

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Cyamopsis tetragonoloba*

| Activities Count | Chemical                        | Plant Part | Low PPM  | High PPM | StdDev                | Reference Citation   |
|------------------|---------------------------------|------------|----------|----------|-----------------------|--|
| 0                | WATER                           | Fruit      |          | 825000.0 | 0.236641791750783     | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 0                | TEXASIN-7-O-BETA-D-GLUCOSIDE    | Leaf       |          |          |                       | Kaushal, G. P., Bhatia, I. S. 1982. A Study of Polyphenols in the Seeds and Leaves of Guar ( <i>Cyamopsis tetragonoloba</i> L. Taub). J Sci Food Agr, 33: 461-470.           |
| 8                | STEARIC-ACID                    | Seed Oil   |          | 58000.0  | -0.46568311898509607  | Varade, P. B., Misra, B. K., Sikka, K. C., Singh, S. P. 1984. Nutritive Assessment of Guar Oil ( <i>Cyamopsis tetragonoloba</i> L. Taub). J Agr Food Chem, 32(5): 1073-1075. |
| 0                | QUERCETIN-3-O-BETA-D-RUTINOSIDE | Leaf       |          |          |                       | Kaushal, G. P., Bhatia, I. S. 1982. A Study of Polyphenols in the Seeds and Leaves of Guar ( <i>Cyamopsis tetragonoloba</i> L. Taub). J Sci Food Agr, 33: 461-470.           |
| 176              | QUERCETIN                       | Fruit      |          |          |                       | Daniel, M. 1989. Polyphenols of Some Indian Vegetables. Curr Sci, 58(23): 1332-1334.   |
| 43               | PROTocatechuic-ACID             | Fruit      |          |          |                       | Bajaj, K. L., Rani, M., Arora, Y. K. 1978. Polyphenols and Lignins of Mature Guar Pods ( <i>Cyamopsis tetragonoloba</i> ). Plant Biochem J, 5: 140-145.                      |
| 0                | PROTEIN                         | Leaf       | 225000.0 | 252000.0 | 0.4005844311513218    | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 0                | PROTEIN                         | Fruit      |          | 37000.0  | -0.9718744540749881   | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 0                | PROTEIN                         | Shoot      | 119000.0 | 211000.0 | 0.0029003981990752305 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 0                | PROTEIN                         | Seed       | 242000.0 | 362000.0 | 1.1404403733742927    | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 14               | POTASSIUM                       | Shoot      |          | 19100.0  | -0.3338334397526517   | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 4                | PHOSPHORUS                      | Shoot      | 1600.0   | 2855.0   | -0.24195509734336013  | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 4                | PHOSPHORUS                      | Leaf       |          | 2700.0   | -0.41791805519896574  | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |

| Activities Count | Chemical                                   | Plant Part        | Low PPM | High PPM | StdDev               | Reference Citation   |
|------------------|--|-------------------|---------|----------|----------------------|--|
| 4                | PHOSPHORUS                                 | Fruit             |         | 500.0    | -0.8249556409969647  | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 13               | PALMITIC-ACID                              | Seed Oil          |         | 179000.0 | -0.01895036765611912 | Varade, P. B., Misra, B. K., Sikka, K. C., Singh, S. P. 1984. Nutritive Assessment of Guar Oil (Cyamopsis tetragonoloba L. Taub). J Agr Food Chem, 32(5): 1073-1075. |
| 0                | P-HYDROXYCINNAMYL-ALCOHOL                  | Fruit             |         |          |                      | Bajaj, K. L., Rani, M., Arora, Y. K. 1978. Polyphenols and Lignins of Mature Guar Pods (Cyamopsis tetragonoloba). Plant Biochem J, 5: 140-145.                       |
| 0                | P-COUMAROYL-QUINIC-ACID                    | Leaf              |         |          |                      | Kaushal, G. P., Bhatia, I. S. 1982. A Study of Polyphenols in the Seeds and Leaves of Guar (Cyamopsis tetragonoloba L. Taub). J Sci Food Agr, 33: 461-470.           |
| 25               | P-COUMARIC-ACID                            | Silk Stigma Style |         |          |                      | Kandasamy, M. K. 1986. The Stigmatic Exudate of Cyamopsis tetragonoloba L. Taub. Biochem Physiol Pflanz, 181(8): 571-575.  |
| 18               | OLEIC-ACID                                 | Seed Oil          |         | 290000.0 | -0.16298033837697343 | Varade, P. B., Misra, B. K., Sikka, K. C., Singh, S. P. 1984. Nutritive Assessment of Guar Oil (Cyamopsis tetragonoloba L. Taub). J Agr Food Chem, 32(5): 1073-1075. |
| 6                | MYRISTIC-ACID                              | Seed Oil          |         |          |                      | Varade, P. B., Misra, B. K., Sikka, K. C., Singh, S. P. 1984. Nutritive Assessment of Guar Oil (Cyamopsis tetragonoloba L. Taub). J Agr Food Chem, 32(5): 1073-1075. |
| 0                | MYRICETIN-7-O-BETA-D-GLUCOSIDE-3-GLYCOSIDE | Leaf              |         |          |                      | Kaushal, G. P., Bhatia, I. S. 1982. A Study of Polyphenols in the Seeds and Leaves of Guar (Cyamopsis tetragonoloba L. Taub). J Sci Food Agr, 33: 461-470.           |
| 0                | MYRICETIN-7-O-BETA-D-GLUCOSIDE-3-GLYCOSIDE | Seed              |         |          |                      | Kaushal, G. P., Bhatia, I. S. 1982. A Study of Polyphenols in the Seeds and Leaves of Guar (Cyamopsis tetragonoloba L. Taub). J Sci Food Agr, 33: 461-470.           |

