

BIBLIOGRAPHY
OF
OLEUM CHAULMOOGRAE

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Le-she-chen, ____.

Mid. 16 C.

(Seeds of Chaulmoogra.)

~~Pren~~-Tsaou-kong-muh, fig. 773. (Pharm. Jour., 2, p. 16.)

(The work was written with the design of obviating the difficulties and confusion arising from a multitude of authorities, by supplying in one work a compedium of all that was more valuable in its predecessors.)

Roxburgh, W.

1814.

(Chaulmoogra Oil.)

Hortus Bengalensis; or, A Catalogue of the Plants Growing in the Honourable East India Company's Botanic Garden at Calcutta, 5, 12, p. 105. (U.S. Dept. Agric. Bull., No. 1057, p. 29.)

The original was not available.

Roxburgh, W.

1819.

(Chaulmoogra Oil.)

Plants of the Coast of Coromandel selected from Drawings and Descriptions presented to the...East India Company, v. 3, p.---. (U.S. Dept. Agric. Bull., No. 1057, p. 29.)

The original was not available.

O'Shaughnessy, W.B.

1842.

Chaulmoogra Odorata (Roxburgh).

The Bengal Dispensatory, 1 ed., p. 206.

Gives the habitat of Chaulmoogra odorata Roxburgh, the uses, a description of the seed, and characteristics of the oil obtained from the seeds by expression.

(Editor.)

1855.

The Chaulmoogra.

Am. Jour. Med. Science, 30, p. 493.

Chaulmoogra oil has been found to be of real service in the treatment of leprosy.

Tatarinov, A.

1856.

(Chaulmoogra Oil.)

Cot. Med. Sinens., p. 19.

(The name of the drug chaulmoogra is given in Latin without comment. The Chinese character is also given, and the sound as expressed both in Russian and English characters.)

Wood, G.B. & Bache, F.

1858.

Gynocardia Odorata. Chaulmoogra.

Dispens. U.S.A., 11 ed., p. 1422; 12 ed., p. 1525; 13 ed., p. 1606; 14 ed., p. 1660; 15 ed., p. 1658; 16 ed., p. 1812; 17 ed., p. 1647; 18 ed., p. 1879; 19 ed., p. 1588; 20 ed., p. 759; 21 ed., p. 75; 22 ed., p. 737.

Gives the botanical source, description of the seed, the uses, and the dose of chaulmoogra oil.

Hanbury, D.

1862.

Ta-fung-tsze.

Pharm. Jour., 3, p. 204.

Given a description and use of some specie or species of chaulmoogra.

Waring, E.J. 1868.

Gynocardia Odorata, R.Br. Chaulmugra.

Pharmacopoeia of India, p. 26.

Gives the habitat of Gynocardia Odorata, R. Brown, part, the properties, therapeutic uses and the dose of the fixed oil of the seed.

Hooker, J.D. & Thomson, T. 1872.

Bixineae.

Hooker's The Flora of British India, v.1, pt. 1, p. 189.
(U.S. Dept. Agric. Bull, No. 1057, p. 28.)

The original was not available.

Beddome, R.H. 1873.

(Chaulmoogra Oil.)

Forester's Manual of Botany for Southern India. Apx.
to Flora Sylvatica, 239, 8, p. 29. (U.S. Dept. Agric.
Bull., No. 1057, p. 28.)

The original was not available.

Dymock, W. 1876.

Chaulmoogra Oil.

Pharm. Jour., 35, p. 761. (Proc. Am. Pharm. Assoc.,
24, p. 307.)

Gives some ready tests for detecting adulteration
of chaulmoogra oil.

Bentley, R. & Trimen, H. 1877.

Gynocardia odorata, R. Brown.

Medicinal Plants, v.1, no. 28. (Index Londonensis, v. 3, p. 335.)

Gives a description of the tree, parts official and name, general characters, constituents of the seed, medicinal properties, uses, and substitutes of chaulmoogra oil.

Lepage, R.C.

1878.

Chaulmoogra Oil.

Chem. & Drugg., 22, p. 315.

After an introduction, tells how the oil is obtained, its physical properties, the value of the seeds and the oil in leprosy and similar diseases and how the drug is administered.

Moss, J.

1878.

Preliminary Paper on Chaulmoogra Oil.

Chem. & Drugg., 20, p. 521; Ibid., 21, p. 380. (Yrbk. Brit. Pharm. Conf., 15, p. 169; Pharm. Jour., 39, p. 251; Am. Jour. Pharm., 52, p. 168.)

Contains an introduction, industrial data, description of chaulmoogra oil, modes of administering, uses and chemistry of chaulmoogra oil.

Baxter, ____.

1879.

(Chaulmoogra Oil.)

Chem. & Drugg., 21, p. 381.

Asks for information concerning the uses of chaulmoogra oil in mangey itch in dogs.

(Editor.)

1879.

(Chemistry of Chaulmoogra Oil.)

Am. Jour. Pharm., 51, p. 522.

Comments on a paper entitled "The Chemistry of Chaulmoogra Oil", Moss.

Mason, _____. 1879.

(The Chemistry of Chaulmoogra Oil.)

Chem. & Drugg., 21, p. 381.

Suggests that it might be convenient if brief details could be given respecting the nature of Chaulmoogra Oil.

Moss, J. 1879.

The Chemistry of Chaulmoogra Oil.

Yrbk. Brit. Pharm. Conf., 16, p. 523. (New Rem., 8, p. 340; Proc. Am. Pharm. Assoc., 28, p. 289.)

Discusses the result of an examination for an alkaloid in the volatile and non-volatile portion of chaulmoogra oil; gives a summary of results previously obtained, names the free acids found in the oil and the methods of separation and recognition of the constituents.

Naylor, _____. 1879.

(Chaulmoogra Oil.)

Chem. & Drugg., 21, p. 381.

In reply to Mr. Baxter's request for information, it states that oil of chaulmoogra has been very successful in some cases of mange in dogs.

Naylor, _____. 1879.

(The Chemistry of Chaulmoogra Oil.)

Chem. & Drugg., 21, p. 381.

In reply to Mason's suggestion, gives the botanical source, and uses of chaulmoogra oil.

Stille, A. & Maisch, J.M.

1879.

Gynocardia - Chaulmugra.

National Disp., 1 ed., p. 702; Ibid., 2 ed., p. 702;
Ibid., 3 ed., p. 755; Ibid., 5 ed., p. 802.

Give the botanical source, geographical habitat, description of the seed, constituents, allied species, medical action and the uses of chaulmoogra oil.

Wilmot, ____.

1879.

(Chaulmoogra Oil.)

Chem. & Drugg., 21, p. 381.

Mentions a case in which chaulmoogra oil failed, but gurjun oil proved beneficial.

Christy, T.

1880.

Chaulmugra.

New Commercial Plants and Drugs, No. 11, p. 3. (Am. Drugg., 18, p. 66; Proc. Am. Pharm. Assoc., 37, p. 651.)

Gives the use of chaulmoogra oil in veterinary cases, in healing wounds, relieving bruises, sprains and stiffness. A formula is given for preparing ointment of chaulmoogra oil.

Cottle, W.

1881.

Chaulmoogra Oil and Gynocardis Acid.

Chem. & Drugg., 23, p. 295. (Yrbk. Brit. Pharm. Conf., 18, p. 295.)

Discusses the active principles of chaulmoogra oil and the use of gynocardic acid in internal and external remedies in various forms of skin diseases.

(Editor.)

1881.

Chaulmoogra Oil.

Chem. & Drugg., 23, p. 489.

Chaulmoogra Oil has been introduced into the medicine chests of the British Cavalry requirements, on account of its remarkable effect upon horses that have been "wrung" by the collar or have sore backs from the friction of the saddle.

Hillis, V.D.

1881.

(Chaulmoogra and Gurjin Oil In Leprosy.)

N.Y. Med. Abstract, --, p. ---. (Am. Jour. Pharm., 53, p. 475.)

(The use of Chaulmoogra Oil has been found very successful in true leprosy. Gives the mode of administration. States that better results have been obtained with gurjin oil - wood oil.)

King, J.

1881.

Gynocardia Odorata, R. Brown.

Am. Disp., 15 ed., supp., p. 189; Ibid., 16 ed. supp., p. 189; Ibid., 18 ed., v.2, p. 971.

Gives the botanical source, history, description, chemical composition, medical uses; and the dosage of the oil of the seed.

Moeller, J.

1884.

(Chaulmoogra Seed.)

Pharm. Jour., 44, p. 321. (Am. Jour. Pharm., 57, p. 145;
Proc. Am. Pharm. Assoc., 33, p. 172.)

(Gives a description of the seeds of Gynocardia odorata, R. Brown, Hydnocarpus anthelmintica, Pierre, and Hydnocarpus inebrians, Vahl.)

Diehl, C. L.

1885.

Lukrabo, or Ta-fung-Fage - Botanical Source.

Proc. Am. Pharm. Assoc., 33, p.173.

Discusses the seed known in China as Fukrabo, or Ta-fung-Faze, and Daiphong-Fu, believed to be allied with Chaulmoogra.

Heckel, E. & Schlagdenhauffen, F.

1885.

Sur les graines de Chaulmoogra (Gynocardia odorata Rob. Brown.)

Jour. de Pharm. et de Chim., 120, p. 359.

Gives the botanical source of "Chaulmoogra Oil", the constituents, the chemical and physical properties, modes of administration, and the products remaining after incineration.

Marcon, E.

1886.

De l'huile de chaulmoogra (Gynocardia odorata), de son utilite et de son emploi en therapeutique.

(Am. Jour. Pharm., 58, p. 463.)

(A thesis from the Medical school at Montpellier, France.)

The original was not available.

(Editor.)

1887.

The Cultivation of Drugs in Annam.

Chem. & Drugg., 31, p. 170.

Suggests that Gynocardia odorata might be profitably cultivated. Gives the uses of Chaulmoogra Oil in the East, the date of flowering of the tree, a description of the nut, and a description of the oil. Also states that the residual cake is unfit for cattle feeding.

Fenwick, E. H.

1887.

Chaulmoogra (Oil Oleum gynocardiae).

Lancet, 65, v. 2, p. 605. (Yrbk. Brit. Pharm. Conf., 25, p. 171.)

A liniment of chaulmoogra oil was found of value in gonorrhoeal rheumatism, its action being increased by the addition of lanolin.

