 365.)

Suggests that an ash limit of 10 per cent is more reasonable than a 5 per cent ash limit for myrrh.

Kuhn, H. 1908

Ueber Asafoetida, Benzoe und Myrrha und die aus ihnen dargestellten Tinkturen.

Apoth. Ztg., 23, p. 162; (Dig. & Com. U.S.P. & N.F., 1908, p. 356.)

Claims that the ash content of good myrrh does not exceed 6 per cent. He classifies the commercial myrrh as "Myrrha naturalis" and "Myrrha electa", the latter having been washed with alcohol to give it bright shining surface. The acid number, ester number and saponification number vary considerable.

Roder, P. 1908

(Myrrha.)

Jahresbericht, Wien, p. 87; (Dig. & Com. U.S.P. & N.F., 1908, p. 357.)

Believes that myrrh is frequently adulterated. Of 3 samples, 2 were rejected because of their ash content.

Scoville, W.L. 1908

Myrrh Chemistry.

Bull. Pharm., 22, p. 523.

"Burseracin is a biiter principle discovered in myrrh; it is soluble in about 20 parts of water, and the healing properties of myrrh are attributed to it."

Solereder, H. 1908

Burseraceae.

System. Anatomie, v. 1, p. 190; (Ibid., v. 2, p. 869; Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1124.)

Gies a review of the anatomical features of the burseraceae family.

Tollen, B. 1908

Ueber das Gummi der Myrrhe.

Archiv. d. Pharm., 246, p. 70; (Dig. & Com. U.S.P. & N.F., 1908, p. 356.)

("Criticizes the contribution by O von Friedricks on Heerabol myrrh, and calls attention to a contribution on the products of the hydrolysis of gum of myrrh made by him several years previous.")

Woolsey, J. F. 1908

Report of Committee on Adulterations.

Proc. Penn. Pharm. Assoc., 31, p. 86; (Dig. & Com. U.S.P. & N.F., 1908, p. 356.)

12 samples of myrrh composed of tears and powder contained 8.10 to 13.47 per cent. of ash; alcohol soluble portion from 14.30 to 34.44 percent; water soluble portion 43.50 to 70.15 per cent and moisture varying from 5.81 to 13.50 per cent.

(Committee.) 1909

Report of the Committee on Drug Market.

Proc. Am. Pharm. Assoc., 57, p. 734; (Dig. Com. U.S.P. & N.F., 1909, p. 491.)

Found that myrrh contained from 36.9 to 44.7 per cent alcohol soluble constituents.

Francis, J. M. 1909

Report of the Committee om Adulterations.

Proc. Penn. Pharm. Assoc., 32, p. 124; (Dig. & Com. U.S.P. & N.F., 1909, p. 491.)

Suggest that the U.S.P. have more specific data in regard to myrrh, because its quality runs low.

(Inspectors.) 1909

(Myrrha.)

J. d. Pharm. d'Anvers, 65, p. 551;(Dig. & Com. U.S.P. & N.F.V., 1909, p. 491.)

Find that myrrh is often mixed with chestnuts, senegal gum and bdellium.

Karsten, G. & Benecke, W. 1909

Myrrha.

Lehrbuch der Pharmakognosie, 2 ed., p. 336; (Ibid., 3 ed., p. 377.)

Various scientific names of the plant yielding myrrh, the composition and history of it are given.

Wall, O. A. 1909

Myrrha.

Notes on Pharmacognosy, 3 ed., p. 586; (Ibid., 4 ed., p. 538; Ibid., 5 ed., p. 424.)

Gives the product used, botanical origin, habitat, description, constituents, uses and dose of myrrh.

Zornig, H. 1909

Myrrha.

Arzneidrogen, 1 ed., v. 1, p. 328.

Presents the botanical origin, official title, history, production, handling, tests, use, adulterations and allied products of myrrh.

Bernegau, L. H. 1910

Report of the Committee on Adulterations.

Proc. Penn. Pharm. Assoc., 33, p. 140; (Dig. Com. U.S.P. & N.F., 1910, p. 540.)

Suggest that the U.S.P. prescribe limits of alcohol soluble matter and ash. In samples tested, thirteen samples showed the percentage of alcohol soluble matter ranging from 18.30 to 37.60 per cent.

Breves, R. 1910

A Few Suggestions for the New Pharmacopoeia.

Prac. Drugg., 28, p. 39; (Dig. & Com. U.S.P. & N.F., 1910, p. 544.)

The amount myrrh soluble in alcohol and water should be stated.

Ceasar & Loretz. 1910

Myrrha.

Pharm. Ber. D. A. B., 5, p. 41; (Dig. & Com. U.S.P. & N.F., 1910. p. 544.)

("Points out that the Pharm. V. requires that myrrh leave not more than 65 per cent. of substance insoluble in hot alcohol and yield on incineration, not more than 7 per cent of ash. In the making of powder, myrrh is to be dried over calcined lime.")

Eldred, F. B. 1910

Some data Obtained in the Examination of official Substances.

Proc. Am. Pharm. Assoc., 58, p. 893; (Dig. Com. U.S.P. & N.F., 1910, p. 544.)

Reports the alcohol insoluble material, volatile material, ash and alcohol soluble material observed from the analysis of 20 samples of myrrh.

Gane, E. H. 1910

Report of the Committee on the Drug Market.

Proc. Am. Pharm. Assoc., 58, p. 744; (Dig. Com. U.S.P. & N.F., 1910, p. 545.)

Much of the myrrh imported, contains a varying proportion of gum acacia, probably due to careless collecting.

Gilg, E. 1910

Myrrha.

Lehrbuch der Pharmakognosie, 2 ed., p. 194; (Ibid., 3 ed., p. 212; Ibid., 4 ed., p. 248.)

Gives the product used, botanical source, method of handling, properties, composition, tests, history and use of myrrh.

Guillaumin, A. 1910

Les Produits Utiles des Burseracies.

Pharmakognostische Rundschau, v. 2, p. 75.

The various resinous materials obtained from the above family including myrrh are described in detail.

Lewal, C.H. & Bradshaw, H. A. 1910

As standards in Drugs.

Proc. Am. Pharm. Assoc., 58, p. 753; (Dig. Com. U.S.P. & N.F., 1910, p. 544.)

A sample of myrrh was found to contain 3.02 per cent of ash.

Parry, E. J. 1910

(Perfume Resins.)

Am. Perf., 5, p. 4; (Dig. Com. U.S.P. & N.F., 1910, p. 544.)

