

BIBLIOGRAPHY OF
QUILLAJA SAPONARIA MOLINA

By

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SCHOOL OF PHARMACY

A Thesis Submitted for the Degree of
GRADUATE IN PHARMACY

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Frezier, A.F.

1717.

Quillay.

Relation du Voyage de la mer du sud, etc., v. 1, p. 206; Reis-Beschryving door de Zuid-Zee, etc., p. 105; Voyage to the South Sea, v. 1, p. 118; (Molina, Nat. Hist. of Chili, Conn. ed., v. 1, p. 121.)

Gives a brief description of the tree and mentions the use of the bark as soap for washing clothes and especially by natives for washing the hair.

Gmelin, J.F.

1740.

(Quillaya).

Linne, Syst. Nat., 2 ed., v. 2, p. 767. (U.S. Dispens., 20 ed., p. 927).

Gives a description of the quillaya tree.

Henry, M.M. Jr., & Charlard, B.

1840.

Chemical Examination of the Bark of Quillaia Saponaria.

Am. Jour. Pharm., 12, p. 209; Ibid., 29, p. 104.

Gives a description and reports a chemical analysis of Quillaia.

Griffith, R.E.

1847.

Quillaja Saponaria.

Med. Bot., p. 272.

States that quillaja is used for its cleansing properties.

Lebeuf, F.

1850.

Recherches sur la saponine.

Comptes Rendus 31, p. 652. (Am. Journ. Pharm., 32, p. 243.)

Recommends saponin from soap bark in preparing emulsions.

Parrish, E.

1857.

Note on Barks - Soap Bark.

Am. Journ. Pharm., 29, p. 104.

States that quillaia is little known and has sufficient interest to demand further investigation.

Raymond, C.

1858.

Note on the Tree Producing Quillaia Bark.

Am. Journ. Pharm., 30, p. 31.

Gives a description of the tree and discusses the uses of Quillaia.

Bleekrode, S.

1860.

The Soap-Bark of South America.

Am. Journ. Pharm., 32, p. 241.

Gives a description of soap-bark and an account of its preparations and their uses.

Flueckiger, F.A.

1862.

Ueber die Seifenrinde (Cort. Quillajae) und das Vorkommen von Krystallen im Innern der (officinellen) Pflanzengewebe.

Schweizsch. Zeit. f. Pharm., 7, p. 13; (Wittstein Vierteljsch. f. Pharm., 11, p. 193; Proc. Am. Pharm. Assoc., 11, p. 82).

Discusses the occurrence of crystals in the structure of soap bark.

Martius, T.

1862.

Quillaya Molina Dec.

N. Rep. f. Pharm., 11, p. 337. (Proc. Am. Pharm. Assoc., 11, p. 82.)

Gives description, active principle, history of saponin and a table of plants containing saponin.

Kindt, ___.

1863.

Ueber Krystalle im Pflanzengewebe.

Schweiz. Wochschr. f. Pharm., p. ; (Am. Journ. Pharm., 36, p. 110; Wittstein's Viertelksch. f. Pharm., 12, p. 569.)

States that the crystals in "quillaya" bark are "oxalate of lime".

Lesseliers, E.

1864.

Empoisonnement par l'ecorce de Panama; proprietes diuretiques de cette substance.

Bull. Soc. de Med. de Grand, 31, p. 43; (S.G.L. Index, series 1, vol. 11, p. 951.)

The original was not available.

Wood, G.B. & Bache, F.

1865.

Soap Bark.

U.S. Dispens., 12 ed., p. 1601; Ibid., 13 ed., p. 1695; Ibid., 14 ed., p. 1757.

Gives source, habitat, constituents and uses of soap bark.

Böttger, H.

1868.

(Quillaya Bark).

Jour. f. prak. Chem., 103, p. 313; (Proc. Am. Pharm. Assoc., 16, p. 183.)

States that bubbles like soap bubbles can be obtained from a decoction of quillaja bark.

(Comm.)

1877.

Tincture of Quillaya for Emulsions.

(Drugg. Circ., 21, p. 129; ibid., 22, p. 158.)

Gives a formula for making tincture of Quillaja for the above purpose.

Collier, H.

1879.

Tincture of Quillaia as an Emulsifying Agent.

Pharm. Jour., 39, p. 236; (Am. Jour. Pharm., 51, p. 522; ibid., 52, p. 41; Drugg. Circ., 23, p. 202; Chem. & Drugg., 21, p. 380.)

Gives formulas for making various emulsions with Tincture of Quillaia.

Collier, H.

1879.

Saponine from the Bark of "Quillaia Saponaria."

Chem. & Drugg., 21, p. 379.

Gives method of obtaining and purifying saponin from quillaia bark.

(Editor)

1879.

Quillaya Tooth Wash.

Drugg. Circ., 23, p. 145.

In reply to a query of C.M., gives a formula for a Quillaya tooth wash.

Shoemaker, J.V.

1879.

(Soap Bark in the Treatment of Skin Diseases).

Med. Bull. (Phila.), 1, p. . (Drugg. Circ., 23, p. 140; Pharm. Jour., 39, p. 187.)

Gives method of using an infusion and a tincture of soap bark in various skin diseases.

