

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Psophocarpus tetragonolobus*

| Activities Count | Chemical       | Plant Part | Low PPM | High PPM | StdDev               | Refernce Citation          |
|------------------|----------------|------------|---------|----------|----------------------|----------------------------|
| 15               | FIBER          | Seed       | 21980.0 | 227005.0 | 0.7282336474734341   | --                         |
| 15               | FIBER          | Leaf       | 25000.0 | 216000.0 | 0.6735231673378518   | --                         |
| 15               | FIBER          | Tuber      | 74000.0 | 173709.0 | 2.160852972122847    | --                         |
| 13               | MUFA           | Seed       | 2500.0  | 65590.0  | -0.31711111223095563 | --                         |
| 18               | OLEIC-ACID     | Seed       | 2480.0  | 61684.0  | -0.47202151385310903 | --                         |
| 22               | BETULINIC-ACID | Root       |         | 53000.0  | 3.8171156804285995   | Jim Duke's personal files. |
| 4                | PUFA           | Seed       | 1860.0  | 47240.0  | -0.4461595808541117  | --                         |
| 27               | LINOLEIC-ACID  | Seed       | 1640.0  | 44381.0  | -0.5375728015633745  | --                         |
| 8                | GLUTAMIC-ACID  | Seed       | 40100.0 | 43749.0  | 0.08589164643808482  | --                         |
| 3                | ASPARTIC-ACID  | Tuber      | 17350.0 | 40728.0  | 1.2126583836273015   | --                         |
| 3                | ASPARTIC-ACID  | Seed       | 31870.0 | 34770.0  | 1.0813768688489356   | --                         |
| 2                | LEUCINE        | Seed       | 24970.0 | 27242.0  | 0.9725558163173301   | --                         |
| 4                | LYSINE         | Seed       | 21360.0 | 23304.0  | 1.517829677713146    | --                         |
| 3                | ASPARTIC-ACID  | Leaf       | 5170.0  | 22333.0  | -0.2966039595260125  | --                         |
| 14               | ARGININE       | Seed       | 18860.0 | 20576.0  | -0.17210131562826794 | --                         |
| 14               | POTASSIUM      | Seed       | 2014.0  | 18873.0  | 0.554303061169027    | --                         |
| 8                | GLUTAMIC-ACID  | Tuber      | 8000.0  | 18779.0  | -0.06387581149516006 | --                         |
| 8                | GLUTAMIC-ACID  | Leaf       | 3890.0  | 16803.0  | -1.142000315027485   | --                         |
| 3                | VALINE         | Seed       | 15300.0 | 16692.0  | 0.57644516120325     | --                         |
| 3                | ISOLEUCINE     | Seed       | 14680.0 | 16016.0  | 0.7049276322959629   | --                         |
| 8                | TYROSINE       | Seed       | 14570.0 | 15896.0  | 1.8890810094036037   | --                         |
| 7                | PHENYLALANINE  | Seed       | 14290.0 | 15590.0  | 0.483590543692155    | --                         |
| 2                | LEUCINE        | Leaf       | 3590.0  | 15508.0  | -0.1548753696789408  | --                         |
| 2                | LEUCINE        | Tuber      | 6400.0  | 15023.0  | 1.67571314544263     | --                         |
| 3                | VALINE         | Tuber      | 5990.0  | 14061.0  | 1.6795363808808315   | --                         |
| 4                | LYSINE         | Tuber      | 5920.0  | 13897.0  | 1.6784251962427683   | --                         |
| 13               | PALMITIC-ACID  | Seed       | 660.0   | 13692.0  | -0.41709066285976165 | --                         |