In notes on some perfume resins, the description, history, origin and constituents of myrrh are discussed.

Scoville, W. L. 1910

Report of Comittee on Drug Market.

Proc. Am. Pharm. Assoc., 58; p. 744; (Dig Com. U.S.P. & N.F., 1910, p. 545.)

The alcohol soluble portion of myrrh in 7 lots of myrrh, ranged from 35 to 44.7 per cent.

Tschirch, A. 1910

Myrrha.

Handbuch der Pharmakognosie, 1 ed., v. 3, p. 1115.

Discusses in detail the synonymy, etymology, botanical origin, production, handling, anatomy, chemistry, adulterations, uses, history with references. Isolated data on myrrh is also found in v. 1, pp. 18, 23, 187, 209, 235, 276, 289, 409, 435, 443, 361, 464, 489, 491, 495, 498, 500, 510, 511, 519, 521, 531, 532, 535, 536, 540, 541, 548, 558, 568, 569, 570, 573, 581, 583, 585, 587, 588, 600, 602, 603, 610, 627, 634, 653, 670 & 800.

Woolsey, J. F. 1910

Report of the Committee on Adulterations.

Proc. Penn. Pharm. Assoc., 33, p. 140; (Dig. Com. U.S.P. & N.F., 1910, p. 545.)

Suggests that the U.S.P. establish a limit for the alcohol and water solubilities of myrrh. States that myrrh has a water soluble portion of 40 to 60 per cent.

Braum, K. 1911

Uber eine Reise durch die Berzirke Tanga und Pangani.

Der Pflanzer, 1911, 7, p. 12; (Guillaumin, Pharmakognostische Rundschau, v. 3, p. 4.)

Among the products observed while on his trip, myrrh is listed.

Caesar & Loretz. 1911

Myrrha.

Jahres.-Bericht., p. 45; (Dig. Com. U.S.P. & N.F., 1911, p. 450.)

States that the limitation of 7 per cent. of ash and 65 per cent. of matter insoluble in alcohol is complied with only in the better grades of this drug.

(Committee.) 1911

(The Biennial Report of the Inspection of Pharmacies.

Bull. Soc. Roy. Pharm. Brux., 55, p. 230; (Jour. d. pharm. Anvers, 67, p. 519; Dig. Com. U.S.P. & N.F., 1911, p. 450.)

States that myrrh is mixed with stones and gums completely insoluble in alcohol.

Dieterich, K. 1911

Harzdrogen.

Die Wichtigsten Medizinischen Drogen, 1 ed., p. 88.

Myrrh is used as incense and pasters, the latter in plasters and salves.

(Editor.) 1911

Myrrha.

Chem. Drugg., 78, p. 580.

The New German Pharmacopoeia states that "Myrrh should yield at the most, 65 per cent residue (dried at 100° C.) on extraction with boiling alcohol. Ash limit 7 per cent."

(Editor.) 1911

Myrrha.

Chem. Drugg., 79, p. 355 & 451.

The revised text of the British Pharmacopoeia provides that myrrh shloud not have more than 70 per cent insoluble in alcohol, and ash limit 5 per cent.

Hartwich, C. 1911

Die Rohstoffe des neuen Arzeibuches.

Apoth. Ztg., 26, p. 34; (Dig. Com. U.S.P. & N.F., 1911, p. 450.)

Does not believe that myrrha is derived from several species of Commiphora, but believes that it may come from one species, C. Abyssinica.

Itallie, E. I. von. 1911

(Analysis of Myrrh.)

Pahrm. Weekblad, 48, p. 283; (Dig Com. U.S.P. & N.F., 1911, p. 283.)

5 samples of myrrh which were found to contain 49.7 to 67.9 per cent of material insoluble in alcohol and from 3.4 to 4.75 per cent. of ash.

Lloyd, J. U. 1911

Three Vegetble Drugs.

Bull. Lloyd. Libr., no. 18, p. 61; (Spatula, 17, p. 407; Dig. Com. U.S.P. & N.F., 1911, p. 450.)

Myrrh has been a constituent of incense, perfume, and such in ceremonial religious life, as well as an article emplowed by the common people from the days of the most remote antiquity.

Mann, E. W. 1911

Myrrh.

Rep. 1911, Southall Bros. & Barclay, Birmingham, 1912, p. 15; (Dig. Com. U.S.P., 1911, p. 450.)

"The ash abtained from 13 samples of myrrh ranged from 3.24 to 9.29 per cent, with an average of 4.69 per cent."

Parry, E.J. 1911

Some Suggested Pharmacopoeial Standards.

Chem. Drugg., 78, p. 379; Dig. Com. U.S.P. & N.F., 1911, p. 450.)

6 samples of myrrh of average quality were tested as to the per cent soluble in alcohol (90 %), water, petroleum ether and the acid and ester values.

Roure-Bertrand Fils. 1911

Plants yielding Gum Resins.

Sci. & Indus. Bull. apr., p. 81; (Dig. Com. U.S.P. & N.F., 1911, p. 450.)

"The myrrh of the Somalis is derived from Commiphora myrrha Ehr. and Nees, and si called by natives-Molmol; it is very closely allied to the Heerabol, if not identical with it. Arabian myrrh, or genuine myrrh, has an origin still slightly doubtful, and 2 sorts of it are known: Fadhli myrrh and the myrrh of Yemen, a little different in appearance and derived from different districts. The plants producing them are Commiphora, probably C.Myrrha and C. opabalsamum. The Balsam of Mecca or Gilead, at the present day almost unobtainable, is a variety of myrrh".

Schneider, A. 1911

The Quality and Purity of Vegetable Drugs on the Pacific Coast.

Pacific Pharm., 5, p. 178; (Dig Com. U.S.P. & N.F., 1911, p. 450.)

Myrrh gum was found to contain considerable vegetable tissue. 2 samples of powdered myrrh were examined, the first contained considerable impurity; the second was found to contain starch, sand, vegetable substance and was bitter and sticky.

Scoville, L. W. 1911

Report of the Committee on the Drug Market.

Drugg. Circ. 55, p. 518.

Reports on the purity of myrrh.

Bernegau, L. H. & E'We, G. E. 1912

A Few Suggestions for the Ninth Decennial Revision of the U.S.P.

Jour. Am. Pharm. Assoc., 1, p. 125; (Dig. Com. U.S.P. & N. F., 1912, p. 346.)

"The sentence, 'It does not swell or dissolve in water;' should read, It does not swell or completely dissolve in water, in view of the fact that myrrh contains considerable water-soluble gum."