Weynton, O.

1887.

Chaulmoogra - Gynocardia odorata
R. Brown.

Pharm. Jour., 47, p. 161.

Give the geographical habitat, medicinal use in the East, description of the seed, and the oil and suggests that it be given a fair trial by professional men as to its merits.

(Editor.)

1888.

(Chaulmoogra Oil.)

Pharm. Era, 2, p. 184.

In reply to an inquiry of P.R., gives the botanical source of chaulmoogra oil and where the drug can be obtained.

Hooper, D.

1888.

Drugs of British Sikkim.

Pharm. Jour., 48, p. 225. (Proc. Am. Pharm. Assoc., 37, p. 428.)

The pulp of the fruit of Gynocardia odorata R. Brown is used to poison fish. The seeds yield chaulmoogra oil. The bark is used in fever. It contains starch and tannin.

Paris Correspondent.

1889.

(Chaulmoogra Plants.)

Chem. & Drugg., 35, p. 820; Ibid., 37, p. 191. (Proc. Am. Pharm. Assoc., 38, p. 475.)

Chaulmoogra plants have been successfully introduced at Reunion. Chaulmoogra Oil is only remedy known that will alleviate leprosy.

King, G.

1890.

(Materials for a flora of the Malayan Peninsula. Order IX. Bixineal.)

Jour. Asiatic Soc. Bengal, 103, pt. 2, no. 2, p. 113. (U.S. Dept. Agric. Bull., 1057, p. 29.)

The original was not available.

Roux, L.

1890.

Huile de Chaulmoogra et Acide Gynocardique, Etude Chimique et Therapeutique; leur emploi dans le traitement de la Lepre, Poissy, 77 pp.

(S.G.L.I. s.2, v.14, p. 769.)

Gives the chemical and therapeutic properties of Chaulmoogra oil and gynocardic acid. Disagrees with the statement made by John Moss regarding the solubility of the oil.

(Editor,)

1891.

Treatment of Leprosy.

Chem. & Drugg., 39, p. 154. (Proc. Am. Pharm. Assoc., 40, p. 576.)

The United States Consul of Maracaibo, in Venezuela reports on the treatment of leprosy with chaulmoogra oil at the leper hospital in that port.

Moss, J.

1891.

Chaulmoogra Oil and Gynocardic Acid.

Chem. & Drugg., 38, p. 228.

Written in defense of his article^{LE} on the properties of chaulmoogra oil appearing in the Chemist and Druggist of December, 1878, as to the chairman's question said he had no manufacturing process in mind when he wrote the article^{LE}.

Moss, J.

1891.

Note on Chaulmoogra Oil and Gynocardic Acid.

Pharm. Jour., 50, pp. 720 and 726. (Yrbk. Brit. Pharm. Conf., 28, p. 224; Proc. Am. Pharm. Assoc., 39, p. 584.)

Written in defence of his "Preliminary Paper on Chaulmoogra Oil" which was contrary to many of the observations made by Roux. Gives the solubility of chaulmoogra oil, the isolation of gynocardic acid, and comments on commercial gynocardic acid.

Petit, M.

1892.

Preparation de l'acide gynocardique.

Jour. de Pharm. et de Chim., 135, p. 445.

Gives a method for the preparation of gynocardic acid from "chaulmoogra oil". Gives the physical and chemical properties of the acid.

Desprez, G.

1899.

Le Chaulmoogra. Huile de Chaulmoogra
Acide gynocardique.

Bull. des Sciences Pharmacologiques, 1, p. 405.

Calls attention to the differences between the seeds of Gynocardia odorata, R. Brown, and Gynocardia Prainii, Desprez, and the constituents of these seeds.

(Editor.)

1900.

Chaulmoogra Oil.

Chem. & Drugg., 57, p. 512.

States that Desprez wrote a very interesting paper on Chaulmoogra Oil.

Gives a comparison of the seed of Gynocardia odorata and those found in commerce.

Gives the chemical properties, therapeutic action, and posology of oil of chaulmoogra.

(Editor.)

1900.

Chaulmoogra and its Oil.

Chem. & Drugg., 56, p. 595.

Comments on the seeds as described by Desprez, Roxburgh and Hanburg.

Draws attention to a paper by Unna in which he proposes the soap of chaulmoogra oil for internal use rather than the oil itself.

(Editor.)

1900.

Oleum Gynocardiae.

Pharm. Jour., 65, p. 663.

Gives the botanical source, medicinal use, constituents, taste, color reaction with sulfuric acid and the dose of chaulmoogra oil.

(Editor.)

1900.

Oleum Gynocardiae.

Pharm. Jour., 65, p. 702.

Gives the physical and chemical properties of chaulmoogra oil.

Desprez, G.

1900.

Sur le Chaulmoogra.

Jour. d. Pharm. et d. Chem., s. 6, v. 11, p. 315. (Pharm. Jour., 64, p. 495; Pharm. Rev., 18, p. 332.)

Describes the seeds of Chaulmoogra odorata Roxburgh, and the seeds of Chaulmoogra met with in commerce.

Holmes, E. M.

1900.

(Chaulmoogra Seed.)

Dict. Econ. Prod. India, v. 4, p. 309. (Pharm. Jour., 64, p. 522.)

(Gives a description of the seeds of Gynocardia odorata, R. Brown, Hydnocarpus anthelminthica, Pierre and Hydnocarpus Wightiana, Blume.)

Unna, P. G.

1900.

Gynokardseife gegen Lepra.

Monats. für prakt. Derm., 30, p. 139. (Merk's Report, 8, p. 372; Yrbk. Brit. Pharm. Conf., 38, p. 182.)

Describes the method of preparation, the constituents, and the dose of chaulmoogra oil in pill form.

Unna, P. G.

1900.

(The Preparation of Chaulmoogra Soap.)

Monatsh. für prakt. Dermatology, 30, p. 140. (Pharm. Centrah., 41, p. 74; Oestern. Zeits. für Pharm., 53, p. 154; Pharm. Jour., 64, p. 615; Merk's Report, 9, p. 372; Proc. Am. Pharm. Assoc., 49, p. 721; Pharm. Jour., 66, p. 754.)

Gives a method for preparing a soap from gynocardia and chaulmoogra oils.

(Editor.)

1901.

Chaulmugra Seed.

Pharm. Jour., 66, p. 540.

States that the plant yielding Chaulmugra seed does not belong to the genus Gynocardia but to the genus Hydnocarpus.

(Editor.)

1901.

Oleum Gynocardiae.

Pharm. Jour., 67, p. 332.

Gives the botanical source of Gynocardia oil, therapeutic properties, forms in which it is administered, and dose. Also discusses chaulmoogra oil as to the physical and chemical properties, the tests and the constituents.

Holmes, E. M.

1901.

Chaulmoogra Seed.

Pharm. Jour., 66, p. 596. (Proc. Am. Pharm. Assoc., 49, p. 721.)

Suggests changing the species name from *Gynocardia odora*, R. Brown to *Gynocardia prainii*, Desprez, and also expresses the opinion that chaulmoogra seeds of commerce do not belong to the genus *Gynocardia* but probably to the genus *Hydnocarpus*.

Hirschsohn, E.

1903.

Beitrag zur Prüfung des Oleum Gynocardiæ.

Pharm. Centralhl., 44, p. 627. (Chem. & Drugg., 63, p. 550; Pharm. Jour., 71, p. 548; Proc. Am. Pharm. Assoc., 52, p. 709; Yrbk. Brit. Pharm. Conf., 41, p. 48.)

Gives the average yield of chaulmoogra oil from the seeds, the melting point, the acid number, the saponification number, and the iodine number of 7 samples of chaulmoogra oil.

(Editor.)

1904.

Chaulmoogra Oil.

Chem. & Drugg., 65, p. 126.

Gives the physical and chemical properties of chaulmoogra oil as determined by Schindelmeister and Power and Gornall's method, which are not in agreement.

(Editor.)

1904.

Gynocardia - Präparate.

Pharm. Centralhl., 45, p. 633. (Pharm. Jour., 73, p. 851; Yrbk. Brit. Pharm. Conf., 42, p. 242.)

Gives a method of preparing several preparations of chaulmoogra oil, as Spirit of Chaulmoogra, Ointment of Chaulmoogra, Liniment of Gynocardia, Plaster of Gynocardia and Pills of Gynocardic acid.

Power, F. B. & Gornell, F. H.

1904.

The Constituents of Chaulmoogra Seeds.

Chem. & Drugg., 64, p. 926.

Give an introduction, the constituents of chaulmoogra seeds, physical and chemical properties of the expressed oil and comments on the fixed oil obtained from Gynocardia odorata.

Power, F. B. & Gornall, F. H.

1904.

Constituents of Chaulmoogra Seed.

Drugg. Cir., 48, p. 170.

Gives the botanical source, review of present work, chemical properties and physical properties of oil of chaulmoogra.

Power, F. B. & Gornall, F. H.

1904.

"The Constituents of Chaulmoogra seeds."

Proc. Chem. Soc. Lond., 20, p. 135. (Pharm. Jour., 72, p. 831; Proc. Am. Pharm. Assoc., 52, p. 708.)

Give the botanical source, constituents, their chemical and physical properties of the seeds of Taraktogenos Kurzii King. State that the seeds of Gynocardia odorata, R. Brown are being investigated.

Power, F. B. & Gornall, F.H.

1904.

"The Constitution of Chaulmoogric acid,
Part I."

Proc. Chem. Soc. Lond., 20, p. 136. (Chem. & Drugg., 88, p. 52.)

Report on a number of derivatives of chaulmoogric acid.

Power, F. B. & Gornall, F. H. 1904.

"Gynocardin, a new cyanogenetic glucoside
Preliminary note."

Proc. Chem. Soc. Lond., 20, p. 137.

Report the isolation of a cyanogenetic glucoside, designated as gynocardin from the seeds of Gynocardia odorata, R. Brown.

Schindelmeiser, J. 1904.

"
Das Gynocardiaöl.

Ber. d. d. Pharm. Ges., 14, p. 164. (Apoth. Zeitg., 19, p. 307; Proc. Am. Pharm. Assoc., 52, p. 709.)

Discusses the use of gynocardia oil, its physical and chemical properties and the results of the experimental work done on the oil.)

Hooper, D. 1905.

