

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in Moringa oleifera

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|---------------|------------|----------|----------|---------------------|--|
| 18 | OLEIC-ACID | Seed | 120000.0 | 380000.0 | 2.1447229043962737 | -- |
| 15 | FIBER | Fruit | 13000.0 | 110170.0 | -0.2973093581717314 | USDA's Ag Handbook 8 and sequelae) |
| 15 | FIBER | Shoot | 15000.0 | 70290.0 | -1.2000644927201543 | USDA's Ag Handbook 8 and sequelae) |
| 13 | PALMITIC-ACID | Seed | 6000.0 | 60000.0 | 0.538393633616372 | -- |
| 8 | STEARIC-ACID | Seed | 6000.0 | 60000.0 | 0.7364062176558109 | -- |
| 8 | GLUTAMIC-ACID | Shoot | 10350.0 | 48500.0 | 0.39220423591385656 | USDA's Ag Handbook 8 and sequelae) |
| 3 | ASPARTIC-ACID | Shoot | 9200.0 | 43110.0 | 0.6418932393390641 | USDA's Ag Handbook 8 and sequelae) |
| 1 | BEHENIC-ACID | Seed | 17200.0 | 43000.0 | 3.348182643310443 | -- |
| 14 | POTASSIUM | Fruit | 4610.0 | 39065.0 | 1.8710838289675698 | USDA's Ag Handbook 8 and sequelae) |
| 2 | LEUCINE | Shoot | 7910.0 | 37065.0 | 1.5509660952798279 | USDA's Ag Handbook 8 and sequelae) |
| 15 | FIBER | Seed | 35000.0 | 36450.0 | -0.7764211777551326 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 15 | FIBER | Leaf | 9000.0 | 36000.0 | -1.5523832439995344 | USDA's Ag Handbook 8 and sequelae) |
| 3 | VALINE | Shoot | 6110.0 | 28630.0 | 1.4529988914891638 | USDA's Ag Handbook 8 and sequelae) |
| 4 | LYSINE | Shoot | 5370.0 | 25165.0 | 1.0391828214272667 | USDA's Ag Handbook 8 and sequelae) |
| 14 | ARGININE | Shoot | 5320.0 | 24930.0 | 1.0 | USDA's Ag Handbook 8 and sequelae) |
| 3 | ALANINE | Shoot | 5320.0 | 24930.0 | 1.0 | USDA's Ag Handbook 8 and sequelae) |
| 12 | GLYCINE | Shoot | 5170.0 | 24225.0 | 1.0 | USDA's Ag Handbook 8 and sequelae) |
| 7 | PHENYLALANINE | Shoot | 4870.0 | 22820.0 | 1.0 | USDA's Ag Handbook 8 and sequelae) |
| 3 | ISOLEUCINE | Shoot | 4510.0 | 21135.0 | 1.2767041989957935 | USDA's Ag Handbook 8 and sequelae) |
| 1 | SERINE | Shoot | 4140.0 | 19400.0 | 1.0 | USDA's Ag Handbook 8 and sequelae) |
| 4 | THREONINE | Shoot | 4110.0 | 19260.0 | 1.2868384427185613 | USDA's Ag Handbook 8 and sequelae) |

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|------------------|---------------|------------|---------|----------|-----------------------|--|
| 28 | CALCIUM | Leaf | 4400.0 | 17600.0 | -0.05720258224768924 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 8 | TYROSINE | Shoot | 3470.0 | 16260.0 | 1.0 | USDA's Ag Handbook 8 and sequelae) |
| 14 | POTASSIUM | Shoot | 3370.0 | 15790.0 | -0.5662125913142811 | USDA's Ag Handbook 8 and sequelae) |
| 7 | HISTIDINE | Shoot | 1960.0 | 9185.0 | 1.0 | USDA's Ag Handbook 8 and sequelae) |
| 112 | ASCORBIC-ACID | Leaf | 2200.0 | 8800.0 | 0.37260776805039464 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 65 | MAGNESIUM | Shoot | 1470.0 | 6890.0 | -0.08383731719594234 | USDA's Ag Handbook 8 and sequelae) |
| 29 | TRYPTOPHAN | Shoot | 1440.0 | 6745.0 | 1.41273485856346 | USDA's Ag Handbook 8 and sequelae) |
| 2 | CYSTINE | Shoot | 1400.0 | 6560.0 | 1.0 | USDA's Ag Handbook 8 and sequelae) |
| 15 | METHIONINE | Shoot | 1230.0 | 5765.0 | 1.0 | USDA's Ag Handbook 8 and sequelae) |
| 4 | PHOSPHORUS | Shoot | 1120.0 | 5250.0 | 0.8439806405575019 | USDA's Ag Handbook 8 and sequelae) |
| 4 | PHOSPHORUS | Fruit | 500.0 | 4235.0 | 0.309512468648855 | USDA's Ag Handbook 8 and sequelae) |
| 20 | CHOLINE | Leaf | | 4230.0 | -0.22919225965734855 | -- |
| 20 | CHOLINE | Fruit | | 4230.0 | 0.27421908226876107 | -- |
| 65 | MAGNESIUM | Fruit | 450.0 | 3815.0 | 0.7803747555207075 | USDA's Ag Handbook 8 and sequelae) |
| 1 | SODIUM | Fruit | 420.0 | 3560.0 | 0.15364001538601127 | USDA's Ag Handbook 8 and sequelae) |
| 4 | PHOSPHORUS | Leaf | 700.0 | 2800.0 | -0.39951935749949974 | USDA's Ag Handbook 8 and sequelae) |
| 28 | CALCIUM | Fruit | 300.0 | 2545.0 | -0.30259294089165506 | USDA's Ag Handbook 8 and sequelae) |
| 112 | ASCORBIC-ACID | Shoot | 517.0 | 2425.0 | -0.25371279504053523 | USDA's Ag Handbook 8 and sequelae) |
| 14 | SULFUR | Leaf | | 1370.0 | -0.8143977090530928 | -- |
| 14 | SULFUR | Fruit | | 1370.0 | -0.031020916059269096 | -- |