Brockman, D. 1912

(Myrrha.)

Somaliland, p. ---; (Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1120.)

The original was not available.

Caesar & Loretz. 1912

Tabellarische Zusammenstellung einer Anzahl dei uns erhaltener Untersuchungeresultate.

Jahres.-Ber., p. 104; (Dig. Com. U.S.P. & N.F., 1912, p. 342.)

("The ash content of myrrh was found to vary between 4.1 and 15.65 per cent.")

Duck, --- 1912

Erfahungen bei der Untersuchung von Arzneimitteln, Drogen und Verbandmaterialien.

Schweiz. Wchnschr. Chem. u. Pharm. 50, p. 516; (Com. & Dig. U.S.P. & N.F., 1912, p.346.)

(A sample of powdered myrrh examined, contained 14.95 per cent of ash. A second sample 11.35 per cent.)

Evans, E. 1912

The Necessity of Care in Collection.

Yrbk. Brit. Pharm. Conf., 49, p. 395; (Dig. Com. U.S.P. & N.F., 1912, p. 346.)

"In the case of myrrh, small stones covered with myrrh whilst still in a moist state and then dried makes detection with the eye extremely difficult."

Herail, J. 1912

Myrrhe.

Traite Matiere Medicale Pharmacographie, 2 ed., p. 378; (Ibid., 3 ed., p. 372.)

Reviews the origin, collection, characteristic properties, chemical composition and uses of myrrh.

Mitlacher, W. 1912

Commiphora Myrrha.

Die Offizinellen Pflanzen und Drogen, p. 42.

Gives the botanical synonymy, product used, Pharmacopoeias in which official and the properties of myrrh.

Rippetoe, J. R. & Minor, R. 1912

The Examination of Some Drugs with Special Reference to the Anhydrous Alcohol and Ether Extracts and Ash.

Am. Jour. Pharm., 84, p. 442; (Dig. Com. U.S.P. & N.F., 1912, p. 346; Guillaumin, Pharmakognostische Rundshau, 3, p. 107.)

Two samples of myrrh, one a powder, were examined and found to contain 9.02 and 7.03 per cent of moisture, 21.35 and 40.58 per cent of alcohol extractive, and 8.20 and 8.39 per cent of ash.

Scoville, W. L. 1912

Report of Comittee on Drug Market.

Jour. Am. Pharm. Assoc., 1, p. 501; (Dig. Com. U.S.P. & N. F., 1912, p. 346.)

"Myrrh is 30.1 per cent to 42 per cent soluble in alcohol."

Tschirch, A. & Reutter, L. 1912

Ueber im 1 Jahrtausend v. chr. bei der Einbalsamierung der Leichen in Aegypten und Carthagobenutzte Harze.

Arch. d. Pharm., 250, p. 170; (Guillaumin, Pharmakonostiche Rundschau, v. 3, p. 49.)

Among various products used for embalming the dead, myrrh was used in both the above areas.

Tunmann, O. 1912

Der Drogenhandel Hamburgs.

Apoth. Ztg., 27, p. 71; (Dig. Com. U.S.P. & N.F., 1912, p. 346.)

Aden is the center of the myrrh trade, through which the Arabian drug is marketed. A myrrh of inferior quality comes from Bombay.

Committee. 1913

Drugs, Adulterated and Otherwise.

Drugg. Circ., 57, p. 740.

Comments briefly on the purity of myrrh on the market.

Dohme, A. R. L. & Engelhardt, G. 1913

(Myrrh.)

Oil, Paint and Drug. Rep., 83, p. 55; (Dig. Com. U.S.P. & N.F., 1913, p. 360.)

("The Ph. Ndl. requires that 30 to 60 per cent of myrrh be soluble in alcohol, and that the drug should yield not more than 5 per cent of ash on incineration. Three samples examined were soluble in alcohol to an extent of 29.2, 37.8 and 30.4 per cent, and yielding 6.1, 11.7 and 4.4 per cent of ash respectively.")

Dorveaux, P. 1913

Mirre.

Le Livre des Simples Medecines, p. See below.

Myrrh is mentioned in the following paragraphs: 473, 700, 775-780, and 665 as to its botanical origin, properties and uses.

Engelhardt, H. 1913

Purity of Chemicals and Drugs.

Lour. Am. Pharm. Assoc., 2, p. 165; (Dig. Com. U.S.P. & N.F., 1913, p. 360.)

The alcohol soluble portion of six samples of myrrh varied from 26.0 to 40.73 per cent. and on incineration, the ash varied from 4.56 to 11.9 per cent.

E'we, G. E. 1913

Report of Committee on Drug Market.

Proc. Penn. Pharm. Assoc., 36, p. 89; (Jour. Am. Pharm. Assoc., 2, p. 974; Dig Com. U.S.P. & N.F., 1913, p. 360.)

12 samples of myrrh assayed, averaged 36 per cent of alcohol soluble matter. 2 samples of powder myrrh averaged somewhat higher.

Holmes, E. M. 1913

Myrrh of Commerce, Ancient and Modern.

Yrbk. Brit. Pharm. Conf., 50, p. 451; (Chem. Drugg., 83, p.171; Yrbk. Am. Pharm. Assoc., 2, p. 254; Nat. Drugg., 43, p. 346; Wood & Lawall, U.S. Dispens., 20 ed., p. 717; 21 ed., p. 713; Dig. Com. U.S.P. & N.F., 1913, p. 260; Tschirch, Handbuch der Pharm., 1 ed., v. 3, p. 1120; Guillaumin, Pharmakognostiche Rundschau, 4, p. 126.)

Discusses the use of myrrh of the Bible and describes the tree of modern myrrh, and gives the habitat of the same.

(Inspectors of Pharmacies, Belgium.) 1913

(Myrrha.)

Ann. pharm. Louvain, 19, p. 341; (Rev. Internat. Pharm. Brux., 1, p. 134; Jour. pharm. Anvers., 69, p. 565; Dig. Com. U.S.P. & N.F., 1913, p. 360.)

("Myrrh varies much in quality and is frequently found mixed with vegetable and mineral substances.")

Kebler, L. F. 1913

Report of Committee on Drug Market.

Jour. Am. Pharm. Assoc., 2, p. 1100; (Dig. Com. U.S.P. & N.F., 1913, p. 360.)

Gives the ash and alcohol insoluble matter found in a number of samples of myrrh.

Linton, A. W. 1913

Some Commercial Samples of Drugs.