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|------------------|---------------|------------|---------|----------|----------------------|-------------------|
| 1                | SERINE        | Seed       | 12350.0 | 13474.0  | 0.5557275304904465   | --                |
| 4                | THREONINE     | Seed       | 11790.0 | 12863.0  | 1.0570792621709848   | --                |
| 12               | GLYCINE       | Seed       | 11400.0 | 12437.0  | 0.2146778870656656   | --                |
| 13               | MUFA          | Leaf       | 2850.0  | 12312.0  | 0.46841244175438723  | --                |
| 18               | OLEIC-ACID    | Leaf       | 2840.0  | 12268.0  | 1.0824599430267432   | --                |
| 28               | CALCIUM       | Leaf       | 1845.0  | 11383.0  | -0.4819955536205135  | --                |
| 3                | ALANINE       | Seed       | 10400.0 | 11346.0  | 0.25292271625770724  | --                |
| 1                | SERINE        | Tuber      | 4640.0  | 10892.0  | 1.667447844953693    | --                |
| 7                | PHENYLALANINE | Tuber      | 4510.0  | 10587.0  | 1.6201849608902243   | --                |
| 4                | THREONINE     | Tuber      | 4510.0  | 10587.0  | 1.7166275671075264   | --                |
| 3                | VALINE        | Leaf       | 2450.0  | 10583.0  | -0.5915120272081044  | --                |
| 3                | ISOLEUCINE    | Tuber      | 4250.0  | 9976.0   | 1.5964830014926703   | --                |
| 4                | LYSINE        | Leaf       | 2280.0  | 9849.0   | -0.6872511348812355  | --                |
| 14               | ARGININE      | Tuber      | 4120.0  | 9671.0   | 0.4703507568264136   | --                |
| 3                | ALANINE       | Tuber      | 3970.0  | 9319.0   | 1.557710779605233    | --                |
| 4                | PUFA          | Leaf       | 2130.0  | 9201.0   | -1.4161635126790344  | --                |
| 12               | GLYCINE       | Tuber      | 3900.0  | 9155.0   | 1.533447141764445    | --                |
| 3                | ISOLEUCINE    | Leaf       | 2040.0  | 8812.0   | -0.8377541303154443  | --                |
| 7                | HISTIDINE     | Leaf       | 7900.0  | 8618.0   | 1.6268625166061266   | --                |
| 28               | CALCIUM       | Seed       | 567.0   | 8586.0   | 0.8153644089249918   | --                |
| 29               | TRYPTOPHAN    | Seed       | 7620.0  | 8313.0   | 1.7010446499058511   | --                |
| 8                | TYROSINE      | Tuber      | 3530.0  | 8286.0   | 1.6435482614290524   | --                |
| 8                | STEARIC-ACID  | Seed       | 7450.0  | 8128.0   | -0.38904004052981384 | --                |
| 7                | PHENYLALANINE | Leaf       | 1880.0  | 8121.0   | -0.5561969565076621  | --                |
| 27               | LINOLEIC-ACID | Leaf       | 1870.0  | 8078.0   | -0.01729539289577017 | --                |
| 4                | THREONINE     | Leaf       | 1820.0  | 7862.0   | -0.6461852655700264  | --                |
| 14               | ARGININE      | Leaf       | 1780.0  | 7689.0   | -0.7904243451957023  | --                |

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| 14               | POTASSIUM            | Leaf       | 1760.0  | 7602.0   | -1.004239273450328   | --                |
| 3                | ALANINE              | Leaf       | 1720.0  | 7430.0   | -1.2016097399886847  | --                |
| 12               | GLYCINE              | Leaf       | 1490.0  | 6436.0   | -1.0570165649654388  | --                |
| 1                | SERINE               | Leaf       | 1490.0  | 6436.0   | -0.9790662724469538  | --                |
| 2                | CYSTINE              | Seed       | 5450.0  | 5946.0   | 1.9451550442744132   | --                |
| 29               | TRYPTOPHAN           | Tuber      | 2520.0  | 5915.0   | 1.4074884647877386   | --                |
| 7                | HISTIDINE            | Tuber      | 2410.0  | 5657.0   | 1.598810359532183    | --                |
| 13               | MUFA                 | Tuber      | 2340.0  | 5493.0   | 1.0                  | --                |
| 18               | OLEIC-ACID           | Tuber      | 2320.0  | 5446.0   | 1.0                  | --                |
| 8                | TYROSINE             | Leaf       | 1260.0  | 5443.0   | -0.7120979322596672  | --                |
| 4                | PHOSPHORUS           | Seed       | 334.0   | 5058.0   | -0.07804981200774307 | --                |
| 29               | TRYPTOPHAN           | Leaf       | 1160.0  | 5011.0   | 2.052127089383901    | --                |
| 2                | CYSTINE              | Tuber      | 1970.0  | 4624.0   | 1.412121670161176    | --                |
| 4                | PUFA                 | Tuber      | 1740.0  | 4085.0   | 1.0                  | --                |
| 15               | METHIONINE           | Seed       | 3560.0  | 3884.0   | -0.11124028840146377 | --                |
| 27               | LINOLEIC-ACID        | Tuber      | 1530.0  | 3592.0   | 1.0                  | --                |
| 15               | METHIONINE           | Tuber      | 1430.0  | 3357.0   | 1.6722129344313175   | --                |
| 13               | PALMITIC-ACID        | Leaf       | 760.0   | 3283.0   | -0.3271548367142454  | --                |
| 2                | CYSTINE              | Leaf       | 750.0   | 3240.0   | 0.2732055722490112   | --                |
| 4                | PHOSPHORUS           | Leaf       | 525.0   | 3175.0   | -0.3305242411265015  | --                |
| 15               | ALPHA-LINOLENIC-ACID | Seed       | 230.0   | 2858.0   | -0.27451820813461353 | --                |
| 15               | METHIONINE           | Leaf       | 640.0   | 2765.0   | -0.267559283063708   | --                |
| 65               | MAGNESIUM            | Seed       | 340.0   | 2623.0   | -0.12765623085472022 | --                |
| 8                | STEARIC-ACID         | Leaf       | 440.0   | 1901.0   | 0.616816492807743    | --                |
| 13               | PALMITIC-ACID        | Tuber      | 620.0   | 1455.0   | 1.0                  | --                |
| 15               | ALPHA-LINOLENIC-ACID | Leaf       | 260.0   | 1123.0   | -1.0820526414679714  | --                |
| 4                | PHOSPHORUS           | Tuber      | 450.0   | 1056.0   | -1.0779395175137283  | --                |