| Activities Count | Chemical                                    | Plant Part | Low PPM | High PPM | StdDev               | Reference Citation  |
|------------------|---|------------|---------|----------|----------------------|---|
| 27               | LINOLEIC-ACID                               | Seed Oil   |         | 472000.0 | 0.3180948503279217   | Varade, P. B., Misra, B. K., Sikka, K. C., Singh, S. P. 1984. Nutritive Assessment of Guar Oil (Cyamopsis tetragonoloba L. Taub). J Agr Food Chem, 32(5): 1073-1075.          |
| 0                | KAEMPFEROL-7-O-BETA-D-GLUCOSIDE-3-GLYCOSIDE | Leaf       |         |          |                      | Kaushal, G. P., Bhatia, I. S. 1982. A Study of Polyphenols in the Seeds and Leaves of Guar (Cyamopsis tetragonoloba L. Taub). J Sci Food Agr, 33: 461-470.                    |
| 0                | KAEMPFEROL-7-O-BETA-D-GLUCOSIDE-3-GLYCOSIDE | Seed       |         |          |                      | Kaushal, G. P., Bhatia, I. S. 1982. A Study of Polyphenols in the Seeds and Leaves of Guar (Cyamopsis tetragonoloba L. Taub). J Sci Food Agr, 33: 461-470.                    |
| 0                | KAEMPFEROL-3-O-RUTINOSIDE                   | Leaf       |         |          |                      | Kaushal, G. P., Bhatia, I. S. 1982. A Study of Polyphenols in the Seeds and Leaves of Guar (Cyamopsis tetragonoloba L. Taub). J Sci Food Agr, 33: 461-470.                    |
| 0                | KAEMPFEROL-3-O-RUTINOSIDE                   | Seed       |         |          |                      | Kaushal, G. P., Bhatia, I. S. 1982. A Study of Polyphenols in the Seeds and Leaves of Guar (Cyamopsis tetragonoloba L. Taub). J Sci Food Agr, 33: 461-470.                    |
| 75               | KAEMPFEROL                                  | Fruit      |         |          |                      | Daniel, M. 1989. Polyphenols of Some Indian Vegetables. Curr Sci, 58(23): 1332-1334.  |
| 1                | JUGLANIN                                    | Fruit      |         |          |                      | Bajaj, K. L., Rani, M., Arora, Y. K. 1978. Polyphenols and Lignins of Mature Guar Pods (Cyamopsis tetragonoloba). Plant Biochem J, 5: 140-145.                                |
| 6                | IRON  | Shoot      |         | 331.0    | -0.2250517161113515  | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses   |
| 6                | IRON  | Fruit      |         | 58.0     | -0.29741781491919245 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses   |
| 0                | GUARAN                                      | Seed       |         |          |                      | Karaw-Ya, M. S., Ammar, N. M., Al-Okbi, S. Y. 1994. Studies on Guar as Hypoglycemic Agent. Fac. Pharmacy, Cairo University, Cairo 11562 Egypt. Egypt J Food Sci, 22(1): 1-12. |