Jour. Am. Pharm. Assoc., 2, p. 32; (Dig. Com. U.S.P. & N. F., 1913, p. 360.)

Carried on a series of determinations on the gum resins of commerce. 12 samples of myrrh were examined and the results of the experiment are recorded.

Schimmel & Co. 1913

Myrrhenol.

Semi-Ann. Rep., Oct., p. 72; (Dig. Com. U.S.P. & N.F., 1913, p. 360.)

("An explanation of our imperfect knowledge of the parent of the official myrrh,")

Scoville, W. L. 1913

Report of Committee on Drug Market.

Jour Am. Pharm. Assoc., 2, p. 682; (Dig. Com. U.S.P. & N. F., 1913, p. 360.)

The alcohol soluble matter of myrrh runs more uniform than formerly, averaging from 32 to 42 per cent.

Scoville, W. L., Rusby, H. H. & Kebler, L. F. 1913

Report of the Committee on Drugs.

Jour. Am. Pharm. Assoc., 2, p. 1100.

Presents the results of observations and examintions made on the myrrh of commerce.

Baker, W. L. 1914

(Myrrh.)

Proc. Am. Pharm. Assoc., 7, p. 210; (Dig. Com. U.S.P. & N. F., 1914, p. 353.)

(The ash content of powdered myrrh was found to be high, 15 per cent.)

Caesar & Loretz. 1914

Harzbestimmung in Harzen und Gummiharzen, speziell in Benzoe, Ammoniacum, Asafoetida, Galbanum und Myrrha.

Jahres.-Ber., p. 87; (Dig. Com. U.S.P. & N.F., 1914, p. 356.)

(A method for the determination of the content of resins and gum resins.)

(Committee.) 1914

Gums, Gum Resins and Resins from Somaliland.

Bull. Imp. Inst., 12, p. 11; (Yrbk. Brit. Pharm. Conf., 51, p. 103.)

("Myrrh of two kinds is found in Somaliland. 'Oga molmol' and 'Guban molmol'. The first is of superior quality, and is the Turkey myrrh of commerce. Both are attributed to the same botanical source Balsamodendron myrrha, known to the natives as 'didin'.")

(Editor.) 1914

Changes in the New Pharmacopoeia. Myrrh.

Pharm. Era, 47, p. 262.

"A gum-resin obtained from one or more species of Commiphora(Fam. Burseaceae). Microscopical characteristics of powdered drug added. Statements about emulsion with water, its insolubility and non-swelling in water, and the nitric acid test on an alcoholic solution omitted. Not less than 35 per cent. of myrrh should be soluble in alcohol. Ash not exceeding 8.5 per cent."

E'we, G. E. 1914

Report of Committee on Drug Market.

Proc. Penn. Pharm. Assoc., 37, p. 147; (Dig. Com. U.S.P. & N.F., 1914, p. 353.)

Three lots of myrrh gave 27.7 to 36.2 per cent of alcohol soluble matter and two of the lots gave ash of 28.5 and 8 per cent.

Linke, H. 1914

Myrrha.

Apoth. Ztg., 29, p. 567; (Dig. Com. U.S.P. & N.F., 1914, p. 353.)

Six samples of myrrh gave from 2.50 to 4.8 per cent of ash, 47.65 to 68.6 per cent. of insoluble maater in warm alcohol, and 31.4 to 52.35 per cent soluble matter in warm alcohol.

Maines, E. L. 1914

Ash Content of Crude Drugs.

Jour. Am. Pharm. Assoc., 3, p. 426; (Dig. Com. U.S.P. & N.F., 1914, p. 353.)

Powdered myrrh was found to contain from 4.08 to 5.45 per cent. of ash.

Mann, E. W. 1914

(Myrrh.)

Ann. Rep. Southall Bros. & Barclay, p. 18; (Dig. Com. U. S.P. & N.F., 1914, p. 353.)

The ash yield from three samples of powdered myrrh ranged from 3.37 to 4.74 per cent.

(Remington J. P., Chairman.) 1914

U.S.P. - Ninth Revision - Abstract of Proposed Changes with new Standards and Description.

Jour. Am. Pharm. Assoc., 3, p. 392; (Dig. Com. U.S.P. & N. F., 1914, p. 353.)

Myrrh is a gum resin obtained from one or more species of Commiphora. The powder is described in detail. Allows not less than 35 per cent of myrrh soluble in alcohol. Ash should not exceed 8.5 per cent.

Rippetoe, J. R. 1914

The examination of some Drugs with Special Reference to the Anhydrous Alcohol and Ether Extracts and Ash.

Am. Jour. Pharm., 86, p. 441; (Dig. Com. U.S.P. & N.F., 1914, p. 353.)

Three samples of myrrh were found to contain from 10.99 to 26 per cent of alcohol extract and from 7.70 to 11.28 per cent of ash. One sample was of poor quality. One sample contained 0.90 per cent of volatile ether soluble extractive and 19.85 per cent. of nonvolatile ether soluble extractive.

Youngken, H. W. 1914

Myrrha.

Pharmaceutical Botany, p. 79.

Describes the official drug, product used and the botanical name of the plant yielding myrrh.

Baker, W. L. 1915

Report of the Chemist's Sub-Committee on Standardization and Drug Testing.

Jour. Am. Pharm. Assoc., 4, p. 226; (Dig. Com. U.S.P. & N.F., 1915, p. 321.)

A sample of powdered myrrh examined, showed an ash content of 15 per cent.

Kraemer, H. 1915

Myrrha.

Scientific and Applied Pharmacognosy, 1 ed., p. 454; (Ibid., 2 ed., p. 381; Ibid., 3 ed., p. 435.)

Gives the botanical origin, description, powder, constituents, adulterations, allied plants, use and dose of myrrh are given.

E'we, G. E. 1916

Report of Committee on Drug Market.

Proc. Penn. Pharm. Assoc., 39, p. 115; (Dig. Com. U.S.P. & N.F., 1916, p. 228.)

Two of seven lots of myrrh examined, met the U.S. P. IX requirement of 35 per cent. alcohol soluble matter. The remaining 5 were below this value.

Roberts, J. G. 1916

Report of Committee on Drug Market.

Proc. Penn. Pharm. Assoc., 39, p. 115; (Dig. Com. U.S.P. & N.V., 1916, p. 229.)

A sample of myrrh was below the U.S.P. IX standard for both the alcohol soluble portion and the ash content.

Rusby, H. H. 1916

Report of Committee on Quality of Medicinal Products.

