

Dr. Duke's Phytochemical and Ethnobotanical Database

Chemicals Found in Cocos nucifera

| Activity Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|----------------|------------------|------------|---------|----------|---------------------|---------------------------------------------------------------------------|
| 3 | ALANINE | Seed | 1700 | 3205 | -1.4776910288536462 | USDA's Ag Handbook 8 and sequelae) |
| 3 | ALANINE | Endosperm | -- | -- | | Jim Duke's personal files. |
| 3 | ALANINE | Leaf | -- | -- | | Jim Duke's personal files. |
| 10 | ALPHA-AMYRIN | Seed Oil | -- | -- | | Jim Duke's personal files. |
| 23 | ALPHA-TERPINEOL | Fruit | -- | -- | | Jim Duke's personal files. |
| 32 | ALPHA-TOCOPHEROL | Seed | 7 | 13 | -0.6896654823517182 | |
| 32 | ALPHA-TOCOPHEROL | Oil | -- | 18 | -0.6737505559360731 | |
| 32 | ALPHA-TOCOPHEROL | Seed Oil | -- | -- | | Jim Duke's personal files. |
| 5 | ALUMINUM | Seed | 7.2 | 7.2 | -0.3516653417103102 | |
| 5 | ALUMINUM | Leaf | -- | -- | | Jim Duke's personal files. |
| 14 | ARGININE | Seed | 5460 | 10300 | -0.6072249141458423 | USDA's Ag Handbook 8 and sequelae) |
| 14 | ARGININE | Endosperm | -- | -- | | Jim Duke's personal files. |
| 14 | ARGININE | Leaf | -- | -- | | Jim Duke's personal files. |
| 2 | ARSENIC | Seed | 0.02 | 0.02 | -0.6237689826185465 | Furr, A.K., et al. 1979 |
| 112 | ASCORBIC-ACID | Seed | 20 | 88 | -0.2856259499860121 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses |
| 3 | ASPARTIC-ACID | Endosperm | -- | -- | | Jim Duke's personal files. |
| 3 | ASPARTIC-ACID | Leaf | -- | -- | | Jim Duke's personal files. |

| Activity Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|----------------|-----------------|------------|---------|----------|----------------------|------------------------------------------------------------------------------------------------------------------------------|
| 3 | ASPARTIC-ACID | Seed | 3250 | 6130 | -1.4611540528862226 | USDA's Ag Handbook 8 and sequelae) |
| 9 | BETA-AMYRIN | Seed Oil | -- | -- | | Jim Duke's personal files. |
| 47 | BETA-SITOSTEROL | Seed Oil | -- | -- | | Jim Duke's personal files. |
| 47 | BETA-SITOSTEROL | Fruit | -- | 270 | -0.43949317582642705 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.) |
| 4 | BORON | Seed | 3 | 5.2 | -0.8970628189505873 | |
| 3 | CADMIUM | Seed | 0.03 | 0.03 | -0.33359741952043553 | Furr, A.K., et al. 1979 |
| 28 | CALCIUM | Seed | 71 | 476 | -0.6741015491289437 | |
| 2 | CAMPESTEROL | Fruit | -- | 30 | -0.4046460894399287 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.) |
| 2 | CAMPESTEROL | Seed Oil | -- | -- | | Jim Duke's personal files. |
| 3 | CAPRIC-ACID | Seed | 2628 | 69743 | 2.633904573975057 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 1 | CAPROIC-ACID | Endosperm | -- | -- | | Jim Duke's personal files. |
| 1 | CAPROIC-ACID | Seed | 117 | 3595 | -0.34501465200156417 | |
| 5 | CAPRYLIC-ACID | Seed | 3154 | 68305 | 1.9870944275459317 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 1 | CELLULOSE | Hull Husk | 266000 | 266000 | -1.1355499479153377 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |

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|----------------|---------------------|---------------------|---------|----------|----------------------|----------------------------------------------------------------------------------------------------------------------------|
| 7 | CHLORINE | Seed | 1007 | 1007 | 1.3276510863378361 | Furr, A.K., et al. 1979 |
| 24 | CHROMIUM | Seed | 0.2 | 0.2 | -0.6533762381344975 | Furr, A.K., et al. 1979 |
| 23 | CITRIC-ACID | Seed | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 2 | COBALT | Seed | 0.2 | 0.2 | -0.19726970453812753 | Furr, A.K., et al. 1979 |
| 12 | COPPER | Seed | 3.2 | 33 | 1.6495159701011972 | |
| 7 | CYCLOARTENOL | Seed Oil | -- | -- | | Jim Duke's personal files. |
| 2 | CYSTINE | Seed | 660 | 1245 | -1.3252475351434945 | USDA's Ag Handbook 8 and sequelae) |
| 3 | DECANOIC-ACID | Endosperm | -- | -- | | Jim Duke's personal files. |
| 3 | DECANOIC-ACID | Seed | 4100 | 50330 | 1 | |
| 1 | DELTA-DECALACTONE | Endosperm | -- | -- | | Jim Duke's personal files. |
| 1 | DELTA-DODECALACTONE | Endosperm | -- | -- | | Jim Duke's personal files. |
| 61 | FERULIC-ACID | Leaf | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 15 | FIBER | Seed | 30000 | 115000 | -0.15617696206043077 | |
| 8 | FRUCTOSE | Root | -- | -- | | Jim Duke's personal files. |
| 8 | FRUCTOSE | Resin, Exudate, Sap | 2100 | 2100 | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 8 | FRUCTOSE | Juice | 22200 | 22200 | | Jim Duke's personal files. |

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|----------------|-------------------|---------------------|---------|----------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 22 | GABA | Seed | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 2 | GAMMA-NONALACTONE | Seed | -- | -- | | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 14 | GAMMA-TOCOPHEROL | Oil | -- | -- | | |
| 8 | GENTISIC-ACID | Leaf | -- | -- | | Jim Duke's personal files. |
| 7 | GLUCOSE | Resin, Exudate, Sap | 2400 | 2400 | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 7 | GLUCOSE | Juice | 19700 | 19700 | | Jim Duke's personal files. |
| 7 | GLUCOSE | Root | -- | -- | | Jim Duke's personal files. |
| 8 | GLUTAMIC-ACID | Endosperm | -- | -- | | Jim Duke's personal files. |
| 8 | GLUTAMIC-ACID | Leaf | -- | -- | | Jim Duke's personal files. |
| 8 | GLUTAMIC-ACID | Seed | 7610 | 14355 | -1.154267228968401 | USDA's Ag Handbook 8 and sequelae) |
| 12 | GLYCINE | Endosperm | -- | -- | | Jim Duke's personal files. |
| 12 | GLYCINE | Leaf | -- | -- | | Jim Duke's personal files. |
| 12 | GLYCINE | Seed | 1580 | 2980 | -1.1526395672471974 | USDA's Ag Handbook 8 and sequelae) |
| 3 | GOLD | Plant | -- | -- | | |
| 2 | HEXANOIC-ACID | Seed | 585 | 7190 | | |
| 7 | HISTIDINE | Seed | 770 | 1455 | -1.2412650733514448 | USDA's Ag Handbook 8 and sequelae) |

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|----------------|----------------|---------------------|---------|----------|---------------------|----------------------------------------------------------------------------------------------------------------------------|
| 7 | HISTIDINE | Leaf | -- | -- | | Jim Duke's personal files. |
| 1 | HYDROXYPROLINE | Endosperm | -- | -- | | Jim Duke's personal files. |
| 8 | INOSITOL | Resin, Exudate, Sap | 690 | 690 | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 12 | IODINE | Seed | 0.3 | 0.3 | -0.2504859725466935 | Furr, A.K., et al. 1979 |
| 6 | IRON | Seed | 20 | 33 | -0.4683156382183686 | |
| 3 | ISOLEUCINE | Seed | 1310 | 2470 | -1.0235626374582578 | USDA's Ag Handbook 8 and sequelae) |
| 3 | ISOLEUCINE | Endosperm | -- | -- | | Jim Duke's personal files. |
| 4 | LACTOSE | Root | -- | -- | | Jim Duke's personal files. |
| 7 | LAURIC-ACID | Seed | 25754 | 368847 | 3.356450956978854 | |
| 7 | LAURIC-ACID | Endosperm | -- | -- | | Jim Duke's personal files. |
| 2 | LEUCINE | Leaf | -- | -- | | Jim Duke's personal files. |
| 2 | LEUCINE | Seed | 2470 | 4660 | -1.1889665424024416 | USDA's Ag Handbook 8 and sequelae) |
| 13 | LIGNIN | Hull Husk | 294000 | 294000 | 1 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 3 | LIGUSTRAZINE | Endosperm | -- | -- | | Jim Duke's personal files. |
| 60 | LIMONENE | Fruit | -- | -- | | Jim Duke's personal files. |
| 27 | LINOLEIC-ACID | Seed | 584 | 18694 | -0.7576615677270858 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |

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|----------------|------------------|------------|---------|----------|----------------------|----------------------------------------------------------------------------------------------------------------------------|
| 4 | LYSINE | Endosperm | -- | -- | | Jim Duke's personal files. |
| 4 | LYSINE | Leaf | -- | -- | | Jim Duke's personal files. |
| 4 | LYSINE | Seed | 1470 | 2775 | -1.2629328431370264 | USDA's Ag Handbook 8 and sequelae) |
| 65 | MAGNESIUM | Seed | 300 | 770 | -0.8597643812861001 | Furr, A.K., et al. 1979 |
| 15 | MALIC-ACID | Seed | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 14 | MANGANESE | Seed | 9 | 21 | 2.833645212569222 | |
| 63 | MENTHOL | Fruit | -- | -- | | Jim Duke's personal files. |
| 1 | MERCURY | Seed | 0.1 | 0.1 | -0.12385851994600533 | Furr, A.K., et al. 1979 |
| 15 | METHIONINE | Endosperm | -- | -- | | Jim Duke's personal files. |
| 15 | METHIONINE | Leaf | -- | -- | | Jim Duke's personal files. |
| 15 | METHIONINE | Seed | 620 | 1170 | -0.8120468095481715 | USDA's Ag Handbook 8 and sequelae) |
| 2 | MOLYBDENUM | Seed | 0.03 | 0.03 | -0.8557155877274645 | Furr, A.K., et al. 1979 |
| 13 | MUFA | Seed | 14250 | 26880 | -0.5971507316122795 | USDA's Ag Handbook 8 and sequelae) |
| 6 | MYRISTIC-ACID | Seed | 7650 | 133015 | 1.4452781690520207 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 6 | MYRISTIC-ACID | Seed Oil | -- | -- | | Jim Duke's personal files. |
| 3 | N-HENTRIACONTANE | Seed Oil | -- | -- | | Jim Duke's personal files. |
| 2 | N-HEXACOSANE | Seed Oil | -- | -- | | Jim Duke's personal files. |

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|----------------|------------------------|------------|---------|----------|---------------------|----------------------------------------------------------------------------------------------------------------------------|
| 1 | N-NONACOSANE | Seed Oil | -- | -- | | Jim Duke's personal files. |
| 39 | NIACIN | Seed | 5 | 10 | -0.9844146803254511 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses |
| 3 | NICKEL | Seed | 2.1 | 2.1 | -0.5073146937660691 | Furr, A.K., et al. 1979 |
| 5 | OCTANOIC-ACID | Endosperm | -- | -- | | Jim Duke's personal files. |
| 5 | OCTANOIC-ACID | Seed | 4670 | 57520 | | |
| 18 | OLEIC-ACID | Seed | 2920 | 58958 | -0.4944308344155307 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 25 | P-COUMARIC-ACID | Leaf | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 13 | P-HYDROXY-BENZOIC-ACID | Leaf | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 13 | PALMITIC-ACID | Seed | 4380 | 75495 | 0.858105760546874 | |
| 24 | PECTIN | Seed | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 7 | PHENYLALANINE | Seed | 1690 | 3190 | -0.9971896280936104 | USDA's Ag Handbook 8 and sequelae) |
| 7 | PHENYLALANINE | Leaf | -- | -- | | Jim Duke's personal files. |
| 4 | PHOSPHORUS | Seed | 830 | 2400 | -0.7804502800829126 | |
| 5 | PHYLLOQUINONE | Oil | -- | 0.005 | -1.0944932984058764 | |