Chaulmoogra Seeds.

Agricult. Ledger, No. 5, p. ---. (Chem. & Drugg., 68, p. 929.)

Describes in detail chaulmoogra seed, giving the habitat, history, chemical composition, and commercial data.

Power, F. B. & Lees, F. H. 1905.

Gynocardin, a New Cyanogenetic Glucoside.

Jour. Chem. Soc. Lond., 87, p. 349.

Report the isolation of a cyanogenetic glucoside, designated as gynocardin from gynocardin seeds. Give the analytical data, chemical and physical properties.

Power, F. B. & Barrow^{RR}eliff, M. 1905.

The Constituents of the Seeds of Hydnocarpus Nightiana and of Hydnocarpus anthelmintica. Isolation of a Homologue of Chaulmoogric Acid.

Jour. Chem. Soc. Lond., 87, I, p. 884.

Give an account of an investigation of the seeds of Hydnocarpus Nightiana, Blume and Hydnocarpus anthelmintica, Pierre, resulting in the isolation of a homologue of Chaulmoogric acid.

Barrow^{RR}eliff, M. & Power, F.B. 1907.

The Constitution of Chaulmoogric and Hydnocarpic Acids.

Jour. Chem. Soc. Lond, 91, p. 557. (Pharm. Jour., 78, p. 328.)

Report on the study of chaulmoogric acid, especially with regard to the products furnished by its oxidation with potassium permanganate. It embodies the results obtained, and the conclusion which may be drawn relating the constitution of this acid.

(Editor.) 1908.

(Chaulmoogra Oil.)

Chem. & Drugg., 72, p. 328.

Gives a method of preparing an emulsion of chaulmoogra oil.

Bixacees et Pittosporacees asiatigues.

Bull. Soc. Bot. France, 55, p. 521. (U. S. Dept. Agric. Bull., No. 1057, p. 29.)

Describes the plants and their seeds and gives of the geographical habitat of Flacourtia Balansae, Gagnep, Flacourtia Thorelii Gagnep, Hydnocarpus anthelminthica Pierre, Hydnocarpus saigonensis Pierre, Scolopia buxifolia Gagnep, Taractogenos microcarpa Pierre, Taractogenos serrata Pierre, Taractogenos subintegra Pierre, and Xylosma macrocarpum Pierre.

Moore, C. W. & Tutin, F.

1910.

Note on Gynocardin and Gynocardase.

Jour. Chem. Soc. Lond., 87, ii, p. 1285.

Gives some further information regarding the unknown hydrolytic products of gynocardin and the enzymes causing the hydrolysis.

Correspondent "Chaulmoogra"

1912.

Chaulmoogra Oil.

Chem. & Drugg., 81, p. 64.

Agrees with "Pharmaceuticus" in that the oil with the thick deposit is the genuine article. Gives the botanical source of both the false and the true seed. Offers to send both the true and false chaulmoogra seed to a London wholesale druggist for examination.

Correspondent "Pharmaceuticus"

1912.

Chaulmoogra Oil.

Chem. & Drugg., 81, p. 64.

Inquires as to the difference between the old variety of chaulmoogra oil, which was a solid, and the new variety which is a liquid.

(Editor.)

1912.

(Chaulmoogra Oil.)

Chem. & Drugg., 81, p. 63.

The specimens of the seeds of chaulmoogra submitted by correspondent "Chaulmoogra", to Dr. F. B. Power, the latter who informed him the seeds were wrongly designated, gives the physical and chemical properties of the oil obtained from the 3 different specimens of seeds.

(Editor.)

1912.

(Chaulmoogra Oil.)

Chem. & Drugg., 81, p. 64.

In reply to correspondent "Pharmaceuticus's" letter, suggests that he asks the supplier of his oil to explain the difference. Also states that chaulmoogra oil as prepared by Power and Gornell is a softsolid.

(Editor.)

1912.

(Chaulmoogra Oil.)

Chem. & Drugg., 81, p. 332.

Discusses a mistake made by D. O'Connor in "A Treatise on Commercial Pharmacy" concerning the properties of Chaulmoogra or gynocardia oil.

(Editor.)

1912.

Chaulmoogra Oil.

Chem. & Drugg., 81, p. 835.

Gives the geographical habitat of Taraktogenos Kurzii and Hydnocarpus Wightiana. Gives several addresses for persons wishing to obtain further information on the collection of the seed.

Wolff, H. H. & Koldewijin, H. B. 1912.

(Over het vet ran Hydnocarpus alpina.)

Pharm. Weekbl., 49, p. 1049. (. U.S.Dept. Agric. Bull., 1057, p. 29.)

The original was not available.

(Editor.) 1913.

True and False Chaulmoogra -seed Oils.

Chem. & Drugg., 83, p. 619. (Yrbk. Am. Pharm. Assoc., 2, p. 231.)

Gives the physical properties and botanical sources of both the true and false chaulmoogra oil, also gives F.B.Power's observation concerning true chaulmoogra oil.

Evans, Sons & Co. 1913.

Chaulmoogra Oil.

Analyt. Notes, 8, p. 22. (Yrbk. Brit. Pharm. Conf., 51, p. 77.)

State that there has been extensive substitution of the allied oil from Hydnocarpus Nightiana Blume, for the true oil derived from Taraktogenos Kurzii King. A table is given showing some of the physical and chemical properties of the oils of these 2 oils.

Goulding, E. & Akers, N.C. 1913.

"Note on the fat of the seeds of "Oncoba echinata"; occurrence of Chaulmoogric acid."

Proc. Chem. Soc. Lond., 29, p. 197.

Report on the examination of the fixed oil
obtained from the seed of Oncoba echinata, Oliver.

Dyer, I.

1914.

The Treatment of Leprosy.

Am. Jour. Trop. Dis. & Prev. Med., 2, p. 295. (Jour. Am.
Med. Assoc., 63, p. 2258; Yrbk. Am. Pharm. Assoc., 3,
p. 207.)

Discusses the method of preparing chaulmoogra
oil for injection and the dose. The use has proven very
beneficial in leprosy.

(Editor.)

1914.

Chaulmoogra Oil.

Chem. & Drugg., 84, p. 99.

Oil of Chaulmoogra has been used in leprosy
with beneficial effect. Warns that nearly all the so-
called "Chaulmoogra Oil" upon the European market is
spurious or adulterated.

(Editor.)

1914.

(Chaulmoogra Oil.)

Chem. & Drugg., 84, p. 960.

A communication on the cultivation of
Chaulmoogra in Assam as well as the production of the
oil in Ceylon will be read before the International
Congress of Tropical Agriculture.

Francis, E.E.

1914.

Chaulmoogra Oil.

Chem. & Drugg., 84, p. 449.

Mentions the scarcity of true chaulmoogra oil and criticises a report by E. J. Parry.

Francis, E. E.

1914.

L'origine de la veritable huile de Chaulmoogra.

Jour. d. Pharm. et d. Chem., s. 7, v. 9, p. 388. (Yrbk. Am. Pharm. Assoc., 3, p. 206.)

Gives the botanical source of chaulmoogra oil, geographical habitat and method of distinguishing oil of Chaulmoogra from oil of Hydnocarpus.

Francis, E. E.

1914.

What is Chaulmoogra Oil?

Lancet, 92, v. 1, p. 718. (Yrbk. Brit. Pharm. Conf., 51, p. 77; Drugg. Circ., 58, p. 401.)

Reports that the 1912 crop of Chaulmoogra seed was a failure and warns the pharmacist against the purchase of substitutes.

Weiser, V. G.

1914.

Leprosy. Its Treatment in the Phillippine Islands by the Hypodermic Use of Chaulmoogra Oil Mixture.

Am. Jour. Trop. Dis. & Prev. Med., 2, p. 300. (Jour. Am. Med. Assoc., 19, p. 2,258; Pharm. Jour., 94, p. 160.)

Gives a method for preparing a mixture containing chaulmoogra oil for hypodermic use, the dosage, and the results obtained in the treatment of leprosy.

Humphrey, J.

1914.

Chaulmoogra Oil.

Pharm. Jour. ,92, p. 393.

Gives the botanical source of Chaulmoogra Oil and warns against the sale of Hydnocarpus Wightiana Blume as "chaulmoogra Oil".

Chattopadhyay, P. C.

1915.

The Examination of Chaulmoogra Oil.

Am. Jour. Pharm., 87, p. 473. (Yrbk. Brit. Pharm. Conf., 53, p. 114; Yrbk. Am. Pharm. Assoc., 4, p. 299.)

Gives the botanical source of chaulmoogra oil, previous workers, analysis of the oil, examination of the oil of chaulmoogra, examination of fatty acids and the salts of gynocardic acid.

Pabisch, H.

1915.

Chaulmoogra Seeds, True and False.

Pharm. Post, 46, p. 889. (Yrbk. Brit. Pharm. Conf., 52, p. 220.)

Gives the percentage of the oil obtained from the seeds and the physical and chemical properties of the oil obtained from 7 different botanical sources yielding oil similar to chaulmoogra oil.

Power, F. B.

1915.

The Botanical Source, Physical Character,
and Chemical Constituents of Chaulmoogra
Oil.

Am. Jour. Pharm., 87, p. 493. (Yrbk. Brit. Pharm. Conf., 52, p. 115; Yrbk. Am. Pharm. Assoc., 4, p. 299; Chem. & Drugg., 87, p. 734.)

The statements of Chattopodhyay as to the source, characters and chemical constituents of true chaulmoogra oil are refuted, as erroneous and misleading.

Rakuzin, M. A. & Flier, G. D.

1915.

(Chaulmoogra and Gynocardia Oils and their Fatty Acids.)

Jour. Russ. Phys.- Chem. Soc., 47, p. 1848. (Drugg. Cric., 60, p. 750; Yrbk. Am. Pharm. Assoc., 5, p. 188; Yrbk. Brit. Pharm. Conf., 52, p. 114; Chem. Abstr., Am. Chem. Soc., 10, p. 1521.)

(Discuss chaulmoogra oil and state that only optically active chaulmoogra oil and Chaulmoogra acid are of medicinal value.)

Brill, H. C.

1916.

Hydnocarpus Venenata Gaertner: False Chaulmoogra.

Philipp. Jour. Sci., 11, p. 75. (Che., Abs., 10, p. 2783; Yrbk. Am. Pharm. Assoc., 5, p. 188.)