Jour. Am. Pharm. Assoc., 5, p. 541; (Dig. Com. U.S.P. & N.F., 1916, p. 228.)

"Several lots of myrrh examined contained many dark, soft and sticky pieces of peculiar, intense bitter taste. If this is genuine myrrh, the U.S.P. description should be so changed as to include them."

Blair, T. S. 1917

Myrrh.

Botanic Remedies, 1 ed., p. 237.

Discusses the action, uses, dose and the scientific name of the plant yielding myrrh.

Dohme, A. R. L. 1917

Report of Committee on Prevention of Adulteration.

Proc. N. W. D. A., p. 510; (Dig. Com. U.S.P. & N.F., 1917, p. 253.)

Samples of myrrh examined showed alcohol-soluble constituents of 32.4, 35.1 and 48.4 per cent respectively.

Engelhardt, H. 1917

Report of Committee on the Quality of Medicinal Products.

Jour. Am. Pharm. Assoc., 6, p. 411; (Dig. Com. U.S.P. & N. N., 1917, p. 253.)

"The alcohol-soluble constituents of six samples of myrrh examined ranged from 27.4 to 38.6 per cent. The ash content varied from 3.8 to 7.6 per cent."

Farwell, O. A. 1917

Botanical Nomenclature of the U.S.P. IX.

Drugg. Circ., 61, p. 175; (Dig. Com. U.S.P. & N.F., 1917, p. 253.)

"Myrrh is said to come from one or more species of Commiphora. The oldest name and consequently the valid one is Balsamea. It should be adopted."

Green, C. 1917

Report of the Committee on Drug Market.

Proc. Penn. Pharm. Assoc., 40, p. 87; (Dig. Com. U.S.P. & N.F., 1917, p. 253.)

Gives the per cent of alcohol soluble matter in seven samples of myrrh of which three were above, and four were below the U.S.P. standard.

Southard, A. E. 1917

Aden's Trade in Gums, Species, Oils and Seeds.

U.S. Com. Rep., no 24, p. 377; (Dig. Com. U.S.P., 1917, p. 253; Pharm. Era, 51, p. 234; Dig. Com. U.S.P. & N.F., 1918, p. 266.)

Gum myrrh is most in demand of all the gums and resins. Tells where myrrh is collected, its time of collection and its price.

Bruntz, L. & Jaloux, M. 1918

Commiphora Myrrha Engl.

Plantes Officinales et Plantes a Drogues Medicamenteuses, p. 119.

Lists the pharmacopoeias of different countries by editions and dates in which myrrh has been official.

Christensen, F. V. 1918

(Myrrha.)

Arch. Pharm. Chem., 25, p. 230, 245; (Henry Loft, p. 265; Dig. Com. U.S.P. & N.F., 1918, p. 266.)

("A thesis dealing with the preparation of powdered myrrh. The bromine method of the Danish Pharm. was used in testing the samples.")

O'Connor, C. D. 1918

Myrrh.

Natl. Drugg., 48, p. 400.

Defines myrrh, gives its habitat, use and the official preparations.

Todd, A. R. 1918

(Myrrh.)

Rep. Mich. D. & F. Com., p. 87; (Dig. Com. U.S.P., 1918, p. 266.)

("Two samples of gum myrrh examined proved to be of standard quality.")

E'we, G. 1919

Report of the Committee on Drug Market.

Proc. Penn. Pharm. Assoc., 42, p. 88; (Jour. Am. Pharm. Assoc., 8, p. 754; Dig. Com. U.S.P. & N.F., 1919, p. 283.)

"One lot of myrrh examined was rejected because it contained about 70 per cent of another gum. 4 lots assayed 25.7, 25.8, 33.4 and 38.7 per cent. respectively of alcohol soluble matter. The U.S.P. requires not less than 35 per cent."

Compain, M. 1920

Myrrhe.

Guide de L'Herboriste-Droguiste, 1 ed., p. 160.

Gives various names, product used, habitat and the uses of myrrh.

Coupin, H. 1920

Baumier porte-myrrhe.

Les Plantes Medicinales, 1 ed., p. 96.

Gives the scientific name, general characteristics, habitat, product used, action and dose of myrrh.

(Eli Lilly & Co.) 1920

(The Determination of the Alcohol-soluble Portion of Myrrh.)

Proc. N. W. D. A., p. 360; (Dig. Com. U.S.P. & N.F., 1920, p. 311.)

(A number of samples of myrrh examined showed much less alcohol-soluble extract than that required by the U. S.P. standard of 35 per cent. One sample examined contained 17 per cent alcohol-soluble material.)

E'we, E. G. 1920

Report of the Committee on Drug Market.

Proc. Penn. Pharm. Assoc., 43, p. 115; (Dig. Com. U.S.P. & N.F., 1920, p. 311.)

The alcohol soluble matter in 17 lots of myrrh ranged from 20,5 per cent. to 98.3 per cent.

Lampa, R. R. 1920

Suggestions for Pharmacopoeial Revision.

Am. Drugg., 68, p. 27; (Jour. Am. Pharm. Assoc., 9, p. 495; Dig. Com. U.S.P. & N.F., 1920, p. 311.)

The average ash yield of myrrh gum found on the market is 12 per cent., and the average yield of soluble matter is 30 per cent. The U.S.P. allows not over 8.5 per cent ash, and not less than 35 per cent soluble matter.

Lyons, A. B. 1920

Calling Attention to a Number of Important Points.

Drugg. Circ., 64, p. 86; (Digg Com. U.S.P. & N.F., 1920, p. 311.)

Stresses the fact that more specific directions for determining the amount of material in myrrh which is soluble in alcohol should be given.

Roberts, J. B. 1920

Report of the Committee on Drug Market.

Proc. Penn. Pharm. Assoc., 43, p. 116; (Dig. Com. U.S.P. & N.F., 1920, p. 311.)

A sample of myrrh contained 10 per cent less alcohol soluble maater than the U.S.P. requires and 3.66 per cent more ash than the U.S.P. requires.

Humphrey, J. 1921

Myrrh.

Drug in Commerce, Their Source, Preparation for the Market, and Description, p. 78.

Gives the scientic name, habitat, collection, properties, composition and related plants of myrrh.

Lloyd, J. U. 1921

Myrrha.

Origin & History of all Pharmacopoeial Vegetable Drugs, Chemicals and Preparations with Bibliography, v. 1, p. 219.

Lists the several revisions of the U.S.P. in which myrrh has been official, its origin, history, synonym, properties with references.

Otterbach, G. & Dorftewiss, R. 1921

Myrrha.