Stille, A. & Maisch, J.M.

1879.

Quillaia.

Natl. Dispens., 2 ed., p. 1197.

Gives description, constituents, medical action and uses of Quillaia.

Bennett, A.E. 1880.

Quillaia Toothwash.

Am. Jour. Pharm., 52, p. 485; (Pharm. Jour., 40, p. 372).

Gives a formula for preparing Quillaia Toothwash.

(Editor) 1881.

Quillaya Tooth Wash.

Drugg. Circ., 25, p. 8.

Gives a formula for Quillaya Tooth Wash.

(Editor) 1881.

Tincture of Quillaia for Emulsifying Castor Oil and
Cod Liver Oil.

Drugg. Circ., 25, p. 82.

Gives formulas for preparing these emulsions with a
tincture of Quillaja.

(Editor) 1882.

Panama Bark.

Drugg. Circ., 26, p. 120.

States that Panama Bark is a common name for Quillaya.

Grazer, F. 1882.

Emulsion of Cod Liver Oil with Hypophosphites.

Proc. Calif. Coll. Pharm., 13, p. 31; (Am. Jour. Pharm., 54,
p. 179.)

Tincture of Quillaia is used in making the above emul-
sion.

McDonnell, S.A.

1882.

The Use of Quillain for Emulsions.

Am. Journ. Pharm., 54, p. 179. (Proc. Am. Pharm. Assoc., 30, p. 81.)

Gives suggestions and formulas for preparing emulsions with Quillaia.

Molina, G.I.

1782.

Quillaja Saponaria.

Saggio sulla Storia Naturale del Chili, p. ; Germ. transl. 1786, p. ; French transl., 1789, p. ; English transl. 1809, English transl. 1808, v. 1, p. 121; U.S. Dispens., 20 ed., p. 927; *ibid.*, 2 ed. (1810) p. .

This is the first description of Quillaja saponaria molina and gives a popular description of the tree and uses of the bark.

(Editor)

1883.

Rejected Bark of "Tr. Quillaya Saponaria" as a Cleansing Agent.

Pharm. Jour., 43, p. 20.

States that after the tincture has been extracted, the bark may be used to cleanse greasy kettles.

Hanba, __.

1883.

(Quillaja as a Mouth Wash).

Bull. de Pharm. de Lyon; (West. Drugg., 5, p. 154.)

Gives formula for Quillaya mouth wash.

Kobert, R.

1883.

(Commercial Saponin).

Gaz. Med. de Paris, 14, p. 2; (U.S. Dispens., 20 ed., p. 928).

Commercial saponin consists chiefly of quillaic acid and sapotoxin.

Schiaparelli, C.

1883.

Sulla Saponina dalla Saponaria Officinalis.

Gazz. Chim. Ital., 13, p. 422. (U.S. Dispens., 17 ed., p. 1133.)

Saponetin, a d-rotatory sugar was obtained from saponin.

Stütz, E.

1883.

Ueber das Saponin.

Ann. d. Chem. u. Pharm., 218, p. 231 (U.S. Dispens., 17 ed., p. 1133; *ibid.*, 19 ed., p. 1036; *ibid.*, 20 ed., p. 928.)

Gives a method of obtaining and the chemical composition of saponin from Quillaja.

Oldberg, O. & Wall, O.A.

1884.

Quillaia; U.S.

Companion to the U.S.P., p. 833.

Gives briefly the origin, habitat, part used, description, constituents, medicinal use and dose of Quillaia.

Stille, A. & Maisch, J.M.

1884.

Quillaia, U.S.

Natl. Dispens., 3 ed., p. 1269.

Gives origin, description, constituents, pharmaceutical uses, medical action and uses of Quillaia.

Goldschmidt, F.

1885.

Ueber Quillaja saponaria.

Aerztl. Int.-Bl., München, 32, p. 715; (S.G.L. Index, series 1, vol. 11, p. 951.)

The original was not available.

Kobert, R.

1885.

(Cortex Quillajae and its Chemical Constituents).

Czasopismotowarz., Lwow, 14, p. 375; (S.G.L. Index, series 1, vol. 11, p. 951.)

The original was not available.

Kobert, R.

1885.

(Quillaia Saponaria Molina).

Zeitschrift fuer Therapie 3, p. 16. (Am. Jour. Pharm., 57, p. 551; Pharm. Rundsch. N.Y., 3, p. 236; Pharm. Centrbl., 26, p. 473; Rundsch. f. Inter. d. Ph., 11, p. 587; Archiv. d. Pharm., 223, p. 896; Am. Drugg., 14, p. 228; *ibid.*, 15, p. 56; Pharm. Jour., 45, p. 289; Drugg. Circ., 29, p. 255; West. Drugg., 7, p. 324.)

Quillaia is recommended in place of Senega.

Kobert, R.

1886.

The Physiological Action and Therapeutic value of Quillaia Bark.

Practitioner, Lond., 36, p. 29; (S.G.L. Index, series 1, vol. 11, p. 951.)

The original was not available.

Kobert, R.

1886.

Quillayic Acid.

Chem. Ztg., , p. ; (Drugg. Circ., 30, p. 10).

Discusses the preparation of Quillayic acid from Quillaya Bark.