| Activities Count | Chemical          | Plant Part | Low PPM  | High PPM | StdDev              | Reference Citation   |
|------------------|-------------------|------------|----------|----------|---------------------|--|
| 8                | GENTISIC-ACID     | Fruit      |          |          |                     | Bajaj, K. L., Rani, M., Arora, Y. K. 1978. Polyphenols and Lignins of Mature Guar Pods ( <i>Cyamopsis tetragonolobus</i> ). <i>Plant Biochem J</i> , 5: 140-145.           |
| 62               | GALLIC-ACID       | Fruit      |          |          |                     | Bajaj, K. L., Rani, M., Arora, Y. K. 1978. Polyphenols and Lignins of Mature Guar Pods ( <i>Cyamopsis tetragonolobus</i> ). <i>Plant Biochem J</i> , 5: 140-145.           |
| 62               | GALLIC-ACID       | Seed       |          |          |                     | Kaushal, G. P., Bhatia, I. S. 1982. A Study of Polyphenols in the Seeds and Leaves of Guar ( <i>Cyamopsis tetragonoloba</i> L. Taub). <i>J Sci Food Agr</i> , 33: 461-470. |
| 0                | FLUROACETIC-ACID  | Fruit      |          | 1.0      |                     | Vartiainen, T., Gynther, J. 1984. Fluoroacetic Acid in Guar Gum. <i>Food Chem Toxicol</i> , 22(4): 307-308.  |
| 0                | FLUOROACETIC-ACID | Gum        |          | 9.5      |                     | Vartiainen, T., Gynther, J. 1984. Fluoroacetic Acid in Guar Gum. <i>Food Chem Toxicol</i> , 22(4): 307-308.  |
| 15               | FIBER             | Leaf       | 97000.0  | 228000.0 | 0.8219169280936776  | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 15               | FIBER             | Fruit      |          | 23000.0  | -1.1198873805281946 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 15               | FIBER             | Shoot      | 131000.0 | 258000.0 | 0.8880777335227723  | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 0                | FAT               | Shoot      | 2400.0   | 24000.0  | -0.4258935674266053 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 0                | FAT               | Seed       |          | 27000.0  | -1.255672714114354  | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 0                | FAT               | Leaf       |          | 9000.0   | -0.9457674024745288 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 0                | FAT               | Fruit      |          | 2000.0   | -0.6259762506792121 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 51               | ELLAGIC-ACID      | Seed       |          |          |                     | Kaushal, G. P., Bhatia, I. S. 1982. A Study of Polyphenols in the Seeds and Leaves of Guar ( <i>Cyamopsis tetragonoloba</i> L. Taub). <i>J Sci Food Agr</i> , 33: 461-470. |

| Activities Count | Chemical                      | Plant Part | Low PPM  | High PPM | StdDev              | Reference Citation   |
|------------------|-------------------------------|------------|----------|----------|---------------------|--|
| 0                | DAIDZEIN-7-O-BETA-D-GLUCOSIDE | Leaf       |          |          |                     | Kaushal, G. P., Bhatia, I. S. 1982. A Study of Polyphenols in the Seeds and Leaves of Guar (Cyamopsis tetragonoloba L. Taub). J Sci Food Agr, 33: 461-470. |
| 6                | CONIFERYL-ALCOHOL             | Fruit      |          |          |                     | Bajaj, K. L., Rani, M., Arora, Y. K. 1978. Polyphenols and Lignins of Mature Guar Pods (Cyamopsis tetragonoloba). Plant Biochem J, 5: 140-145.             |
| 77               | CHLOROGENIC-ACID              | Leaf       |          |          |                     | Kaushal, G. P., Bhatia, I. S. 1982. A Study of Polyphenols in the Seeds and Leaves of Guar (Cyamopsis tetragonoloba L. Taub). J Sci Food Agr, 33: 461-470. |
| 77               | CHLOROGENIC-ACID              | Seed       |          |          |                     | Kaushal, G. P., Bhatia, I. S. 1982. A Study of Polyphenols in the Seeds and Leaves of Guar (Cyamopsis tetragonoloba L. Taub). J Sci Food Agr, 33: 461-470. |
| 0                | CARBOHYDRATES                 | Shoot      | 697000.0 | 782000.0 | 1.0817725502152693  | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 0                | CARBOHYDRATES                 | Leaf       | 574000.0 | 707000.0 | 0.7566939770077538  | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 0                | CARBOHYDRATES                 | Fruit      |          | 122000.0 | -3.5340739619094204 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 28               | CALCIUM                       | Shoot      | 7430.0   | 19800.0  | 0.3692304919069643  | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 28               | CALCIUM                       | Leaf       |          | 24200.0  | 0.3937598773084697  | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 28               | CALCIUM                       | Fruit      |          | 1300.0   | -0.5898896055857143 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 102              | CAFFEIC-ACID                  | Seed       |          |          |                     | Kaushal, G. P., Bhatia, I. S. 1982. A Study of Polyphenols in the Seeds and Leaves of Guar (Cyamopsis tetragonoloba L. Taub). J Sci Food Agr, 33: 461-470. |
| 53               | BETA-CAROTENE                 | Shoot      |          | 11.0     | -0.6744401420904678 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |

| Activities Count | Chemical   | Plant Part | Low PPM  | High PPM | StdDev               | Reference Citation   |
|------------------|--|------------|----------|----------|----------------------|--|
| 53               | BETA-CAROTENE  | Fruit      |          | 2.0      | -0.14693466516508752 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 7                | ASTRAGALIN   | Leaf       |          |          |                      | Kaushal, G. P., Bhatia, I. S. 1982. A Study of Polyphenols in the Seeds and Leaves of Guar (Cyamopsis tetragonoloba L. Taub). J Sci Food Agr, 33: 461-470. |
| 7                | ASTRAGALIN   | Seed       |          |          |                      | Kaushal, G. P., Bhatia, I. S. 1982. A Study of Polyphenols in the Seeds and Leaves of Guar (Cyamopsis tetragonoloba L. Taub). J Sci Food Agr, 33: 461-470. |
| 0                | ASH  | Leaf       | 144000.0 | 165000.0 | 0.8130765270791607   | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 0                | ASH  | Fruit      |          | 14000.0  | -1.1047928929878599  | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 0                | ASH  | Shoot      | 75000.0  | 80000.0  | -0.5227382651464656  | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 0                | ASH  | Seed       | 33000.0  | 43000.0  | -0.14678225213812016 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 112              | ASCORBIC-ACID  | Shoot      |          | 2800.0   | -0.23555395280964694 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 112              | ASCORBIC-ACID  | Fruit      |          | 490.0    | -0.2540222790363039  | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 0                | 7-O-BETA-D-GLUCOSIDE-3-O-(2-DIRHAMNOSYL-GLUCOSYL)-KAEMPFEROL | Leaf       |          |          |                      | Singh, J., Kaushal, G. P. 1992. A New Flavonoltetraglycoside From Guar (Cyamopsis tetragonoloba) Leaves. J Indian Chem Soc, 69(6): 345-346.                |
| 0                | 7-O-BETA-(2-RHAMNOSYL-GLUCOSYL)-MYRICETIN                    | Seed       |          |          |                      | Singh, J., Kaushal, G. P., Sood, R. 1989. A New Flavonol Glycoside from Guar (Cyamopsis tetragonoloba L. Taub). J Indian Chem Soc, 66(11): 833-834.        |
| 0                | 7-O-BETA-(2-RHAMNOSYL-GLUCOSYL)-MYRICETIN                    | Leaf       |          |          |                      | Singh, J., Kaushal, G. P., Sood, R. 1989. A New Flavonol Glycoside from Guar (Cyamopsis tetragonoloba L. Taub). J Indian Chem Soc, 66(11): 833-834.        |

| Activities Count | Chemical                      | Plant Part | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|-------------------------------|------------|---------|----------|--------|--|
| 0                | 3-EPIKATONIC-ACID             | Seed       |         |          |        | Coxon, D. T., Wells, J. W. 1980. 3-epikatic acid from Guar Meal, <i>Cyamopsis tetragonoloba</i> . <i>Phytochemistry</i> , 19: 1247-1248.                                   |
| 0                | 2,3,4-TRIHYDROXY-BENZOIC-ACID | Leaf       |         |          |        | Kaushal, G. P., Bhatia, I. S. 1982. A Study of Polyphenols in the Seeds and Leaves of Guar ( <i>Cyamopsis tetragonoloba</i> L. Taub). <i>J Sci Food Agr</i> , 33: 461-470. |