Drogenkunde, p. 106.

Gives the physical properties, habitat, description and use of myrrh.

Cross, C. M. P. 1922

Production of Gum Myrrh in the Red Sea District.

Commerce Reports, 3, p. 61; (Chem. Drugg., 97, 949.)

Discusses the habitat, demand, cost and gives data on the production and exportation of gum myrrh.

Cross, C. M. P. 1922

Production of Gums in the Red Sea District.

American Consular Report, 2, p. 385; (Pharm. Jour., 109, p. 203.)

Myrrh is the most important gum of the Red Sea District and that from Abyssinia is considered best. Nearly all importers are Somalis from the wild Hinterland of Africa and they bring the drug in the crude form. A table is given showing the amount of gum exported.

Gano, W. H. 1922

Review of Current French Literature.

Am. Jour. Pharm., 94, p. 820.

Myrrh is one of the three principal drugs produced in the basin of the Red Sea and comes from Abyssinia and the Interior of Arabia. It is considered the best and is collected by the Somalis, who carry it in the crude form to Aden where it is sorted for exportation.

Davis, R. 1923

Aden Trade in Gum Myrrh.

American Consul Report, 1, p. 735; (Chem. Drugg., 99, p. 32.)

Statistics are given which compare the imports and exports of myrrh to and from various countries.

Wren, R. C. & Holmes, E. M. 1923

Myrrh.

Potter's Cyclopaedia of Botanical Drugs and Preparations, 3 ed., p. 229.

Reviews the botanical origin, synonyms, product used, action, preparations and distinctive characters of myrrh.

Dezani, S. 1924

(New Reaction for Myrrh.)

Giorn. farm. chin., 731, p. 5; (Chem. Abst., 18, p. 1177; Pharm. Jour., 113, p. 60; Yrbk. Brit. Pharm. Conf., 61, p. 144.)

(A reagent consisting of chloroform, glacial acetic acid, ether and sulphuric acid with myrrh gives an intense violet or azure color which persists for several hours.)

Schlickum, R. 1924

Myrrha.

Pharmakognosie als Vademecum Fur arzte Apotheker Studierende der Mdizin und Pharmazie, 3 ed., v. 2, p. 78.

Gives the scientific name, habitat, tests, properties, composition, preparations, uses, handling and adulterations of myrrh.

Wallis, T. E. & Greenish, H. G. 1925

Myrrh.

Practical Pharmacognosy, p. 67.

Gives the botanical origin, product used and a test for myrrh.

Zornig, H. 1925

Myrrha.

Tabellen fur das pharmakognostische Praktikum zugleich Repetitorium der Pharmakognosie, p. 118.

The botanical origin, constituents and uses of myrrh are reviewed.

Barry, I. H., Drummond, A. A. & Morrell, R. S. 1926

The Chemistry of Natural and Synthetic Resins.

Am. Perfumer, 22, p. 37.

Presents the physical and chemical properties, description, source of supply, and methods of production of the natural sorts, including myrrh.

(Editor.) 1926

Arabia's Exports of Gums and Resins.

Am. Perfumer, 21, p. 76.

The only export of any importance to the United States is gum myrrh and is derived chiefly from Abyssinia.

Leyel, C. F. 1926

Herbs in Medicine Before the Birth of Christ.

The Magic of Herbs, p. 12.

Myrrh is one of the drugs listed in the Edwin Smith papynus and Georg. Ebers papyrus, both of which are prior to Exodus of the Israelites.

Leyel, C. F. 1926

Herbs in Medicine Before the Birth of Christ.

The Magic of Herbs, p. 17.

Myrrh is listed as one of the 400 simples used by Hippocrates and which is still in use today.

Leyel, C. F. 1926

Love Powders, Potions and Philtres.

The Magic of Herbs, p. 101.

The aphrodisiacs of the Greek and Roman courtesans were made of myrrh and other ingredients.

Leyel, C. F. 1926

Recipes of Famous Cosmetics.

The Magic of Herbs, p. 150, 152, 164 & 165.

The earliest ointments of Greece and Rome were composd of herbs and gums, of which, myrrh was an ingredient.

Leyel, C. F. 1926

Perfumers and Perfumes.

The Magic of Herbs, pp. 206, 210, 213 & 221.

Myrrh with other odiferous substances were mixed and used as perfumes and perfumed products.

Leyel, C. F. 1926

Miraculous and Magical Scents.

The Magic of Herbs, p. 247.

The Egyptians offered the sun God Ri', myrrh at midday and with other scented drugs at other periods of the day.

Leyel, C. F. 1926

Quacks and Their Herbal Nostrums.

The Magic of Herbs, p. 255 & 265.

Myrrh was used by Paracelsus during the 15 century in one of his"laudanums" and was also used in Edward Runstall's Black Drop.

Leyel, C. F. 1926

The History of Some Remedies in our Pharmacopoeia. Two-thousand-year old Herbal Formulae.

The Magic of Herbs, p. 273.

Myrrh was an ingredient in Pompey's expensive treacle.

Leyel, C. F. 1926

The History of Some Remedies in our Pharmacopoeia. Two-thousand-year old Herbal Formulae.

The Magic of Herbs, p. 275.

The electuary of Nicholas Myrepsus, contained myrrh as an essential ingredient.

Leyel, C. F. 1926

Apothecaries', Their Shops and Gardens.

The Magic of Herbs, p. 305.

Describes the medicines as they were stored in the apothecary shop, and states that Abyssinian myrrh was used.

Youngken, H. W. 1926

Myrrha.

Pharmacognosy, 2 ed., p. 257.

Reviews synonyms, botanical origin, product used, purity rubric, habitat, plants, production and commerce, description, constituents, uses and adulterants of myrrh.

(Editor.) 1927

Myrrh.

Chem. Drugg., 107, p. 842.

Discusses the botanical origin, collection, physical properties, constituents and kinds of myrrh on commerce.

Heraud, A. 1927

Baumier Porte-Myrrhe.

Nouveau Dictionnaire des Plantes Medicinales, 6 ed., p. 127.

Presents the botanical origin, description, habitat, action, composition, dose and uses of myrrh.

Chamings, A. R. G. 1928

Myrrh.

Pharmacohnosy Map for Students of Pharmacy.

A map showing the various habitats of drugs, including myrrh.

(Editor.) 1928

The Scarcity of Myrrh.

Chem. Drugg., 108, p. 602.

Discusses the price level, bulk and quality of myrrh on the market from the time of the war to the above date.