Discusses the obscurity enveloping the source of chaulmoogra oil of commerce. Tabulates the constituents of various chaulmoogra oils.

(Editor.)

1916.

The Intravenous injection of Chaulmoogra Oil.

Chem. & Drugg., 88, p. 457:

The intravenous injection of Chaulmoogra oil has given promising results. Gives method of preparing an emulsion of chaulmoogra oil. The laws of the chemists have so many exceptions that the only proof of a drug is the administration.

Heiser, V. G. 1916.

Recent Developments In the Treatment of
Leprosy.

N. Y. Med. Jour., 103, p. 289.

Describes the treatment of leprosy with chaulmoogra oil.

Rogers, L. 1916.

Preliminary Note on the Use of Gynocardates
Orally and Subcutaneously In Leprosy.

Lancet, 94, I, p. 288.

Advises the use of gynocardic acid or chaulmoogric acid in place of chaulmoogra oil.

Bercovitz, N. 1917.

The Hypodermic Use of Chaulmoogra Oil in
Leprosy.

Jour. Am. Med. Assoc., 68, p. 1960. (Yrbk. Brit. Pharm. Conf., 55, p. 206.)

Gives a report on the treatment of leprosy by Heiser's method of hypodermic injections of chaulmoogra oil in 14 cases in a leper settlement outside the Hoi How City wall.

Brill, H.C. & Williams, R. R. 1917.

The Use of Chaulmoogra Oil as a Specific
~~for~~ Leprosy.
for

Philipp. Jour. Science, 12, p. 207. (Yrbk. Brit. Pharm. Conf., 54, p. 249.)

Comments on the crude and the refined oil of chaulmoogra. Gives the results of Roger's experiments with the free acids and the sodium salts of the acids, the constants of 10 samples of chaulmoogra oil, physical and chemical examination of chaulmoogra oil.

Adler, R. W.

1917.

(Chaulmoogra Oil.)

Am. Jour. Pharm., 89, p. 326.

Submitted a thesis on Chaulmoogra Oil at the Philadelphia College of Pharmacy.

Power, F. B.

1917.

The Aims and Developments of Phytochemical Research.

Am. Jour. Pharm., 89, p. 99.

Gives the source, uses, chemical properties, physical properties, constituents, and chemical examination of species of Hydnocarpus seed. Gives the chemical and physical properties of Gynocardic and chaulmoogra oils. This information proved useful in determining the identity of the poison found in some margarines.

Hernandez, J.G.

1917.

(Chaulmoogra, Oil.(Nonofficial).)

Gaceta Medicn de Caracas, Venezuela, 25, p. 127. (Jour. Am. Med. Assoc., 71, p. 1177.)

(Reports experimental data relative to the value of chaulmoogra oil in the treatment of Tuberculosis.)

Rogers, L.

1918.

Two Years Experience of Sodium Gynocardate and Chaulmoograte Subcutaneously and Intravenously In the Treatment of Leprosy.

Ind. Jour. Med. Research, 5, p. 277. (Lancet, 96, v. 1, p. 662; Yrbk. Brit. Pharm. Conf., 55, p. 250.)

The injection of the sodium salts of the fatty acids of gynocardia and chaulmoogra oil has given promising results.

Cofman, V.

1919.

Acid Value of Chaulmoogra Oil.

Pharm. Jour., 103, p. 269. (Yrbk. Brit. Pharm. Conf., 57, p. 79; Yrbk. Am. Pharm. Assoc., 8, p. 460.)

In response to a letter by Mr. F. F. Shelley showing that the limits set by the British Pharmacopoeia are unsatisfactory the acid value of oil of chaulmoogra prepared by expression and extraction are given and commented upon.

Connal, A.

1919.

Some Notes on the Treatment of Leprosy.

Jour. Trop. Med. & Hyg., 22, p. 37.

Discusses 4 methods of treatment that have been given on extended trial at the Yaba Leper Asylum, Lagos, Nigeria. Of these methods 3 were with chaulmoogra oil or its derivatives and one with Nastin.

Eberle, E. G.

1919.

The Acidity of Chaulmoogra Oil.

Jour. Am. Pharm. Assoc., 8, p. 987.

Gives a table showing the acid value of chaulmoogra oil as determined by 5 investigators. Discusses some of the work done previously on chaulmoogra oil.

Hollman, H. T. & Dean, A. L.

1919.

Chaulmoogra Oil in the Treatment of Leprosy.

Jour. Cutaneous Diseases, 37, p. 367. (Yrbk. Brit. Pharm. Conf., 56, p. 157; Drugg. Circ., 63, p. 504; Yrbk. Am. Pharm. Assoc., 8, p. 460.)

The treatment of leprosy with chaulmoogra oil and its derivatives has proven very successful.

Shelley, F. F.

1919.

Chaulmoogra Oil.

Pharm. Jour., 103, p. 195.

Points out the wide divergence in the acidity of commercial samples of chaulmoogra oil, and shows that the limits set by the British Pharmacopoeia are unsatisfactory. Discusses as to what might be considered the acid limits within which a genuine commercial sample should fall.

Dean, A. L. & Wrenshall, R.

1920.

Fractionation of Chaulmoogra Oil.

Jour. Am. Chem. Soc., 42, II, p. 2627. (Am. Jour. Pharm., 93, p. 360; Pharm. Era, 54, p. 251; Jour. Am. Pharm. Assoc., 10, p. 478; Yrbk. Am. Pharm. Assoc., 9, p. 543; Pharm. Jour., 107, p. 70.)

Discusses the results of an experimental study of chaulmoogra oil. The esters of the isolated fatty acids proved beneficial in leprosy.

Eberle, E. G.

1920.

Chaulmoogra Oil to Be Used By Public
Health Service Against Tuberculosis.

Jour. Am. Pharm. Assoc., 9, p. 1118.

Refined chaulmoogra oil is soon to be used in the fight against tuberculosis.

(Editor.)

1920.

The Chemotherapy of Chaulmoogra Oil.

Jour. Am. Med. Assoc., 74, p. 1578. (Yrbk. Am. Pharm. Assoc., 9, p. 544.)

Discusses the therapeutic use of chaulmoogra oil from the chemical viewpoint.

(Editor.)

1920.

Refinements In the Use of Chaulmoogra Oil in the Treatment of Leprosy.

Jour. Am. Med. Assoc., 75, p. 1071. (Yrbk. Am. Pharm. Assoc., 9, p. 544.)

Discusses chaulmoogra oil and the fractions of the fatty acids of chaulmoogra oil in the treatment of leprosy.

(Editor.)

1920.

Source of Chaulmoogra Oil, and Its First Employment in Leprosy.

Jour. Am. Med. Assoc., 75, p. 1361. (Yrbk. Am. Pharm. Assoc., 9, p. 544.)

Gives the botanical source of chaulmoogra oil, the physical properties, when and where it was first employed in the treatment of leprosy and the pronunciation of the word.

Gilmour, J. P.

1920.

Chaulmoogra Oil in Leprosy.

Pharm. Jour., 105, p. 178.

Reports that the treatment of leprosy at the Hawaiian Leper Colony with the ethyl esters of chaulmoogric acid has been very successful.

Henry, T. A.

1920.

Chaulmoogra Oil In Leprosy.

Jour. Trop. Med. & Hyg., 23, p. 249. (Jour. Soc. Chem. Ind., 40, p. 13; Yrbk. Am. Pharm. Assoc., 10, p. 450.)

Describes some recent developments in the use of chaulmoogra oil in the treatment of leprosy.

McDonald, J. T.

1920.

Treatment of Leprosy With the Dean
Derivatives of Chaulmoogra Oil.

Jour. Am. Med. Assoc., v. 75, p. 1483.

Describes the Leprosy Hospital in Hawaii. Describes Chaulmoogra oil, its botanical source, the chemical properties, the constituents, and the mode of administration. Describes leprosy and the effect of chaulmoogra oil on leprosy.

McDonald, J. T. & Dean, A. L.

1920.

The Treatment of Leprosy.

U.S. Public Health Report, v. 35, no. 34, p. 1959. (Drugg. Circ., 64, p. 426; Yrbk. Am. Pharm. Assoc., 9, p. 545.)

Discuss the methods of treatment of leprosy that have been found useful.

Ramaley, F.

1920.

(Chaulmoogra Oil.)

Jour. Am. Med. Assoc., 75, p. 1361.

Asks the editor to please give some information as to the origin, source and preparation of chaulmoogra oil. When and where it was employed in the treatment of leprosy, and the derivation and pronunciation of the word.

Walker, E. L. & Sweeney, M. A.

1920.

The Chemotherapeutics of the Chaulmoogric Acid Series and Other Fatty Acids In Leprosy and Tuberculosis.

Jour. Infect. Dis., 26, p. 234. (Chem. Abs., 14, p. 1580.)

The bactericidal activity of the chaulmoogric acids against all members of the acid-fast group of bacilli, together with the clinical results obtained from their use in leprosy, furnish theoretical grounds for the application of the chaulmoogrates in the therapy of tuberculosis.

(Editor.)

1921.

Chaulmoogra Oil in Leprosy.

Chem. & Drugg., 94, p. 8.

Gives a summary of the work done on Chaulmoogra Oil.

(Editor.)

1921.

Moogrol.

Chem. & Drugg., 95, p. 202.

Moogrol, is a mixture of esters of acids of the chaulmoogric series put out by Burroughs Wellcome & Co. Gives the use and the dose of Moogrol.

(Editor.)

1921.

Progress in the Treatment of Leprosy.

Jour. Am. Med. Assoc., 77, p. 292. (Yrbk. Am. Pharm. Assoc., 10, p. 449.)

Discusses the treatment of leprosy, both by intramuscular injections and oral administration, of chaulmoogra oil and its derivatives.

(Editor.)

1921.

Hunting a Leprosy Cure.

Literary Digest, 70, p. 23.

Gives a brief history of Chaulmoogra Oil. Describes an expedition to obtain the seed bearing chaulmoogra oil at their original source.

(Editor.)

1921.

Philippines to Grow Chaulmoogra.

Pharm. Era., 54, p. 129. (Yrbk. Am. Pharm. Assoc., 10, p. 224.)