Maslovski, A.

1886.

Quillaja Saponaria (as an expectorant).

Russk. Med., St. Petersburg., 6, p. 599; (S.G.L. Index, series 1, vol. 11, p. 951).

The original was not available.

Power, F.B.

1886.

Quillaia Bark as a Substitute for Senega Root.

Proc. Wis. Pharm. Assoc., 7, p. 45; West. Drugg., 8, p. 327; Pharm. Rundsch., 4, p. 195; (Proc. Am. Pharm. Assoc., 35, p. 165; Pharm. Jour., 46, p. 350; U.S. Dispens., 17 ed., p. 1133; *ibid.*, 19 ed., p. 1036; *ibid.*, 20 ed., p. 929; Chem. & Drugg., 29, p. 611.)

Gives an historical account of the chemistry of soap bark.

Wood, H.C., Remington, J.P., Sadler, S.P.

1886.

Quillaia, U.S.

U.S. Dispens., 15 ed., p. 1211; *Ibid.*, 17 ed., p. 1132.

Gives description, properties and medical properties of quillaia.

(Comm.)

1887.

Tinctura Quillaiae.

Drugg. Circ., 31, p. 248.

Gives a formula for Tincture of Quillaiae as taken from a British Unofficial Formulary.

Kobert, R.

1887.

Ueber Quillaja-säure; ein Beitrag zur Kenntniss der Saponingruppe.

Arch. f. exper. Path. u. Pharmakol., Leipz., 23, p. 233; (S.G.L. Index, s. 1, vol. 11, p. 951.)

Gives a lengthy discussion on the chemistry of and therapeutic action of Quillaja.

Lesellier, E.

1887.

Quillaja Acid.

Ther. Gaz., 11, p. 546. (Natl. Dispens., 5 ed., p. 1342.)

Gives an account of therapeutical action of quillaja acid.

Boa, P.

1888.

Preliminary Note on Tincture of Quillaia Saponaria.

Drugg. Circ., 32, p. 20. (Pharm. Jour., 47, p. 426.)

Discusses the different methods of making tincture of quillaia.

Boa, P.

1888.

Tinctura Quillaiae, B.P.C.

Drugg. Circ., 32, p. 36; (Am. Drugg. 17, p. 29; Pharm. Journ., 47, p. 527.)

Discusses different methods for making tincture of quillaia.

(Editor)

1888.

Quillaia in Soda Water.

Drugg. Circ., 32, p. 136.

Holds that the use of quillaia in soda water is objectionable.

Pattee, A.F.

1888.

Quillaia Internally.

Drugg. Circ., 32, p. 86.

States that tincture of Quillaja has been used internal-

ly without toxic effect.

Trechinski, __. 1888.

Quillaja Bark in Catarrh.

West. Drugg., 10, p. 366. (Therap. Gaz., 12, p. 720; Natl. Dispens., 5 ed., p. 1342.)

States powdered bark may be used for catarrh.

Caesar & Loretz. 1889.

Insektenpulver fortior, mit 10% Quillaya.

Pharm. Rundsch. (Wien) 15, p. 146. (Am. Jour. Pharm., 61, p. 177; Pharm. Centralh., 30, p. 313; Jahresb. u. d. Pharm., 49, p. 36.)

Prove that Quillaia powder is not an insecticide.

Kobert, R. 1889.

(Quillajic Acid.)

Journ. Chem. Soc., p. 55; Archiv. f. exp. Pathol. u. Pharmacol., 23, p. 233. (Am. Jour. Pharm., p. 142; King's Am. Dispens., 18 ed., 3 rev., v. 2, p. 1620.)

Discusses the methods of preparing and the action of Quillajic Acid.

(Editor) 1890.

New Quillaia.

Chem. & Drugg., 36, p. 404.

Asserts that quillaia imported from America has been examined and found to comply with the standards.

Pabst, G. & Köhler, E. 1890.

Quillaja Saponaria.

Medizinal-Pflanzen, v. 2, p. 433.

Gives description, habitat, name and synonyms and use of quillaja with a colored illustration.

(Editor) 1891.

Quillaia in Soda Water.

West. Drugg., 13, p. 222.

Quillaia is not recommended to be used in soda water.

Flueckiger, F.A. 1891.

Cortex Quillaiae.

Pharmacognosie des Pflanzenreichs, 3 ed., p. 616. (King's Am. Dispens., 18 ed., 3 rev., v. 2, p. 1620.)

Gives chemical composition of Quillaia Bark.

Maisch, J.M. 1891.

Notes on Vegetable Drugs Used in Mexico.

Am. Journ. Pharm., 63, p. 73.

Alcoholic tincture of Quillaja is used for emulsifying oils.

Bloch, H. 1893.

Quillajahaltige Seife.

Pharm. Rund., (Wien), 19, p. 235. (Proc. Am. Pharm. Assoc., 41, p. 444; Chem. Ztg., 1893, v. 1, p. 4; Pharm. Centrhl., 34, p. 203.)

States that a German patent was obtained on quillaja soap.

Kobert, R. 1893.

Saponin.

Chem. Central., 1893, v.1, p. 32. (U.S. Dispens., 19 ed., p. 1036; *ibid.*, 20 ed., p. 928.)

A list of 140 plants including quillaja which contain bodies of the saponin class.

Berg, O.C. & Schmidt, C.P. 1894.

Quillaja Saponaria, Molina.

Atlas der Officinellen Pflanzen, 2 ed., Plate 63; (J.K. Lee, U.W. Thesis, '22).

Gives a colored illustration of quillaja with descriptive text.

Editor. 1894.

Quillaja Soap.

West. Drugg. 16, p. 181. (Proc. Am. Pharm. Assoc., 42, p. 610).

Outlines the process for preparing soap patented in Germany.

Stille, A., Maisch, J.M., Caspari, C. 1894.
& Maisch, H.C.

Quillaja, U.S.

Natl. Dispens., 5 ed., p. 1342.

Gives origin, constituents, pharmaceutical uses, action and uses of Quillaja.

Blach, H. 1895.

Quillaia-soap.

Chem. & Drugg., 46, p. 223.

Gives method of preparing soap from quillaia bark.

Sayre, L.E. 1897.

Can Northern Senega, Southern Senega, Euonymus and Quillaja be Distinguished from one another in the Powdered State by the Microscope?

Am. Journ. Pharm., 69, p. 433; (King's Am. Dispens., 18 ed., 3 rev., v. 2, p. 1620.)

Gives an account of the microscopic analysis of the three drugs.

Dragendorff, G. 1898.

Quillaja Saponaria Mol.

Die Heilpflanzen der Verschiedenen Völker und Zeiten, p. 272.

States that quillaja is used for its cleansing properties.

(Editor) 1900.

'Quillaiae Cortex B.P.

Pharm. Jour., 65, p. 534.

Gives source, description and characters of Quillaia Bark.

(Editor) 1900.

Reinigung des aus der Quillajarinde erhaltenen Saponins.

Pharm. Post, 33, p. 746; (Pharm. Jour., 66, p. 546.)

States that a process has been patented in Germany for a method of removing color and impurities from the aqueous extract of quillaia.

Felter, H.W. & Lloyd, J.U. 1900.

Quillaja (U.S.P.)

King's Am. Dispens., 18 ed., 3 rev., v. 2, p. 1619.

Gives botanical source, history, description, composition and uses of Quillaja.

Milliers, G. 1901.

Pharm. Journ., 66, p. 161. (U.S. Dispens., 19 ed., p. 1036; Ibid., 20 ed., p. 928; Proc. Am. Pharm. Assoc., 49, p. 724.)

A carbohydrate isolated from Quillaja bark was identified as saccharose.

Nelson, B.E. 1901.

An Analytical Scheme for the Microscopical Examination of Powdered Drugs.

Merck's Report, 10, p. 48; (E. W. Lange, U.W. Thesis, 1923).

Gives microscopical description with illustrations of fibers and stone cells of quillaja.

Ransom, F. 1901.

Saponin und sein Gegengift.

Deut. Med. Wochschr., 27, p. 194. (U.S. Dispens., 20 ed., p. 928.)

The destructive action of saponin on red blood corpuscles is discussed.

Mitlacher, W. 1902.

Cortex Quillajae.

Pharm. Post., 35, p. 749. (U.S. Dispens., 19 ed., p. 1036; Proc. Am. Pharm. Assoc., 51, p. 795; Pharm. Jour., 70, p. 234.)

An account of the anatomy of Quillaia bark.

Greenish, H. G. & Collin, E. 1903.

Quillaja Bark.

Pharm. Jour., 70, p. 871.

Gives the diagnostic characters of powdered quillaja bark.

Strasburger, E. and others. 1903.

Quillaja Saponaria.

Lehrbuch der Botanik, 6 ed., p. 472; Ibid., 10 ed., p. 517; Ibid., 11 ed., p. 513; Ibid., 12 ed., p. 501; Ibid., 15 ed., p. 580; Text Book of Botany, Eng. Trans., 2 ed., p. 565; Ibid., 4 ed., p. 613; (M. T. Kasson, U.W. Thesis, 1923).

Gives description of characteristic features of Quillaja with a colored illustration.

Wild, R.B.

1903.

Toxic Properties of Quillaia.

Chem. & Drugg., 63, p. 904; (Proc. Am. Pharm. Assoc., 52, p. 720.)

Discusses the toxic properties of Quillaia.

Lohmann, ___.

1904.

(Physiological Action of Saponin).

Ztschr. offentl. Chemie, , p. . (Ztschr. f. Unters. Nahrungs. u. Genussm. , p. ; Pharm. Jour., 73, p. 477; U.S. Dispens., 20 ed., p. 928).

States that chemically pure saponin is not injurious when taken into the stomach.

Zickgraf, ___.

1904.

Versuche ueber die Therapeutische Verwendung der Quill-
yarinde.

Med. Woche, Berl., 222, p. ; (S.G.L. Index, series 2, vol. 14, p. 224.)

The original was not available.

(Editor)

1906.

(Soap Bark).

Oil, Paint and Drug Rep., 70, p. 7; (Dig. Com. U.S.P. & N.F. 1906, p. 448.)

Efforts are being made to induce East Indian planters to grow soap bark.

Hemmans, L.F.

1906.

Quillaia as an Emulsifying Agent.

Brit. Med. Jour., 1906, v. 1, p. 318; (Index Medicus 1906, p. 277; Dig. Com. U.S.P. & N.F. 1906, p. 448; S.G.L. Index, s. 2, vol. 14, p. 224.)

Discusses the use of Quillaia as an emulsifying agent.

Holmes, E.M.

1906.

Spurious Quillaia Bark.

Pharm. Journ., 76, p. 315; (Proc. Am. Pharm. Assoc., 54, p. 786; Dig. Com. U.S.P. & N.F. 1906, p. 448.)

Gives an account of the different species of quillaia appearing in commerce.

Zickgraf, __.

1906.

Ueber die Behandlung der oberen Luftwege mit Quillaja-rindendecoct.

Therap. d. Gegenw., Berl., 8, p. 160; (Dig. Com. U.S.P. & N.F. 1906, p. 448.)

Discusses the use of quillaja in the treatment of the upper respiratory passages.

Wood, G.B. & Bache, F.

1907.

Quillaja. U.S. (Br.)

U.S. Dispens., 19 ed., p. 1035; *ibid.*, 21 ed., p. 913.

Gives source, description, properties, uses and official preparations of Quillaja.

Beringer, G.M.

1908.

Fluidglycerates.

Drugg. Circ., 52, p. 556. (Proc. Am. Pharm. Assoc., 56, p. 1000; Dig. Com. U.S.P. & N.F., 1908, p. 458.)

Gives formula for preparing fluidglycerate of quillaja.

Cook, G.W.

1908.

(Soap Bark).

Dental Dig., 14, p. 629. (Dig. Com. U.S.P. & N.F., 1908, p. 458.)

"Asserts that the use of soap bark can cause degeneration of the mucous tissue."

Röder, P.

1908.

(Quillaja).

Jahresbericht, Wien, 1908, p. 52; (Dig. Com. U.S.P. & N.F., 1908, p. 458.)

Points out that the Ph. Austr. VIII requires soap bark to contain not more than 10% ash.

Rusby, H.H.

1908.

Crude and Powdered Drugs at the Port of New York.

Proc. Am. Pharm. Assoc., 56, p. 790; (Dig. Com. U.S.P. & N.F. 1908, p. 458.)

Asserts the genuine soap bark is becoming scarce and different sorts are coming forward.

Capps, J.A., Pratt, J.H., McCrae, T., & Halsey, J.T.

1909.

Report of the Committee on the Revision of the Pharmacopoeia.

Jour. Am. Med. Assoc., 53, p. 792; (Dig. Com. U.S.P. & N.F., 1909, p. 608.)

Recommend the deletion of the quillaja, fluidextract and tincture of quillaja from the U.S.P.

Cook, E.F.

1909.

Tincture of Quillaja.

Proc. Am. Pharm. Assoc., 57, p. 1003; (Dig. Com. U.S.P. & N.F., 1909, p. 608.)

Reports that tincture of quillaja forms considerable precipitate that separates into masses.

"Micron". 1909.

Soap-Bark.

Chem. & Drugg., 75, p. 443; (Proc. Am. Pharm. Assoc., 58, p. 210; Dig. Com. U.S.P. & N.F., 1909, p. 608.)

Gives microscopical differences of various species of quillaia.

Rusby, H.H. 1909.

Quillaja.

Pharm. Era, 42, p. 635; (Midl. Drugg., 43, p. 691; Dig. Com. U.S.P. & N.F., 1909, p. 608.)

Asserts that several species of quillaia are imported and they cannot be differentiated.

Beringer, G.M. 1910.

Tincture of Quillaja.

Proc. Am. Pharm. Assoc., 58, p. 783; (Dig. Com. U.S.P. & N.F., 1910, p. 669.)

Asserts that 800 cc. of boiling water will not extract 100 Gm. of quillaja, nor will the subsequent displacement with the amount directed suffice.

Executive Comm. Br. Pharm. Conf. 1910.

Quillaia Bark.

Yrbk. Br. Pharm. Conf. 47th, p. 297; (Dig. Com. U.S.P. & N.F. 1910, p. 669.)

Suggests experiments to determine the best solvent for exhausting quillaja bark for the purpose of making emulsifying agents.

Havenhill, L.D. 1910.

Tincture of Quillaja.

Proc. Am. Pharm. Assoc., 58, p. 790; (Dig. Com. U.S.P. & N.F., 1910, p. 670.)

Outlines a modified formula for the tincture of quillaja.

Holmes, E.M.

1910.

Quillaia Bark.

Pharm. Journ. 84, p. 79; (Proc. Am. Pharm. Assoc., 58, p. 209; Dig. Com. U.S.P. & N.F., 1910, p. 669.)

Gives a description of different species of quillaia.

LaWall, C.H. & Bradshaw, H.A.

1910.

Quillaya.

Proc. Am. Pharm. Assoc., 58, p. 754; (Dig. Com. U.S.P. & N.F., 1910, p. 669.)

"Report finding 9.1 and 9.5% ash in quillaya".

Tunmann, O.

1910.

Cortex Quillajae.

Apoth. Ztg., 25, p. 566; (Dig. Com. U.S.P. & N.F., p. 670.)