| Activity Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|----------------|---------------|---------------------|---------|----------|----------------------|----------------------------------------------------------------------------------------------------------------------------|
| 2 | PHYTOSTEROLS | Seed | 470 | 885 | -0.40781205023024353 | USDA's Ag Handbook 8 and sequelae) |
| 14 | POTASSIUM | Seed | 2560 | 11491 | -0.09489587073970547 | |
| 4 | PUFA | Seed | 3660 | 26880 | -0.601249593588963 | USDA's Ag Handbook 8 and sequelae) |
| 1 | QUINIC-ACID | Seed | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 1 | RAFFINOSE | Root | -- | -- | | Jim Duke's personal files. |
| 1 | RAFFINOSE | Resin, Exudate, Sap | 900 | 900 | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 15 | RIBOFLAVIN | Seed | 0.2 | 0.7 | -1.0823929498985099 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses |
| 7 | SALICYLATES | Seed | 2 | 3 | -0.32408179774656004 | |
| 60 | SELENIUM | Seed | 0.02 | 0.02 | -0.2635767939811563 | Furr, A.K., et al. 1979 |
| 1 | SERINE | Endosperm | -- | -- | | Jim Duke's personal files. |
| 1 | SERINE | Leaf | -- | -- | | Jim Duke's personal files. |
| 1 | SERINE | Seed | 1720 | 3245 | -1.4046655429596806 | USDA's Ag Handbook 8 and sequelae) |
| 14 | SHIKIMIC-ACID | Seed | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 4 | SILICON | Seed | 370 | 370 | -0.5747786449558462 | Furr, A.K., et al. 1979 |
| 1 | SODIUM | Seed | 145 | 626 | 0.2780073375488779 | |

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|----------------|----------------|---------------------|---------|----------|---------------------|----------------------------------------------------------------------------------------------------------------------------|
| 11 | SORBITOL | Endosperm | -- | -- | | Jim Duke's personal files. |
| 10 | SQUALENE | Seed | -- | -- | | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 10 | SQUALENE | Seed Oil | -- | -- | | Jim Duke's personal files. |
| 8 | STEARIC-ACID | Seed | 584 | 23008 | 0.14430588634246846 | |
| 12 | STIGMASTEROL | Seed Oil | -- | -- | | Jim Duke's personal files. |
| 7 | SUCCINIC-ACID | Root | -- | -- | | Jim Duke's personal files. |
| 7 | SUCCINIC-ACID | Seed | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 14 | SUCROSE | Juice | 4300 | 4300 | | Jim Duke's personal files. |
| 14 | SUCROSE | Resin, Exudate, Sap | 134000 | 134000 | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 14 | SULFUR | Seed | 440 | 1370 | -0.6588697590248107 | |
| 4 | SYRINGALDEHYDE | Leaf | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 6 | SYRINGIC-ACID | Leaf | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 35 | TANNIN | Plant | -- | -- | | Jim Duke's personal files. |

| Activity Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|----------------|------------------|------------|---------|----------|---------------------|----------------------------------------------------------------------------------------------------------------------------|
| 31 | THIAMIN | Seed | 0.3 | 1 | -1.3322834288131225 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses |
| 4 | THREONINE | Seed | 1210 | 2285 | -1.3091612941527981 | USDA's Ag Handbook 8 and sequelae) |
| 4 | THREONINE | Leaf | -- | -- | | Jim Duke's personal files. |
| 4 | TIN | Seed | 1.5 | 1.5 | -0.442152019568875 | Furr, A.K., et al. 1979 |
| 2 | TRIDECANOIC-ACID | Seed | -- | -- | | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 29 | TRYPTOPHAN | Seed | 390 | 735 | -0.8833088946354036 | USDA's Ag Handbook 8 and sequelae) |
| 8 | TYROSINE | Leaf | -- | -- | | Jim Duke's personal files. |
| 8 | TYROSINE | Seed | 1030 | 1945 | -1.3427005948815731 | USDA's Ag Handbook 8 and sequelae) |
| 3 | VALINE | Seed | 2020 | 3810 | -1.0100996922183336 | USDA's Ag Handbook 8 and sequelae) |
| 3 | VALINE | Endosperm | -- | -- | | Jim Duke's personal files. |
| 3 | VALINE | Leaf | -- | -- | | Jim Duke's personal files. |
| 16 | VANADIUM | Seed | 0.004 | 0.004 | -0.5871182787387549 | Furr, A.K., et al. 1979 |
| 24 | VANILLIC-ACID | Leaf | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 28 | VANILLIN | Leaf | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 77 | ZINC | Seed | 9 | 17 | -0.5715529290009757 | |