Falck, M. A. & Baur, R. 1928

Myrrha.

Die Offizinellen Drogen und Ihre Ersatzstoffe, p. 93.

Gives the various pharmacopoeial names of myrrh and the pharmacopoeias listing it, with its constituents.

Rosenthaler, L. 1928

Chemishe Charakteriscerung von Drogen. Characteristics of -- Myrrh.

Pharm. Zeit., 72, p. 510; (Yrbk. Am. Pharm. Assoc., 16, p. 211.)

Discusses in detail the various color reactions of myrrh.

(Editor.) 1929

Arabia Exports of Perfume Materials to the United States.

Am. Perfumer, 24, p. 394.

In 1927, 58,170 pounds of gum myrrh valued at $9000 and in 1928, 27, 320 pounds of gum myrrh valued at $ 7,240 were imported by the United States from Arabia.

Fischer, H. 1929

Das Eindringen von Pflanzlichen Arzneimitteln in den Heilmittelschatz der Abendlandischen Volker.

Mittelalterliche-Pflanzenkunde, 1 ed., p. 210.

Gives the various species of Commiphora which are held to yield the myrrh of the Bible and various general references.

Greenish, H. G. 1929

Myrrh.

Materia Medica, 5 ed., p. 467; (6 ed., p. 468.)

The scientific name, source, description, constituents, uses, varieties, substitutes, and admixtures of myrrh are given.

Wasicky, R. 1929

Myrrha.

Lehrbuch der Physiopharmakonosie fuer Pharmazeuten, v. 1, p. 244; (v. 2, p. 880.)

Gives the product used, habitat, botanical synonymy, properties, composition and uses of myrrh.

Rusby, H. H., Bliss, A. R. Jr. _ Ballard, C. W. 1930

Myrrha.

The Properties and Uses of Drugs, p. 400.

Reviews the part used, botanical origin, composition limits, description of tree, habitat, description of the drug, adulterations, action, dose and preparations.

(Editor.) 1930

Commerce in Myrrh.

Chem. Drugg., 112, p. 736.

Reports statistics on the bulk and value of the myrrh of commerce for the official 1928-29 year and the 1929 calender year.

Coulter, S. 1932

Myrrh.

Pharmacology of the Medical Agents in Common Use, p. 150.

Reviews the product used, botanical origin, dose, standard strength, constituents and physiological action of myrrh.

Strafford Allen & Sons, Ltd. (1932)

Myrrh.

The Romance of Empire Drugs, p. 94.

Gives the product used, habitat, derivation of the word, botanical origin, similar products, early use, properties and uses of myrrh.

Windler, E. 1932

Mirre.

Das Bremer Mittelniederdeutsche Arzneibuch des Arnoldus Doneldey, p. (see below.)

Myrrh (mirre) is mentioned as to its use etc. on pp. 3, line 37; p. 4, l. 17 & 21; p. 5, l. 6; p. 20, l. 20. White myrrh is mentioned on p. 6, l. 35.

Paulitschke, --- ----

(Didthin.)

Harrar., p. ---; (Tschirch, Handbuch d. Pharm., 1 ed., v. 3, p. 1120.)

(The above name is that of the true myrrh plant in Somali, Africa.)

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(iation), v. 1-59; 1851-1911.

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(erence), v. 4-68; 1867-1931.

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(iation), v. 1-18; 1912-1929.

UNITED STATES PHARMACOPOEIA (O-X)

(1820-1920)

and

NATIONAL FORMULARY (I-V)

(1888-1926)

HISTORY

of

MYRRH

U.S.P.,-1820, p. 41.

Myrrha — Gummi-resina. A gum resin.

Myrrh — The / tree unknown.

U.S.P.-1830, (N.Y.), p. 46.

Myrrha — Balsamodendron Dataf.

Myrrh. Gum Resin.

Prop. In irregular shaped pieces of a yellowish-red colour; light, / brittle, translucent; odour peculiar, pleasant; taste, bitter, aromatic; / partially soluble in water, alcohol, and ether; almost entirely taken up / by proof spirit./

Med. Oper. Stimulant, expectorant, emenogogue.

Dose: 10 grains to one drachm.

U.S.P.-1830, (Phil.), p. 17.

Myrrha — Balsamodendron myrrha. F'ee,/

Myrrh — Cours d' Hist. Nat. Pharm./

Succus concretus./

The concrete juice./

U.S.P.-1840, p. 27.

Myrrha — Myrrh.

The concrete juice of Balsamodendron Myr- / rha (Ehrenberg)./

U.S.P.-1850, p. 31.

Myrrha — Myrrh

The concrete juice of Balsamodendron Myr- / rha (Nees, Beschreib. Officinal Pflanzen)./

U.S.P.-1860, p. 37.

Myrrha Myrrh

The concrete juice of Balsamodendron Myrrha / (Nees, Beschreib. Officinal Pflanzen)./

U.S.P.-1870, p. 38.

Myrrha Myrrh

A gum-resinous exudation from Balsamodendron/ Myrrha (nees, Beschreib. Officinal Pflanzen)./

U.S.P.-1880, p. 228.

Myrrha

Myrrh

A gum-resin obtained from Balsamodendron Myrrha Nees (Nat. Ord.,/ Burseraceae).

In roundish or irregular tears or masses, dusty, brownish-yellow or reddish- / brown; fracture waxy, somewhat splintery, translucent on the edges, sometimes / marked with whitish veins; odor balsamic; taste bitter and acrid. When tritu- / rated with water, Myrrh yields a brownish-yellow emulsion; with alcohol it yields / a brownish-yellow tincture which acquires a purple hue on the addition of nitric / acid./

Dark-colored pieces, the alcoholic solution of which is not rendered purple by / nitric acid, and pieces of gum which dissolve completely, as well as those which/ merely swell in water, should be rejected./

(Cont.)

Preparations: Mistura Ferri Composita. Pilulae Ferri / Compositae. Pilulae Galbani Compositae. Tinctura Aloes et Myrrhae. Tinctura / Myrrhae./

U.S.P.-1890, p. 264.

Myrrha

Myrrh

A gum-resin obtained from Commiphora Myrrha (Nees) Engler (Nat. / Ord. Burseraceae)./

In rounded or irregular tears or masses, dusty, brownish-yellow or redish- / brown; fracture waxy, somewhat splintery, translucent on the edges, some- / times marked with whitish veins; odor balsamic; taste aromatic, bitter and / acrid./

When triturated with water, Myrrh yields a brownish-yellow emulsion, / with alcohol it yields a brownish-yellow tincture which acquires a purple tint / on the addition of nitric acid./

Dark-colored pieces, the alcoholic solution of which is not rendered purple / by nitric acid, and pieces of gum which dissolve completely, as well as those //which merely swell in water, should be rejected./

Preparations: Mistura Ferri Composita. Pilulae Aloes et Myrrhae. Tinctura / Aloes et Myrrhae. Tinctura Myrrhae./

U.S.P.-1900, p. 298.

Myrrha

Myrrh

A gum-resin obtained from Myrrha (Nees) Engler / (Fam. Burseraceae).

In rounded or irregular tears or masses, dusty, brownish-

(Cont.)

yellow or reddish- / brown; fracture waxy, somewhat splintery, translucent on the edges, sometimes / marked with whitish veins; odor balsamic; taste aromatic, bitter and acrid./

When triturated with water, Myrrh yields a brownish-yellow emulsion; with / alcohol it yields a brownish-yellow tincture which acquires a purplish-red tint / on the addition of nitric acid./

It does not swell or dissolve in water./

Average dose.-- 0.500 Gm. -- 500 milligrammes (7 1/2 grains).

U.S.P.-1910, p. 279.

Myrrha

Myrrh

Myrrh. -- Gum Myrrh.

A gum-resin obtained from one or more species of Commiphora (Fam. / Burseraceae)./

In rounded or irregular tears or masses; brownish-yellow or reddish-brown, / and covered with a brownish-yellow dust; fracture waxy, somewhat splintery, / (page 280) translucent on the edges, sometimes marked with nearly white lines; odor balsamic; taste aromatic, bitter and acrid./

The powder is yellowish-brown; 0.001 Gm. of the powder, when added to a / drop of fixed oil on a slide and examined under the microscope, shows / numerous angular fragments varying in color from pale yellow to yellowish- / brown; when mounted in hydrated chloral T.S. the color of the yellowish frag- / ments is intensified; the addition of

(Cont.)

iodine T.S. to the powder, previously / mounted in hydrated chloral T.S., may show the presence of a few starch grains / varying in shape from spherical, polygonal and narrowly ellipsoidal to some / what pear shaped, from 0.01 to 0.035 mm. in diameter; when mounted in / phloroglucinol T.S. and hydrochloric acid the powder may show a few fragments / of lignified tissues consisting of either sclerenchymatous fibers, or of small groups / of stone cells, the individual cells of the latter with very thick, porus walls and / from 0.015 to 0.05 mm. in length.

Not less than 35 per cent, of Myrrh is soluble in alcohol./

Myrrh yields not more than 8.5 per cent. of ash./

Preparations:-Pilulae Rhei Compositae. Tinctura Myrrhae./

Average Dose - Metric, 0.5 Gm. -- Apothecaries, 8 grains./

U.S.P.-1920, p. 244.

Myrrha

Myrrh

Myrrh

Myrrh is a gum-resin obtained from Commiphora Myrrha (Nees)/ Baillon or from other species of Commiphora (Fam. Burseraceae)./

Myrrh yields not less than 30 per cent. of alcohol-soluble extractive / and not more than 4 per cent of acid-insoluble ash./

Description and physical properties./

Unground Myrrh ---- Rounded or irregular tears or masses of agglutinated tears, / brownish-yellow or reddish-brown and more or less covered with a grayish or /

(Cont.)

yellowish dust; fracture waxy, granular, conchoidal, internally deep yellowish / or reddish-brown, sometimes marked with nearly white spots or lines, oily,/ translucent at the edges; odor balsamic, aromatic; taste aromatic, bitter / and acrid.

Powdered Myrrh ----Yellowish-brown; consisting of numerous angular fragments of / resin and gum, a few fragments of lignified tissue and a very few starch grains./

Assay ---- Proceed as directed under alcohol-soluble extractive, page 466./

Preparations --- Tinctura Myrrhae./

Average Dose --- Metric, 0.5 Gm. ---- Apothecaries, 8 grains./

SUMMARY OF U.S.P. & N.F. DATA OF MYRRH

Official in:

U.S.P., 1820, '30, N.Y., '30, Phil., '40, '50, '60, '70, '80, '90, 1900, '10, '20.

Official Latin Title:

Myrrha, 1820, '30, N.Y., '30, Phil., '40, '50, '60, '70, '80, '90, 1900, '10, '20.

Official English Title:

Myrrh, 1820, '30, M.Y., '30, Phil., '40, '50, '60, '70, '80, '90, 1900, '10, '20.

Official Abbreviation:

Myrrh., 1910, '20.

Official Synonyms:

Gum Myrrh, U.S.P. 1910.

Official Scientific Names:

Balsamodendron Kataf, U.S.P. 1830, N.Y.

Balsamodendron Myrrha, F'ee, U.S.P. 1830, Phil.

Balsamodendron Myrrha Nees, U.S.P. 1840, '50, '60, '70, '80.

Commiphora Myrrha (Nees) Engler, U.S.P. 1890, 1900.

One or more species of Commiphora, U.S.P. 1910.

Commiphora Myrrha (Nees) Baillon or from other species of Commiphora.

Official Family:

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

(Cont.)

Part Used:

A gum resin, U.S.P. 1820.

Gum resin, U.S.P. 1830, N.Y.

The concrete juice, U.S.P. 1830, Phil., '40, '50, '60.

A gum-resinous exudation, U.S.P. 1870.

A gum-resin, U.S.P. 1880, '90, 1900, '10, '20.

Description:

1830, N.Y., '80, '90, 1900, '10, '20.

Preparations:

Mistura Ferri Composita, U.S.P., 1880, '90.

Pilulae Ferri Compositae, U.S.P., 1880.

Pilulae Galbani Compositae, U.S.P., 1880,

Tinctura Aloes et Myrrhae, U.S.P., 1880, '90.

Tinctura Myrrhae, U.S.P., 1880, '90, 1900, '20.

Pilulae Rhei Compositae, U.S.P., 1910.

Average Dose:

10 grains to one drachm, U.S.P., 1830, N.Y.

0.500 Gm. -- 500 milligrammes-- (7 1/2 grains).
U.S.P., 1900.

Metric, 0.5 Gm. -- Apothecaries, 8 grains. U.S.P.,
1910, '20.

Properties:

U.S.P. 1830, N.Y.

Med. Oper.:

Stimulant, expectorant, emenagogue, U.S.P. 1830, N.Y.

APPROVED BY W.O. Richtmann

Assoc. Prof. of Pharmacognosy