Reports that the use of soap bark for medicinal purposes continues to be small and the technical use is increasing despite the material advance in price.

Caesar & Loretz.

1911.

Cortex Quillaiae.

Pharm. Ber. d. D.A.B., 5 ed., p. 26; (Dig. Com. U.S.P. & N.F., 1910, p. 669.)

Point out that the microscopical description of quillaja has been materially elaborated in the Ph. Germ. V.

(Comm.)

1911.

Pharm. Jour., 87, p. 709; (Dig. Com. U.S.P. & N.F., 1911, p. 553.)

Recommends the inclusion of a microscopical description of quillaja bark and an ash limit of 15 p.c.

Lloyd, J.U.

1911.

Quillaja.

Lloyd Libr. Bull. No. 18, p. 67; (Jour. Therap. & Diet., 5, p. 228; Dig. Com. U.S.P. & N.F., 1911, p. 553.)

Contributes a brief historical note on quillaja.

Schneider, A.

1911.

Quillaja.

Merck's Rept., 20, p. 3; (Dig. Com. U.S.P. & N.F., 1911, p. 554.)

States that quillaja has "sclerenchyma and branching bast cells with numerous large prismatic crystals of calcium oxalate."

Kobert, R.

1912.

Quillajarinde.

Ber. d. d. pharm. Gesellsch., 22, p. 212; (Dig. Com. U.S.P. & N.F., 1912, p. 410.)

Discusses the biologic valuation of quillaja.

Riedel, J.R.

1912.

(Soap Bark).

Berichte, 1912, p. 49; (Dig. Com. U.S.P. & N.F., 1912, p. 410).

The ash content of soap bark was found to vary from 9.6 to 15.1 p.c.

- Rippetoe, J.R. & Minor, R. 1912.
Soap Bark.
Am. Jour. Pharm., 84, p. 444; (Dig. Com. U.S.P. & N.F., 1912, p. 410.)
States that one sample of soap bark contained 11.57% ash.
-
- Rosenthaler, L. & Ström, K.T. 1912.
Ueber das Saponin der weissen Seifenwurzel II.
Arch. Pharm., 250, p. 290; (Dig. Com. U.S.P. & N.F., 1912, p. 410.)
Gives a contribution on the chemistry of the saponin of white soap root.
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- Rusconi, A. 1912.
(Detection of Saponin in Aerated Beverages).
Archivio de farmacologia sperimentale e scienze affini, 13, p.1; (Dig. Com. U.S.P. & N.F., 1912, p. 410.)
Gives a method for the detection of saponin in aerated beverages.
-
- Sormani, C. 1912.
Nachweis des Saponins in Getränken und Nahrungsmitteln durch Haemolyse.
Ztschr. Unters. Nahr. u. Genussm., 23, p. 561; (Dig. Com. U.S.P. & N.F., 1912, p. 410).
The detection of saponin in beverages and foods by haemolysis is described.
-
- (Editor) 1913.
(Saponin in Carbonated beverages).
Am. Drugg., 61, p. 224; (Dig. Com. U.S.P. & N.F. 1913, p. 431.)
States that of all the examples of overzeal on the part

of officials, the ban placed on the use of saponin in carbonated beverages seems to be the most uncalled for.

Fricke, F.H.

1913.

Do Not Use Soap Bark.

Proc. Mo. Pharm. Assoc., 35, p. 148; (Meyer Bros. Drugg., 34, p. 205; Dig. Com. U.S.P. & N.F., 1913, p. 431.)

States that the use of soap bark in soda water will not be permitted in Missouri.

Kebler, L.F.

1913.

Soap Bark.

Jour. Am. Pharm. Assoc., 2, p. 1106; (Dig. Com. U.S.P. & N.F., 1913, p. 431.)

"States that soap bark was found to contain from 9.1 to 10.23 p.c. ash."

Riedel, J.D.

1913.

(Quillaja).

Berichte, 1913, p. 31; (Dig. Com. U.S.P. & N.F., 1913, p. 431).

States quillaja contained from 9.6 to 15.1% of total ash and up to 0.6% of insoluble ash.

Rusby, H.H.

1913.

Quillaja Bark.

Jour. Am. Pharm. Assoc., 2, p. 1102. (Dig. Com. U.S.P. & N.F. 1913, p. 431.)

States that quillaja bark now always arrives in the cut condition and is of good quality.

Thurston, A. & Thurston, A.N.

1913.

Quillaja.

Jour. Am. Pharm. Assoc., 2, p. 476; (Dig. Com. U.S.P. & N.F.,

1913, p. 431.)

States that soap tree bark was found to have 8.02 p.c. moisture and 10.30% total ash.

Riedel, J.D.

1914.

(Quillaja Bark).

Berichte, 1914, p. 31; (Dig. Com. U.S.P. & N.F., 1914, p. 427.)

States that quillaja contained from 9.6 to 17.8% of ash, from 25.4 to 37.1% of extract soluble in water and from 21.6 to 33.5% extract soluble in 70% alcohol.

Rippetoe, J.R.

1914.

Quillaja Bark.

Journ. Am. Pharm. Assoc., 86, p. 441; (Dig. Com. U.S.P. & N.F., 1914, p. 427.)

States that four samples of quillaja contained from 6.14 to 12.73% of ash.

Beringer, G.M.

1915.

Quillaja.

Jour. Am. Pharm. Assoc., 4, p. 1381. (Dig. Com. U.S.P. & N.F. 1915, p. 380.)

A reprint of a proposed monograph for quillaja.

Hare, H.A., Caspari, C. & Rusby, H.H.

1916.

Quillaja, N.F.

Natl. Stand. Dispens., 3 ed., p. 1357.

Gives the origin, description, constituents, action, uses and allied products of Quillaja.

Holmes, E.M.

1916.

Note on Quillaia Extract.

Pharm. Jour., 96, p. 220; (Dig. Com. U.S.P. & N.F., 1916, p. 267.)

"Gives notes on the identity of a crystalline substance obtained from a glycerin extract of quillaja."

Remington, J.P., & Wood, H.C. Jr. 1918.

Quillaiiae Cortex, Br.

U.S. Dispens., 20 ed., p. 927.

Gives source, description, properties, uses and official preparations of Quillaiiae Cortex.

Tunmann, O. 1918.

(Quillaja).

Apoth. Ztg., 33, p. 307; (Dig. Com. U.S.P. & N.F., 1918, p. 306.)

Microchemical reactions of quillaja should be included in the new edition of the Ph. Germ.

Pittenger, P.S. 1919.

The Relative Non-Toxicity of Quillaja when Administered by Mouth.

Proc. Penn. Pharm. Assoc., 42, p. 176; (Yrbk. Am. Pharm. Assoc., 8, p. 542.)

The effect of saponin when administered to dogs is discussed.

Cofmann-Nicoresti, J. & Tallentyre, S.B. 1920.

An Examination of Quillaja Bark and Commercial Saponins.

Pharm. Jour., 105, p. 94; (Chem. & Drugg., 93, p. 96; Dig. Com. U.S.P. & N.F., 1920, p. 351.)

Gives the results obtained in the examination of quillaja bark and commercial saponin.

Lampa, R.R.

1920.

Soap Bark.

Am. Drugg. & Ph. Rec., 68, p. 27; (Jour. Am. Pharm. Assoc., 9, p. 495; Dig. Com. U.S.P. & N.F., 1920, p. 351.)

States that the average ash content of soap bark found on the market is 12.35% while the N.F. allows not over 10%.

Lloyd, J.U.

1921.

Quillaja.

Origin and History of all the Pharmacopoeial Vegetable Drugs, Chemicals and Preparations v. 1, p. 262.

Gives a brief history of quillaja.

(Editor)

1922.

Tincture of Quillaja as an Emulsifying Agent.

Drugg. Circ., 66, p. 18.

Gives formula and method of preparing a specific emulsion.

Cofman-Nicoresti, J. & Tallantyre, S.B.

1923.

The International Standardization of Quillaja Preparations.

Pharm. Jour., 111, p. 103. (Yrbk. Am. Pharm. Assoc., 12, p. 61.)

Give proposed international standards for Quillaja.

List of Journals Consulted.

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- American Druggist and Pharmaceutical Record, 1892-1926;
Vol. 22-74.
- American Journal of Pharmacy, 1825-1927; vol. 1-99.
- British and Colonial Druggist, 1887-1926; vol. 12-79.
- Chemist and Druggist, 1859-1927; vol. 1-106.
- Digest of Comments on the U.S.P. and N.F., 1905-1920
- Druggists Circular, 1857-1926; vol. 1-70.
- Journal of the American Pharmaceutical Association, 1912-1927;
vol. 1-16.
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- New Remedies, 1876-1883; vol. 5-12.
- Pharmaceutical Era, 1887-1926; vol. 1-63.
- Pharmaceutical Journal, 1841-1927; vol. 1-119.
- Pharmaceutical Record, 1884-1893; vol. 4-15.
- Proceedings of the American Pharmaceutical Association,
1851-1911; vol. 1-59.
- Western Druggist, 1882-1927; vol. 4-49.
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6 ed., 1825; 7 ed., 1827.
- Dragendorff, G., Die Heilpflanzen der Verschiedenen Völker
und Zeiten. 1898.
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v. 2, 1824.
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1879.
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and Canada. 1907.

- Jacquin, N.J., *Selectarum Stirpium Americanarum Historia*.
1763.
- Johnson, L., *Medical Botany of North America*. 1880.
- King, J., *American Dispensatory*, 1 ed., 1852; 6 ed., 1864;
8 ed., 1872; 10 ed., 1875; 18 ed., 1898.
- Linne, C., *Species Plantarum*, 1 ed., 1753.
- Lloyd, J.U., *Origin and History of all the Pharmacopoeial
Vegetable Drugs, Chemicals and Preparations*, v. 1, 1921.
- Michaux, A., *Flora Boreali Americanae*. 1803.
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1831.
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1824; 2 ed., 1879; 3 ed., 1884.
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1904; 10 ed., 1910; 11 ed., 1911; 12 ed., 1913; 15 ed.,
1921; with English translation, 2 ed., 1903; 4 ed., 1908.
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1834; 3 ed., 1836; 4 ed., 1839; 5 ed., 1843; 7 ed., 1847;
10 ed., 1854; 12 ed., 1865; 13 ed., 1870; 14 ed., 1879;
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21 ed., 1926.

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UNITED STATES PHARMACOPOEIA (O-X)

(1820 - 1920)

and

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History

of

Quillaja

U.S.P., 1880, p. 276.

Quillaia

Quillaia.

(Soap Bark)

The bark of *Quillaia Saponaria* Molina.

(Nat. Ord., Rosaceae, Roseae).

Flat, large pieces, about one-fifth of an inch (5 millimeters) thick; outer surface/ brownish-white, often with small patches of brown cork attached, otherwise/ smooth; inner surface whitish, smooth; fracture splintery, checkered with pale/ brownish bast-fibres imbedded in white tissue; inodorous, very acrid and sternu-/ tatory.

U.S.P., 1890, p. 330.

Quillaja

Quillaja

(*Quillaia*, Pharm. 1880. Soap Bark).

The inner bark of *Quillaja Saponaria* Molina (Nat. Ord. Rosaceae)./

Flat, large pieces, about 5 Mm. thick; outer surface brownish-white, often/ with small patches of brown cork attached, otherwise smooth; inner surface/ whitish, smooth; fracture splintery, checkered with pale brownish bast-fibres/ imbedded in white tissue; inodorous; taste persistently acrid; the dust very/ sternutatory.

The infusion of *Quillaja* foams like soap-water./

Preparation: *Tinctura Quillajae*.

U.S.P., 1900, p. 373.

Quillaja

Quillaja

The dried bark of Quillaja Saponaria Molina (Fam. Rosaceae), / deprived of the periderm.

In flat pieces of variable length, 3 to 8 Mm. thick, or in small chips; outer / surface brownish-white, often with small patches of cork attached, otherwise / nearly smooth; inner surface yellowish-white, nearly smooth, with occasional / circular depressions, conical projections or transverse channels; fracture uneven / and strongly fibrous, the laminae oblique to each other; odor slight; taste acrid. /

The powder is strongly sternutatory, and contains calcium oxalate in mono- / clinic pyramids and prisms from 0.035 to 0.200 Mm. long.

N.F. IV, 1916, p. 335.

Quillaja

Quillaja

(U.S.P. VIII)

Soap-tree Bark

The dried bark of Quillaja Saponaria Molina (Fam. Rosaceae), deprived/ of the periderm.

In flat pieces of variable length, from 3 to 8 mm. in thickness, or in small chips;/ outer surface brownish-white, often with small patches of cork attached, otherwise/ nearly smooth; inner surface yellowish-white, nearly smooth, with occasional cir-/cular depressions, conical projections of transverse channels; fracture uneven and/ strongly fibrous, the laminae oblique to each other. Odor slight; taste acrid./

The powder is strongly sternutatory, and contains calcium oxalate in monoclinic/ pyramids and prisms from 0.035 to 0.2 Mm. in length./

Quillaja yields not more than 10 per cent of ash./

N.F. V, 1926, p. 383.

Quillaja

Quillaja

Quillaj.

Soap Tree Bark

Soap Bark

Quillaja is the dried inner bark of Quillaja Saponaria Molina (Fam./ Rosaceae).

Quillaja contains not more than 5 per cent of outer bark and not more/ than 1 per cent of foreign organic matter.

Description and physical properties.

Unground Quillaja: In flat pieces of variable length, from 3 to 8 Mm. in thickness, / or in small chips; outer surface brownish white, sometimes with a very few small / patches of cork attached, otherwise nearly smooth; inner surface yellowish / white, nearly smooth, with occasional circular depressions, conical projections / or transverse channels; fracture uneven and strongly fibrous, the laminae oblique / to each other. Odor slight; taste acrid. /

Powdered Quillaja: Pinkish white; very sternutatory; calcium oxalate in elongated / prisms either isolated or in crystal fibers, the prisms from 0.035 to 0.200 Mm. in / length; numerous fragments composed of long, more or less irregular fibers / with thick, strongly lignified walls, the fibers often associated with medullary / rays, the latter about 4 cells wide; stone cells with simple oblique pores; nearly / spheroidal starch grains up to 0.010 mm. in diameter; occasional fragments com- / posed of cork cells with brownish walls.

Preparations: Liquor Picis Carbonis, Tinctura Quillajae.

Summary of data of U.S.P. and N.F.
on Quillaja.

Official in U.S.P. - 1880, '90, 1900.

Official in N.F. - 1916, 1926.

Official Latin Title

Quillaia -1880.

Quillaja - 1890, 1900, '16, '26.

Official English Title

Quillaia - 1880

Quillaja - 1890, 1900, '16, '26.

Official Abbreviation - None

Official Synonyms

Soap Bark - 1880, '90, 1926.

Soap-tree Bark - 1916, '26.

Official Family

Rosaceae 1880, '90, 1900, '16, '26.

Part Used

The bark - 1880.

The inner bark - 1890.

The dried bark - 1900, '16.

The dried inner bark - 1926.

Official Preparations

Tinctura Quillajae, 1890, 1926.

Liquor Picis Carbonis, 1926.

Approved by W.O. Richtmann.
Assoc. Prof. of Pharmacognosy.