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|------------------|----------------------|------------|---------|----------|----------------------|-------------------|
| 8                | STEARIC-ACID         | Tuber      | 360.0   | 845.0    | 1.0                  | --                |
| 28               | CALCIUM              | Tuber      | 300.0   | 704.0    | -0.9355421766643365  | --                |
| 15               | ALPHA-LINOLENIC-ACID | Tuber      | 210.0   | 493.0    |                      | --                |
| 1                | SODIUM               | Seed       | 31.0    | 429.0    | -0.03471403306658902 | --                |
| 65               | MAGNESIUM            | Leaf       | 80.0    | 346.0    | -1.4594878487198142  | --                |
| 6                | MYRISTIC-ACID        | Seed       | 10.0    | 305.0    | -0.2920105038220169  | --                |
| 6                | IRON                 | Leaf       | 20.0    | 259.0    | -0.2640811219950509  | --                |
| 112              | ASCORBIC-ACID        | Fruit      |         | 190.0    | -0.2726753768551174  | --                |
| 6                | IRON                 | Seed       | 15.0    | 158.0    | 0.03348544932864827  | --                |
| 2                | ERUCIC-ACID          | Seed       | 20.0    | 154.0    | -0.8137179048354621  | --                |
| 2                | ERUCIC-ACID          | Leaf       | 20.0    | 86.0     | -1.3746709538531923  | --                |
| 39               | NIACIN               | Seed       | 9.0     | 69.0     | 0.7816979184632326   | --                |
| 77               | ZINC                 | Seed       | 43.0    | 51.0     | 0.16659222798430076  | --                |
| 6                | IRON                 | Tuber      | 20.0    | 47.0     | -0.9038475374149667  | --                |
| 14               | MANGANESE            | Seed       | 34.0    | 44.0     | -0.1186048828781413  | --                |
| 6                | MYRISTIC-ACID        | Leaf       | 10.0    | 43.0     | -0.715739317406298   | --                |
| 12               | COPPER               | Seed       | 28.0    | 33.0     | 1.6495159701011972   | --                |
| 2                | ERUCIC-ACID          | Tuber      | 10.0    | 23.0     |                      | --                |
| 31               | THIAMIN              | Seed       | 1.4     | 11.2     | 1.10126507491978     | --                |
| 15               | RIBOFLAVIN           | Seed       | 1.0     | 7.7      | 1.6003863849892273   | --                |
| 53               | BETA-CAROTENE        | Seed       | 0.78    | 6.0      | -0.05425299955351525 | --                |
| 53               | BETA-CAROTENE        | Fruit      |         | 4.0      | -0.1430687011995372  | --                |
| 15               | FOLACIN              | Seed       | 0.4     | 0.5      | -0.8686494784736316  | --                |
| 9                | HCN                  | Stem       |         |          |                      | --                |
| 112              | ASCORBIC-ACID        | Seed       |         |          |                      | --                |