Discusses the attempt to grow trees producing chaulmoogra oil in the Philippine Islands. Gives the use of chaulmoogra oil, physical properties and the empirical formula of chaulmoogric and hydnocarpic acids.

Kolmer, J. A., Luther, L. C. & Jager, R.

1921.

The Influence of Chaulmoogra Oil on the Tubercle Bacillus.

Jour. of Infect. Dis., 28, p. 265.

Report results obtained in the use of chaulmoogria oil on tubercle bacilli.

Lifschutz, V. I.

1921.

Über eine Farb und Spektralreaktion
auf Gynocardia Öl.

Chem. Zeit., 45, p.1264. (U. S. Dispens., 22 ed., p. 737.)

Describes several color reactions for chaulmoogra oil.

Lukens, R. M.

1921.

(Chaulmoogra Oil Now Used In Treating
Laryngitis.)

Sci. News Letter, --, p. --. (Am. Jour. Pharm., 94, p. 209.)

(Experimental work has been done in the use of chaulmoogra oil for tubercular laryngitis. The oil does not kill the tubercle bacilli but shows marked aid in healing the diseased lesions.)

Mc Donald, J. T.

1921.

Treatment of Leprosy With the Dean
Derivatives of Chaulmoogra Oil.

Jour. Am. Med. Assoc., 76, II, p. 1121.

During the past month 64 patients have been released from the Kalibi (Leprosy) Hospital on parole, apparently cured.

Mc Donald, J. T. & Dean, A. L.

1921.

The Constituents of Chaulmoogra Oil
Effective in Leprosy.

Jour. Am. Med. Assoc., 76, v. 2, p. 1470.

Gives a summary of the results observed during a recent period of 14 months on leprosy patients treated with chaulmoogra oil or its derivatives.

Rock, J. F.

1921.

(The Introduction of Chaulmoogra Trees
in the United States and Hawaii.)

U.S. Dept. Agric. Bull., No. ---, p. ---. (Jour. Am. Pharm.
Assoc., 10, p. 631; Weekly News Letter, --, p. ---.)

(Discusses the introduction of chaulmoogra
trees in United States and Hawaii.)

Rogers, L.

1921.

Chaulmoogra Oil In Leprosy and Tuberculosis.

Lancet, 99, I, p. 1178.

Discusses the successful treatment of leprosy
by injections of soluble preparations of the fatty
acids of chaulmoogra and other oils and its bearing
on the tuberculosis problem.

Warren, L. E.

1921.

The Chemistry and Therapeutic Properties of
Chaulmoogra Oil.

Jour. Am. Pharm. Assoc., 10, p. 510. (Yrbk. Am. Pharm.
Assoc., 10, p. 450.)

Gives the chemistry and the therapeutic prop-
erties of chaulmoogra oil. Graphic formulas are given
fro the acids of the chaulmoogra series and tables of
constants of some of the acids, also a table of comparison
of chaulmoogra oil and related oils, such as gynocardia
oil.

(Editor.)

1922.

Chaulmoogra Oil in Leprosy.

Am. Jour. Pharm., 94, p. 63.

The ethyl esters of chaulmoogra oil have been found to be more beneficial than the oil itself. Only time can tell how successful the oil is in the treatment and the cure of leprosy.

(Editor.)

1922.

Chaumlestrol.

Jour. Am. Med. Assoc., 78, I, p. 111.

Tells what chaulmestrol is chemically, its action and uses, the dosage, where it can be obtained, method of manufacture and its physical properties.

(Editor.)

1922.

Chaumloogra Derivatives.

Jour. Am. Med. Assoc., 78, I, p. 111.

Gives the botanical source of chaulmoogra oil, the constituents, modes of administration, use and the various derivatives used in medicine.

(Editor.)

1922.

Chaulmoogra Oil.

Jour. Am. Med. Assoc., 78, I, p. 111.

Gives the botanical source, the physical properties, the action and uses and dosage of chaulmoogra oil.

Eldred, F. R.

1922.

(The Treatment of Leprosy With the Ethyl Esters and Sodium Salts of the Chaulmoogra Oil.)

Am. Jour. Pharm., 94, p. 660.

The treatment of leprosy with the ethyl esters and sodium salts of the unsaturated acids of chaulmoogra oil has brought many "brilliant" results.

Lukena, R. M.

1922.

Chaulmoogra Oil In the Treatment of
Tuberculous Laryngitis.

Jour. Am. Med. Assoc., 78, p. 274. (Yrbk. Am. Pharm. Assoc., 11, p. 217.)

A report on the results of 60 cases of tuberculous Laryngitis, treated over a period of 8 months with chaulmoogra oil.

Morrow, H., Walker, E.L. & Miller, H. E.

1922.

Experience With Chaulmoogra Oil
Derivatives in Treatment of Leprosy.

Jour. Am. Med. Assoc., 79, p. 434. (Yrbk. Am. Pharm. Assoc., 11, p. 146.)

A report on the treatment of 21 cases of leprosy with the derivatives of chaulmoogra oil. The remedy is of great value but injections must be kept up for at least 3 years in mild cases of leprosy and much longer in the advanced ones.

Ohara, M.

1922.

Pharmacological Studies of a Few
Derivatives of Chaulmoogra Oil.

Jap. Med. World, 2, p. 1. (Jour. Am. Med. Assoc., 78, p. 1667; Yrbk. Brit. Pharm. Conf., 59, p. 245.)

Discusses the effects of the derivatives of chaulmoogra oil on various laboratory animals.

Peers, R. A. & Shipman, S. J.

1922.

The Chaulmoogra Oil Treatment of Tuberculous
Laryngitis.

Jour. Am. Med. Assoc., 79, p. 461. (Yrbk. Am. Pharm.
Assoc., 11, p. 146.)

Describes the treatment and the results of
7 patients having severe laryngeal, and treated with
chaulmoogra oil.

Rock, J. F.

1922.

Hunting the Chaulmoogra Tree.

National Geograph. Mag, 41, p. 243.

Describes a journey into the jungles of
Burmah, Asia in search of the true chaulmoogra tree.
Illustrated.

Rock. J. F.

1922.

The Chaulmoogra Tree and Some Related
Species: A Survey Conducted
In Siam, Burma, Assam, and Bengal.

U. S. Dept. Agric. Bull., 1057, pp. 29. (Chem. & Drugg.,
97, p. 78; Pharm. Jour., 111, p. 412.)

Contains an introduction, history of chaulmoogra
oil, chemistry of chaulmoogra, hydnocarpus, and gynocardia
oils, some recent information on the chaulmoogra, and
suggestions are offered regarding the requirements
for establishing plantations of Taraktogenos kurzii King.

(_____, __.)

1922.

(Chaulmoogra Oil.)

Olpp. Klin. Wchnschr., 47, p.---. (Pharm. Zeitg., 68,
p. 146; Yrbk. Am. Pharm. Assoc., 12, p. 155.)

(Gives the botanical source of chaulmoogra oil,
the active constituents and their derivatives, and
their use in the treatment of leprosy.)

Cameron, C.

1923.

(Chaulmoogra Oil in Leprosy.)

Two Years in the South Seas. (Pharm. Jour., 111, p. 448.)

(States that the treatment of leprosy at the Leper Colony on the island of Molokai with Chaulmoogra oil has been very successful.)

Eberle, E. G.

1923.

Oleum Chaulmoograe.

Jour. Am. Pharm. Assoc., 12, p. 66.

Gives the botanical source, the physical and chemical properties, test for free acid and a method of preservation of chaulmoogra oil.

(Editor.)

1923.

Chaulmoogra Oil.

Chem. & Drugg., 98, p. 907.

Gives the probable botanical sources of chaulmoogra oil also of trees yielding an oil possessing similar properties.

(Editor.)

1923.

(Combing the World For Leper Cures.)

Daily Science News Bulletin, --, p.--. (Literary Digest, 79, p. 27.)

(Discusses attempts to increase the supply of chaulmoogra oil.)

Harper, P.

1923.

Progress Report on the Treatment of
Leprosy By the Intravenous
Injection of Chaulmoogra Oil.

Jour. Trop. Med. & Hyg., 25, p. 2.

Discusses the treatment of leprosy by the intravenous injection of chaulmoogra oil at the Makogai Asylum in Fiji.

Lissner, H. H.

1923.

Chaulmoogra Oil Esters In Treatment of
Pulmonary Tuberculosis.

Am. Rev. of Tuberculosis, 7, p. 257. (Jour. Am. Med. Assoc., 81, 1, p. 778; Yrbk. Brit. Pharm. Conf., 60, p. 245.)

Discusses the use of chaulmoogra oil esters in the treatment of pulmonary tuberculosis and its complications.

Perkins, G. A. & Cruz, A. O.

1923.

A Comparative Analytical Study of Various
Oils in the Chaulmoogra Group.

Phillipp. Jour. Science, 23, p. 543. (Yrbk. Brit. Pharm. Conf., 60, p. 271; Yrbk. Am. Pharm. Assoc., 13, p. 245.)

Authenticated seeds of 10 species related to chaulmoogra and 15 samples of commercial oils were examined for the purposes of establishing criterion for the recognition of each oil and for the detection of adulteration.

Read, B. E.

1923.

Fatty Oils of the Chaulmoogric Acid Series,
the Comparative Merit of Chaulmoogra
Oil, British Pharmacopoeia, and Hydro-
carypux Oil, Japanese Pharmacopoeia.

Pharm. Jour., 111, p. 412. (Yrbk. Brit. Pharm. Conf.,

61, p. 310; Yrbk. Am. Pharm. Assoc., 12, p. 345.)

Discusses the adaption of the oil of Hydnocarpus anthelmintica Pierre in the British Pharmacopoeia as a source of chaulmoogra oil.

Schöbl, O.

1923.

Chemotherapeutic Experiments With
Chaulmoogra and Allied Preparations.

Philipp. Jour. Science, 23, p. 533. (Yrbk. Am. Pharm. Assoc., 12, p. 155; Ibid., 13, p. 142.)

Discusses the growth inhibiting activity of chaulmoogra oil and its derivatives towards Bacillus Tuberculosis in vitro.

Wood, H. C.

1923.

Chaulmoogra Oil.

Jour. Am. Pharm. Assoc., 12, p. 1054.

Gives the history of chaulmoogra oil and discusses the curative properties.

(Editor.)

1924.

Brazilian Chaulmoogra Cultivation.

Chem. & Drugg., 100, p. 753.

An attempt is being made by the Brazilian National Society of Agriculture to cultivate Torakto-
genus Kurzii, in that country.

(Editor.)

1924.

(Chaulmoogra Oil.)

Colonial Offic. Report, --, p.----. (Chem. & Drugg., 104, p. 51.)

(The treatment of inmates of the Barbados Leper Asylum with ethyl esters of chaulmoogra oil has been continued with very hopeful results in a number of less advanced cases.)

(Editor.)

1924.

(Treatment of Leprosy by Chaulmoogra Oil.)

Morning Post, --, p.---. (Pharm. Jour., 113, p. 283.)

(States that the United States Department of Agriculture has supplied Central and South American countries with large number of plants yielding chaulmoogra oil. The treatment of leprosy with chaulmoogra oil has been very successful.)

Perkins, G. A.

1924.

Chaulmoogra Ethyl, Propyl, Butyl, and Amyl Esters.

Phillipp. Jour. Science, 24, p. 621. (Yrbk. Am. Pharm. Assoc., 13, p. 245; Pharm. Jour., 113, p. 475.)

Discusses the experimental preparation of the above esters of chaulmoogra acid and their present methods of manufacture.

Read, B. C.

1924.

The Influence of Chaulmoogra Oil on Calcium Metabolism.

Jour. Biol. Chem., 62, p. 515. (Yrbk. Am. Pharm. Assoc., 13, p. 1914.)

Reports the effect observed of chaulmoogra oil or ethyl hydnocarpate administered in various ways to dogs and rabbits on the calcium metabolism.

Read, B. E.

1924.

The Influence of Hydnocarpates Upon
Urinary Nitrogen Partition in
the Dog.

Jour. Biol. Chem., 62, p. 541. (Yrbk. Am. Pharm. Assoc., 13, p. 195.)

Discusses the influence of chaulmoogra oil or the ethyl ester upon the urinary nitrogen partition in the dog.

Read, B. E.

1924.

The Toxic Action of Chaulmoogra Oil.

Jour. Pharmacol. & Exper. Therap., 24, p. 221. (Chem. & Drugg., 102, p. 462; Yrbk. Brit. Pharm. Conf., 62, p. 226; Chem. Abstra., 19, p. 356; Yrbk. Am. Pharm. Assoc., 13, p. 195.)

The toxic action of chaulmoogra oil seems to be due to the esters of hydnocarpic acid, as determined in a series of experiments on rabbits.

Schöbl, O. & Kusama, H.

1924.

Chemotherapeutic Experiments with
Chaulmoogra And Allied Preparations.

Philipp. Jour. Science, 24, p. 443. (Yrbk. Brit. Pharm. Conf., 62, p. 310; Yrbk. Am. Pharm. Assoc., 13, p. 142.)

Discuss the effect of the vapors of oils containing the acids of the chaulmoogric series on the tubercle bacillus.

"
Zornig, H.

1924.

Die Vergleichende Pflanzenanatomie im
Dienste der Untersuchung von
Arzneidrogen auf Verfälschungen.

Archiv. der Pharmazie u. Berichte, 262, p. 155.

Tells how to distinguish the true chaulmoogra
seed from the false.

(An Indian Pharmacognosist.)

1925.

Chaulmoogra Oil.

Chem. & Drugg., 103, p. 226.

Gives a brief history of chaulmoogra oil,
the difference between false and genuine chaulmoogra
seed, and the botanical source of the oil used in Japan
and the United States.

Andre, E.

1925.

Contribution a l'etude des huiles du
groupe chaulmoogrique.

Comptes Rendus, 181, p. 1089.

Gives a brief history of chaulmoogra oil, the
constituents, their physical and chemical properties
and the botanical source.

Eberle, E. G.

1925.

Chaulmoogra Oil and Ethyl Chaulmoograte.

Jour. Am. Pharm. Assoc., 14, p. 988.

Chaulmoogra Oil and ethyl chaulmoograte are
used in treatment of leprosy. The product in the form
of esters is now only available in this country under
the trade-market name "Chaulmestrol."

(Editor.)

1925.

Oil Used in Curing of Four Leper Cases.

Wis. State Jour., March, 22, 1925, p. 4.

The success in the curing of many cases of leprosy with chaulmoogra oil has resulted in great demand for the seed. Describes an expedition into the Indian Jungles to obtain the seeds so a plantation may be started in Hawaii.

Gathercoal, E. N.

1925.

Iodized Ethyl Esters of Chaulmoogra Oil.

Jour. Am. Pharm. Assoc., 14, p. 348.

The iodized ethyl esters from chaulmoogra Oil in the treatment of leprosy are especially successful in young persons and where the disease is of less than a year's standing.

Greembaum, F.

1925.

(Saponification of Chaulmoogra Oil.)

Oesterr. Chem. Ztg., 28, p. 109. (Chem. Abstr., 20, p. 91; Yrbk. Brit. Pharm. Conf., 63, p. 275; Yrbk. Am. Pharm. Assoc., 14, p. 235.)

(Describes the procedure for making a soap from Chaulmoogra oil using an aqueous sodium hydroxide solution and an alcoholic sodium hydroxide solution.)

Hashinata, T.

1925.

A Chemical Investigation of Chaulmoogra Oil.

Jour. Am. Chem. Soc., 47, 9, p. 2325. (Chem. & Drugg., 103, p. 430; Yrbk. Brit. Pharm. Conf., 62, p. 115; Yrbk. Am. Pharm. Conf., 14, p. 235.)

Several new substances in chaulmoogra oil were isolated. Discusses all the known constituents of chaulmoogra oil.)

^{RR}
Ken, I.

1925.

The Chaulmoogra Treatment of Leprosy.

Lancet, 103, v. 2, p. 373. (Che. & Drugg., 103, p. 433; Pharm. Jour., 115, p. 550.)

Reports on the more recent preparations of chaulmoogra and hydnocarpus oils in the treatment of leprosy.

Schriner, R. L. & Adams, R.

1925.

The Structure of Chaulmoogric and Hydnocarpic Acids. I.

Jour. Am. Chem. Soc., 4, II, p. 2727.

Discuss the physical and chemical properties and reactions of chaulmoogric and hydnocarpic acids, particularly those which have a relation to their structure.

Wade, H. W.

1925.

Comparison of Creosoted and Non-creosoted Chaulmoogra Ethyl Ester Preparations.

Philippine Jour. of Science, 26, p. 21. (Chem. & Drugg., 102, p. 890.)

Contains an introduction, general analysis, comparison of the preparations used, summary and a conclusion.

(Editor.)

1926.

Indian Chaulmoogra Oil.

Chem. & Drugg., 104, p. 154.

The oil obtained from the seeds of Hydnocarpus
Wightiana is as efficacious as the ethyl ester of
Chaulmoogric acid and much cheaper.

Geldine, A. J. & Greenbaum, F. R.

1926.

Chaulmoogra Oil and Its Saponification.

Am. Jour. Pharm., 98, p. 411.

Gives the botanical source of chaulmoogra oil,
physical properties, chemical properties, uses,
saponification number and methods of saponifying the oil.

Perrot, M.

1926.

Chaulmoogra.

Chem. & Drugg., 105, p. 353.

A brief account on chaulmoogra and similar
seeds delivered to the Paris Society of Pharmacy.

Read, B. E.

1926.

Japanese Chaulmoogra Oil.

Pharm. Jour., 117, p. 673.

Reports that the use of Japanese oil expressed
from Hydnocarpus anthelmintica Pierre, with 20 percent
camphor is very successful in the treatment of leprosy.

Read, B. E.

1926.

The Chaulmoogra Treatment of Leprosy in Korea.

Pharm. Jour., 117, p. 673.

Discusses the treatment of leprosy in Korea with the ethyl-esters of chaulmoogric acid.

Warren, L. E.

1926.

Report On Chaulmoogra Oil.

Jour. Assoc. Offic. Agric. Chem., 9, p. 290. (Yrbk. Brit. Pharm. Conf., 64, p. 330; Pharm. Jour., 118, p. 79.)

Recommends that confirmatory tests such as viscosity and loss or gain on heating should be added; as well as a test to determine the presence of castor oil.

(Editor.)

1927.

(Chaulmoogra Oil.)

Pharm. Weekblad., 64, p. 293.

Gives the botanical source of chaulmoogra oil, the geographical habitat, the places in which attempts have been made to cultivate plants bearing seeds producing chaulmoogra oil, the modes of administration, the physical properties and the chemical properties of the oil.

Perkins, G. A., Cruz, A. O. & Reyes, M.O.

1927.

Studies of Chaulmoogra-Group Oils.

Ind. Eng. Chem., 19, p. 939. (Yrbk. Brit. Pharm. Conf., 64, p. 91; Pharm. Jour., 119, p. 340.)

State that chaulmoogra - group oils, if free from rancidity, are very suitable for intramuscular or subcutaneous injection. The details of refining are described. Analytical characteristics of some chaulmoogra group oils of minor importance are recorded.

Perkins, G. A. & Cruz, A. O.

1927.

Synthesis of Compounds Similar to
Chaulmoogric Acid. I.

Jour. Am. Chem. Soc., 49, I, p. 517.

Discusses the synthesis of compounds similar to chaulmoogric acid. Most of the work was done on malonic acid.

Perkins, G. A. & Cruz, A. O.

1927.

Synthesis of Compounds Similar to
Chaulmoogric Acid. II.-de- Chaulmoogric
Acid.

Jour. Am. Chem. Soc., 49, v. I, p. 1070.

Discuss the synthesis of compounds similar to chaulmoogric acid. The work was done in order to produce anti-leprosy drugs superior to those obtainable from chaulmoogra-group oils.

Perrot, E.

1927.

Chaulmoogra et autres graines
utilisables contre la lepre.

Travaux du Lab. de Mat. Med., 17, pt. 2, p. 1. (Chem. & Drugg., 107, p. 285; Pharm. Jour., 117, p. 110.)

Gives a botanical and pharmacognostic study of the various plants yielding seeds which contain acids of the chaulmoogric and hydnocarpic groups. Gives the attempts to cultivate plants yielding chaulmoogra oil, toxicity, methods of extraction, chemical composition, and the uses.

Read, B. E.

1927.

(Toxicity of the Halogen Compounds of
Chaulmoogra Oil.)

Chinese Jour. Physiol., I, 4, p. 345. (Pharm. Jour.,
120, p. 353.)

(Discusses the toxicity of bromo, dichloro,
and di-iodo saturated esters of chaulmoogra oil on
dogs and rabbits.)

Seabra, P.

1927.

La plante et ses vertus.

Jour. d. Pharm. et d. Chim., s. 8, v. 5, p. 100. (Pharm.
Jour., 118, p. 603.)

Suggests the substitution of the oil of
Carpotroche braziliensis, N.O., for that of Taraktogenos
Kurzii King. Discusses some of the work done on this oil.

Davis, W.

1928.

(Leprosy Drug Now Administered Painlessly.)

Sci. News. Letter, Dec. 22, p. ---. (Am. Jour. Pharm.,
100, p. 188.)

(A combination of chaulmoogra oil with
benzocaine has shown promising results.)

(Editor.)

1928.

Ceylon Chaulmoogra Oils.

Chem. & Drugg., 108, p. 497.

Discusses the attempts to raise plants bearing
seeds which yield chaulmoogra oil, by the Department
of Agriculture at Heneratgoda and Peradeniya.

(Editor.)

1928.

Genezing van melaatschleid.

Pharm. Weekblad., 65, p. 173.

Discusses the prevalence of leprosy in the world and the use of chaulmoogra oil in leprosy.

Altaffer, L. C.

1929.

More Chaulmugra Oil.

Drug Market, 25, p. 506.

Discusses the work being done in Burma to increase the supply of chaulmoogra oil.

"
Bomer, A. & Engel, H.

1929.

"
Über die Glyceride des Chaulmugroöles.

Zeits. inters. Lebenson, 57, p. 113. (Yrbk. Brit. Pharm. Conf., 66, p. 523.)

(Discuss their work on the glycerides of chaulmoogra oil.)

Butting, B.

1929.

Fruit and Seeds of Hydnocarpus Woodii
Merrill from North Borneo.

Bull. Imp. Inst., 27, p. 12. (Chem. & Drugg., 111, p. 275.)

Discusses the results of cultivation of Hydnocarpus Woodii Merrill in British Malaya.

De Santos, I. & West, A. P.

1929.

Resins in the Seed Coats of Philippine
Chaulmoogra Seeds (Hydnocarpus Alcalae).

Phillippine Jour. Sci., 40, p. 485. (Quart. Jour. & Yrbk. Pharm. Conf., 66, p. 101.)

Gives a description of the oil obtained from Hydnocarpus alcalae, the iodine value, the free fatty acids present, the saponification value and the unnamed unsaponifiable matter present.

(Editor.)

1929.

Chaulmoogra from North Borneo.

Chem. & Drugg., 111, p. 630.

Gives a comparison of the oils obtained from Hydnocarpus Wightiana (Blume), Taraktogenos Kurzii, (King) and Hydnocarpus Woodii, Merrill.

Magnus, Mabee & Reynard, Inc.

1929.

Chaulmoogra Oil.

Drug. Markets, 24, p. 303.

In an advertisement state that the oil known in commerce as Chaulmoogra Oil and its derivatives are of considerable importance in the treatment of leprosy, skin diseases etc. Offer article in full conformity with U.S.P.X.

Advertisment.

Magnus, Mabee & Reynard, Inc.,

1929.

Oil Chaulmoogra.

Drug. Markets, 25, p. 585.

An Advertisment of the Oil.

Van Itallie, E. I.

1929.

Het Rhodnangetal Von Strophanthusolie En Van
Oliem Der Chaulmoogra groep.

Pharm. Weekblad., 66, p. 677. (Quart. Jour. & Yrbk.
Brit. Pharm. Conf., 2, p. 617.)

Discusses the behavior of the Chaulmoogric acids
toward thiocyanogen.

(Editor.)

1930.

(Chaulmoogra Oil.)

Chem. & Drugg., 113, p. 178.

The Malayan Agricultural Experimental Station
at Serdang is experimenting with the cultivation of the
chaulmoogra tree for the production of chaulmoogra oil
for the treatment of leprosy.

(Editor.)

1930.

Burmese Chaulmoogra Oil.

Chem. & Drugg., 113, p. 253.

Discusses the work done on various chaulmoogra
trees in Burma and the plans of future work.

(Editor.)

1930.

Chaulmoogra Oil.

Chem. & Drugg., 113, p. 433.

Gives a short summary of the work done on
Chaulmoogra oil, The Philippine Islands have been
importing oil for use in their leper colony.

(Editor.)

1930.

(Chaulmoogra Oil.)

Time, March 3, 1930, p. 37.

In reply to Professor Roger Adams has been working on the synthesis of Chaulmoogric acid which is the most effective remedy yet known for leprosy.

Eberle, E. G.

1931.

Chaulmoogra In Porto Rico.

Jour. Am. Pharm. Assoc., 20, p. 4.

Gives the results of the planting of Chaulmoogra trees in Porto Rico.

(Editor.)

1931.

Our Lepers.

The Literary Digest, July, 18, 1931, p. 28.

Chaulmoogra oil is probably the most important contribution to modern therapy. Many instances of its use were very successful. Leprosy can be helped by modern medicine and surgery and maybe prevented its spread.

Ohlsson, E.

1932.

Oleum Chaulmoograe.

Svensk. Kemisk Tidskrift, 44, p. 121. (Science News Letters, Oct. 8, p. 228.)

Reports on the treatment of tuberculosis in guinea pigs with chaulmoogra oil.

Tonn, O.

1932.

Vorschriften zur Bereitung steriler
Alepol₄, -Sodium₁₁hydrocarpate- und Chaul-
mograolseifenlösung.

Pharm. Monat., 13, p. 199. (Pharm. Jour., 129, p. 439.)

Describes a method of preparing a solution of saponified chaulmoogra oil for injection.

(Editor.)

1924.

Dyes Raise False Hopes in Leprosy
Treatment.

Science News, Letter, September 15, 1934, p. 165.

Various dyes were not as successful as the original claims made, as preliminary reports were hopeful. How the disease is transmitted is still unknown.

Fang, C. T.

1934.

(Use of Benzylephedrine as Analgesic
in Chaulmoogra Injections.)

Chinese Med. Jour., 48, p. 563. (Chem. Abstracts, 27, p. 289; Pharm. Abstracts, 1, p. 34.)

(A mixture containing 80 cc. chaulmoogra oil, 20 cc. of olive oil and 0.1 Gm. of benzlephedrine base is used for intra-muscular injection. It is painless and has a tolerance 2-3 times that of ordinary chaulmoogra preparations.)

Sant, G.

1924.

Chaulmoogra Oil from Surinam.

Quart. Jour. & Yrbk. Brit. Pharm. Conf., 7, p. 716.

Reports the results of growing Taraktogenos Kurzii in Surinam. Describes the physical and chemical properties of the oil obtained from the seeds of these trees.

Chalmeta, A. & Chalmeta, C. 1935.

(Chaulmoogra Oils in Pharmacopoeas and
in Commerce.)

La Farm.Med., 46, pp. 63 & 94. (Pharm. Abstracts, 1,
p. 50.)

(Give some of the physical properties of
chaulmoogra oil.)

(Editor.)

1935.

Battling an Ancient Scourge.

Science & Medicine, Oct. 12, p. 17.

Discusses the use of Chaulmoogra in leprosy.

Calcagno, O.

1936.

(Chaulmoogra and Carpotroche Preparation for
the Treatment of Leprosy.)

Semana med., 43, 2, p. 798. (Pharm. Abstracts, 3, p. 217.)

(Gives a method of preparing an emulsion of
chaulmoogra and carpotroche oils for the treatment of
leprosy.)

(Director.)

1936.

Chaulmoogra Oils.

Bull. Imp. Inst., 34, p. 145. (Quart. Jour. Pharm. Pharmacol., 9, p. 712; Pharm. Abstracts, 3, p. 383; Pharm. Jour., 137, p. 83.)

Gives the physical properties, chemical properties and constituents of the fixed oil of the seed of Hydnocarpus Wightiana, Blume, and Hydnocarpus anthelmintica, Pierre.

Dunston, W.

1936.

Chaulmoogra Oils.

Bull. Imp. Inst., 34, p. 145. (Quart. Jour. & Yrbk. Brit. Pharm. Conf., 9, p. 716.)

Reports on the cultivation of the different species of trees which produce chaulmoogra oil in many tropical parts of the British Empire, with a view of supplying the local needs.

(Editor.)

1936.

Chaulmoogra Oil.

Chem. & Drugg., 125, p. 62.

Gives a comparison of the oil obtained from the seeds of Hydnocarpus Wightiana (Blume) with the British Pharmacopoeia standards for chaulmoogra oil. Also deals with the oil obtained from Hydnocarpus anthelmintica Pierre.

Fitch, W. K.

1936.

Chaulmoogra Oils.

Pharm. Jour., 137, p. 83. (Pharm. Abstracts, 2, p. 440.)

Gives the botanical sources of chaulmoogra oil. States that the most effective oil is that derived from Hydnocarpus Wightiana Blume.

Flondin, C., Baranger, P., & Ragu, J.

1936.

Essai de traitement de la lepre par un complexe nouveau de chaulmoogra et de cholesterol, permettant l'injection intraveineuse a haute dose de derives chaulmoogriques.

Compt. Rend., 203, p. 502. (Pharm. Abstracts, 2, p. 526.)

Reports on the treatment of leprosy with a new "complex" of chaulmoogra and cholesterol.

Veno, S.

1936.

(Preparation of a Gold Soap Solution in Chaulmoogra Oil and Its Effect on Lepers.)

Jour. Soc. Chem. Ind. Japan, 39, p. 151. (Chimie et Industrie, 38, p. 102; Pharm. Abstracts, 4, p. 62.)

(Give a method of preparation of a gold soap solution of chaulmoogra fatty acids and the results obtained when used on 22 patients.)

Cole, H. I. & Cardoso, H.

1937.

Hydnocarpic and Chaulmoogric Acids and Ethyl Esters.

Jour. Am. Chem. Soc., 59, p. 963. (Pharm. Abstracts, 4, p. 76.)

Give data concerning the optical rotation and the boiling and melting points of pure hydnocarpic and chaulmoogric acids and their ethyl esters.

(Editor.)

1937.

Chaulmoogra Oil.

Chem. & Drugg., 127, p. 20;

Discusses Chaulmoogra oil as to botanical source, geographical habitat, preparations, method of extraction and use.

Niederl, J. B.

1937.

Method For Producing Substituted
Aliphatic Acids.

U.S.Pat., No. 2,082,459. (Pharm. Abstracts, 3, p. 439.)

Gives a method of preparing products such as 10-(p-hydrophenyl) stearic acid, hydroxyphenyl-di-hydro-chaulmoogric acid, etc. and their therapeutic uses.

Cole, H. I. & Cardoso, H. T.

1938.

Analysis of Chaulmoogra Oil. I. *Carpotroche brasiliensis* (Sapucaina) Oil.

Jour. Am. Chem. Soc., 60, p. 614. (Pharm. Abstracts, 4, p. 573.)

Methods for the qualitative and quantitative analysis of chaulmoogra oils are discussed. The analysis of the fatty acid of Carpotroche brasiliensis Endlicher, oil as made by this method is given.

Cole, H. I. & Cardoso, H. T.

1938.

Analysis of Chaulmoogra Oils. II. *Oncoba echinata* (Gorli) Oil.

Jour. Am. Chem. Soc., 60, I, p. 617; (Pharm. Abstracts, 4, p. 573.)

Give the results of qualitative and quantitative analysis of the fatty acids of Oncoba echinata Oliver, (Gorli) oil.

Cutter, I.S.

1938.

Chaulmoogra Oil in Arthritis.

Chicago Daily Tribune, June 28, 1938, p. 8.

Many remedies have been used for arthritis. Chaulmoogra Oil when tried the foci of infection were not disturbed.

Cutter, I.S.

1939.

Chaulmoogra Oil Valuable in Arthritis.

Chicago Daily Tribune, April 3, 1939, p. 16.

Chaulmoogra oil is being used for the treatment of arthritis after it was observed that lepers rarely if ever develop this disease.

LIST OF JOURNALS CONSULTED

- (The) Am(eric)an Jour(nal of) Pharm(acy), v. 1-108;
1825-1936.
- Chem(ist) & Drugg(ist), v. 1-128; 1824-1938.
- (The) Jour(nal of the) Am(eric)an Pharm(aceutical)
Assoc(iation), v. 1-27; 1912-1938.
- Pharm(aceutical) Abstracts, v. 1-4; 1935-1938.
- (The) Quart(erly) Jour(nal) & Y(ea)rbook (Of Pharmacy of
the) Brit(ish) Pharm(aceutical) Conf(erence),
v. 1-10; 1928-1937.
- (The) Proc(eedings of the) Am(eric)an Pharm(aceutical)
Assoc(iation), v. 1-59; 1851-1911.
- (The) Pharm(aceutical) Jour(nal)(and Pharmacist.),
v. 1-137; 1841-1936.
- Y(ea)rbook (of the) Am(eric)an Pharm(aceutical)
Assoc(iation), v. 1-23; 1912-1934.
- (The) Y(ea)rbook (of Pharmacy & Transactions of the)
Brit(ish) Pharm(aceutical) Conf(erence),
v. 4-64; 1867-1927.

LIST OF BOOKS CONSULTED

- Coxe, J. R., The Am(eric)an Disp(ensatory), 1 ed., 1806; 4 ed., 1818; 6 ed., 1825; 7 ed., 1827; 8 ed., 1830; 9 ed., 1831.
- King, J. (The) Am(eric)an Disp(ensatory), 6 ed., 1864; 8 ed., 1872; 10 ed., 1875; 15 ed., 1881; 16 ed., 1889; 18 ed., 1895; v. 1; 18 ed., 1900, v. 2,
- King, J. & Newton, R. S. (The) Eclectic Disp(ensatory of) (the) U(nited) S(tates of) A(merica), 1 ed., 1852.
- Stille, A. & Maisch, J. M., (The National Disp(ensatory), 2 ed., 1879; 3 ed., 1884; 5 ed., 1894.
- Thacher, J., New Disp(ensatory), 1 ed., 1810; 2 ed., 1913; 4 ed., 1821.
- Wood, G.B. & Bache, F. (The) Disp(ensatory of the) U(nited) S(tates of) A(merica), 2 ed., 1834; 3 ed., 1836; 4 ed., 1839; 5 ed., 1843; 6 ed., 1845; 7 ed., 1847; 8 ed., 1849; 9 ed., 1851; 10 ed., 1854; 11 ed., 1858; 12 ed., 1865; 12 ed. rev., 1869; 13 ed., 1870; 13 ed., rev., 1871; 14 ed., 1879; 15 ed., 1883; 16 ed., 1892; 17 ed., 1894; 18 ed., 1899; 19 ed., 1907; 20 ed., 1918; 21 ed., 1926; 22 ed., 1937.

UNITED STATES PHARMACOPOEIA

(O-XI) (1820-1930)

AND

NATIONAL FORMULARY

(I-VI) (1888-1935)

HISTORY

OF

OLEUM CHAULMOOGRAE

Oleum Chaulmoograe

Chaulmoogra Oil

Ol. Chaulmoog.

The fixed oil expressed from the seeds of Taraktogenos Kurzii King/ (Fam. Flacourtiaceae). The fixed oil expressed from seed of certain species of/ Hydnocarpus, when designated as such and when agreeing in physical. and chemical characters with Chaulmoogra Oil, may be used in its place./

Description and physical properties.- A yellowish or brownish-yellow liquid, or at/ temperatures below about 25°C., a whitish, soft solid. It has a characteristic/ odor, and a somewhat acrid taste./

Chaulmoogra Oil is sparingly soluble in alcohol; soluble in benzene, chloroform, ether, and in petroleum benzin./

Tests for identity- Specific gravity about 0.950 at 25°C./

The specific rotation (a)_D of Chaulmoogra Oil determined at 25°C. in chloroform, containing about 10 Gm. of the Oil in each 100 cc. of the solution, and/ using a 100 mm. tube, is not less than + 48° and not more than + 60°, page/ 447./

Test for Purity - Dissolve 1 Gm. of the Oil

in 15 cc. of a mixture of equal volumes of alcohol and ether, previously neutralized with tenth-normal (sodium/ hydroxide, using 5 drops of phenolphthalein T.S. as indicator, and titrate the/ solution with tenth-normal sodium hydroxide to the production of a pink color/ which persists for fifteen seconds; not less than 1.8 cc. and not more than 5 cc./ of tenth-normal sodium hydroxide is required (free acid)./

Saponification value; not less than 196 and not more than 213, page 457./

Iodine value: not less than 98 and not more than 104, page 445./

Preserve in well-closed containers, in a cool place, protected from light./

Average Dose - Metric, 1 cc. - Apothecaries, 15 minims.

U.S.P., 1930, - p. 251.

Oleum Chaulmoograe

Chaulmoogra Oil

Ol. Chaulmoog.

The fixed oil expressed from the ripe seed of Taraktogenos Kurzii/ King, Hydnocarpus Wightiana Blume, or Hydnocarpus anthelmintica/ Pierre (Fam. Flacourtiaceae).

The fixed oil expressed from the ripe/seed of other species of Hydnocarpus (Fam. Flacourtiaceae). The fixed oil expressed from the ripe/ seed of other species of Hydnocarpus (Fam. Flacourtiaceae) when designated as such and when conforming with the description, physical properties and tests for identity and purity prescribed below, may be used.

Description and physical properties - A yellow or brownish-yellow liquid, or, at temperature below about 25°C ., a whitish, soft solid. It has a characteristic odor, and a somewhat acrid taste./

Chaulmoogra Oil is sparingly soluble in alcohol, soluble in benzene, in chloroform, in ether, and in petroleum benzine./

Tests for identity- Specific gravity: 0.940 to 0.960 at 25°C ./ The specific rotation $(\alpha)_D$ of Chaulmoogra Oil determined at 25°C . in chloroform, the solution containing 10 Gm. of the Oil in each 100 cc. of solution, and using a sodium light, is not less than $+ 48^{\circ}$ and not more than $+ 60^{\circ}$, page 459./

Tests for purity - The free fatty acids in 10 Gm. of Chaulmoogra Oil require for neutralization not more than 40 cc. of tenth-normal sodium hydroxide, Acid Value, page 444./

Place 25 cc. of Chaulmoogra Oil in a measuring tube consisting of a glass- / stoppered, pear-shaped bulb of not less than 100 cc. capacity, joined at its/ lower, tapering end to a tube about 30 cm. long, graduated to 25 cc. in divi-/sions of 0.1 cc. Add 100 cc. of neutralized alcohol and shake the mixture/ thoroughly for not less than ten minutes. Allow the tube to stand for twenty-/four hours and observe the volume of the lower. Its volume is not less/ than 23.5 cc. (free fatty acids or castor oil.)/

Saponification value: not less than 196 and not more than 213, page 445./

Iodine Value: not less than 93 and not more than 104, page 445./

Storage - Preserve Chaulmoogra Oil in well-closed containers, in a cool place/ and protected from light./

Average Dose - Metric, 1 cc. Apothecaries, 15 minims./

SUMMARY OF U.S.P. DATA OF OLEUM CHAULMOOGRAE.

Where official:-

U.S.P., 1920; '30.

Official Latin Title:-

Oleum Chaulmoograe, U.S.P., 1920; '30.

Official English Title:-

Chaulmoogra Oil, U.S.P., 1920; '30.

Official Abbreviation:-

Ol. Chaulmoog., U.S.P., 1920; '30.

Official Synonym:-

Scientific Name:-

Taraktogenos Kurzii King, U.S.P., 1920; '30,
certain other species of Hydnocarpus, U.S.P.,
1920;

Hydnocarpus Wightiana Blume, U.S.P., 1930;

Hydnocarpus anthelmintica Pierre, U.S.P., 1930;
and other species of Hydnocarpus, U.S.P., 1930.

Family:-

Flacourtiaceae, U.S.P., 1920; '30.

Parts Used:-

The fixed oil expressed from the seeds of,
U.S.P., 1920.

The fixed oil expressed from the ripe seeds of,
U.S.P., 1930

Official Description:-

U.S.P., 1920; '30.

Official Preparation:-

Official Dose:-

1 cc. - 15 minims, U.S.P., 1920; '30.

APPROVED BY W. O. Richtmann.

Prof. of Pharmacognosy