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|------------------|---------------|------------|---------|----------|----------------------|---|
| 112 | ASCORBIC-ACID | Fruit | | 1200.0 | -0.2098766141984456 | =ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp |
| 9 | OXALIC-ACID | Leaf | | 1010.0 | -0.4465321906788087 | -- |
| 9 | OXALIC-ACID | Fruit | | 1010.0 | -0.25065522800719753 | -- |
| 1 | SODIUM | Shoot | 90.0 | 420.0 | 0.03209133983378128 | USDA's Ag Handbook 8 and sequelae) |
| 93 | TOCOPHEROL | Leaf | 74.0 | 296.0 | -0.42871944832620335 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 6 | IRON | Leaf | 70.0 | 280.0 | -0.21085163399012055 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 53 | BETA-CAROTENE | Shoot | 45.0 | 215.0 | 0.25672153528088315 | USDA's Ag Handbook 8 and sequelae) |
| 6 | IRON | Shoot | 40.0 | 185.0 | -0.4205794716292474 | USDA's Ag Handbook 8 and sequelae) |
| 39 | NIACIN | Shoot | 8.0 | 105.0 | -0.03554155028579542 | USDA's Ag Handbook 8 and sequelae) |
| 53 | BETA-CAROTENE | Seed | | 100.0 | 5.8216177591739955 | -- |
| 53 | BETA-CAROTENE | Leaf | 18.0 | 72.0 | -0.8243829994255151 | -- |
| 39 | NIACIN | Fruit | 2.0 | 52.0 | -0.1162786785242452 | -- |
| 15 | RIBOFLAVIN | Shoot | 6.0 | 30.0 | 1.1234399209254322 | USDA's Ag Handbook 8 and sequelae) |
| 6 | IRON | Fruit | 3.0 | 30.0 | -0.40848626836489793 | USDA's Ag Handbook 8 and sequelae) |
| 31 | THIAMIN | Shoot | 2.0 | 12.0 | -0.11133380761319199 | USDA's Ag Handbook 8 and sequelae) |
| 15 | RIBOFLAVIN | Fruit | 0.7 | 6.3 | 0.27642502355036735 | -- |

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|------------------|--------------------|------------|---------|----------|----------------------|---|
| 15 | RIBOFLAVIN | Leaf | 0.6 | 6.0 | -0.1497366095229266 | =ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp |
| 31 | THIAMIN | Fruit | 0.5 | 4.5 | -0.10659124509620688 | USDA's Ag Handbook 8 and sequelae) |
| 12 | COPPER | Leaf | 1.0 | 4.0 | -0.6510387463181428 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 12 | IODINE | Leaf | 0.05 | 0.7 | -0.1409355592404101 | -- |
| 28 | VANILLIN | Stem | | | | =ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp |
| 9 | SPIROCHIN | Root | | | | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 2 | PHYTOSTEROLS | Root | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 14 | GAMMA-TOCOPHEROL | Seed | | | | -- |
| 1 | INDOLE-ACETIC-ACID | Fruit | | | | -- |
| 4 | DELTA-TOCOPHEROL | Seed | | | | -- |
| 75 | KAEMPFEROL | Leaf | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |

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|------------------|-----------------------|------------|---------|----------|--------|--|
| 1 | DELTA-7-AVENASTEROL | Seed | | | | -- |
| 1 | DELTA-5-AVENASTEROL | Seed | | | | -- |
| 1 | LIGNOCERIC-ACID | Seed | | | | -- |
| 47 | BETA-SITOSTEROL | Stem | | | | =ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi. 487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp |
| 1 | CHOLESTEROL | Seed | | | | -- |
| 2 | CAMPESTEROL | Seed | | | | -- |
| 75 | KAEMPFEROL | Flower | | | | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 176 | QUERCETIN | Flower | | | | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 102 | CAFFEIC-ACID | Leaf | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 47 | BETA-SITOSTEROL | Seed | | | | -- |
| 4 | PTERYGOSPERMIN | Root | | | | -- |
| 20 | BENZYL-ISOTHIOCYANATE | Root | | | | -- |
| 6 | MYRISTIC-ACID | Shoot | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 6 | MYRISTIC-ACID | Seed | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |

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|------------------|------------------|------------|---------|----------|--------|--|
| 32 | ALPHA-TOCOPHEROL | Seed | | | | -- |
| 12 | STIGMASTEROL | Seed | | | | -- |
| 6 | MORINGININE | Bark | | | | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 6 | MORINGININE | Root Bark | | | | -- |
| 176 | QUERCETIN | Leaf | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |