

**Dr. Duke's Phytochemical and Ethnobotanical Database**

**Chemicals Found in *Tagetes erecta***

| Activity Count | Chemical                                      | Plant Part | Low PPM | High PPM | StdDev              | Reference Citation   |
|----------------|---|------------|---------|----------|---------------------|--|
| 67             | 1,8-CINEOLE                                   | Plant      | 43      | 43       | -0.5495931805692766 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                               |
| 0              | 2,2',5,5'-TERTHIENYL                          | Plant      | --      | --       |                     | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                               |
| 0              | 2,4-METHYLENE-CHOLESTEROL                     | Flower     | --      | --       |                     | Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar. |
| 0              | 2-CRYPTOXANTHIN                               | Flower     | --      | --       |                     | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                               |
| 0              | 28-ISOFUCOSTEROL                              | Flower     | --      | --       |                     | Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar. |
| 0              | 4-BETA-METHYLERGOSTA-7,24(28)-DIEN-3-BETA-OL  | Flower     | --      | --       |                     | Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar. |
| 0              | 4-BETA-METHYLSTIGMASTA-7,24(28)-DIEN-3BETA-OL | Flower     | --      | --       |                     | Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar. |

| Activity Count | Chemical                                  | Plant Part | Low PPM | High PPM | StdDev | Reference Citation   |
|----------------|---|------------|---------|----------|--------|--|
| 0              | 5'-ETHYNYL-5-(PROP-1-YNYL)-2,2'-BITHIENYL | Plant      | --      | --       |        | Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar. |
| 2              | 5-(3-BUTEN-1-YNYL)-2,2'-BITHIENYL         | Plant      | --      | --       |        |  |
| 0              | 5-(4-ACETOXY-1-BUTENYL)-2,2'-BITHIENYL    | Plant      | --      | 1.3      |        |  |
| 0              | 5-(4-HYDROXY-1-BUTENYL)-2,2'-BITHIENYL    | Plant      | --      | --       |        | Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar. |
| 0              | 6-HYDROXYKAEMPFEROL-7-O-GLUCOSIDE         | Flower     | --      | --       |        | Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar. |
| 0              | 8-HYDROXYQUERCETAGETIN                    | Flower     | --      | --       |        |  |
| 7              | ALPHA-CAROTENE                            | Flower     | --      | --       |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                               |
| 0              | ALPHA-D-PHELLANDRENE                      | Plant      | 52      | 52       |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                               |
| 10             | ALPHA-TERTHIENYL                          | Leaf       | --      | --       |        |  |
| 1              | ANTHERAXANTHIN                            | Flower     | --      | --       |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                               |

| Activity Count | Chemical           | Plant Part | Low PPM | High PPM | StdDev              | Reference Citation   |
|----------------|--------------------|------------|---------|----------|---------------------|--|
| 53             | BETA-CAROTENE      | Flower     | --      | --       |                     | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                               |
| 47             | BETA-SITOSTEROL    | Flower     | --      | --       |                     | Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar. |
| 2              | CAMPESTEROL        | Flower     | --      | --       |                     | Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar. |
| 1              | CHOLESTEROL        | Flower     | --      | --       |                     | Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar. |
| 19             | D-LIMONENE         | Plant      | 320     | 380      | -0.5015846853903156 |  |
| 0              | D-LINALOL          | Plant      | --      | 59       | -1                  |  |
| 0              | D-LINALOOL         | Plant      | 59      | 59       | -0.9837096120750434 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                               |
| 0              | DITHIENYLACETYLENE | Flower     | --      | --       |                     | Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar. |
| 0              | EO                 | Plant      | 1000    | 1000     | -0.6641303623853891 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                               |
| 5              | ETHYL-GALLATE      | Plant      | --      | 1.3      |                     |  |

| Activity Count | Chemical                  | Plant Part | Low PPM | High PPM | StdDev               | Reference Citation   |
|----------------|---------------------------|------------|---------|----------|----------------------|--|
| 0              | FAT                       | Seed       | 200000  | 205000   | -0.31808304365825935 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                               |
| 2              | HELENIEN                  | Flower     | 7400    | 7400     |                      | Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar. |
| 1              | KAEMPFERITRIN             | Flower     | --      | --       |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                               |
| 1              | KAEMPFERITRIN             | Leaf       | 7000    | 7000     |                      | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                               |
| 75             | KAEMPFEROL                | Leaf       | --      | --       |                      | Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar. |
| 5              | KAEMPFEROL-7-O-RHAMNOSIDE | Leaf       | --      | --       |                      | Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar. |
| 0              | L-LINALOL                 | Plant      | --      | 98       | -0.8221976575846884  |  |
| 0              | L-LINALOOL                | Plant      | 98      | 98       | -0.9878117299847998  | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                               |
| 7              | LINALYL-ACETATE           | Plant      | 61      | 61       | -0.5487342575406269  | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                               |

| Activity Count | Chemical                  | Plant Part | Low PPM | High PPM | StdDev               | Reference Citation   |
|----------------|---------------------------|------------|---------|----------|----------------------|--|
| 15             | LUTEIN                    | Flower     | --      | --       |                      |  |
| 0              | LUTEIN-DIMYRISTATE        | Flower     | --      | --       |                      |  |
| 0              | LUTEIN-DIMYRISTATE        | Plant      | --      | --       |                      |  |
| 0              | LUTEIN-DIPALMITATE        | Plant      | --      | --       |                      |  |
| 0              | LUTEIN-DIPALMITATE        | Flower     | --      | --       |                      |  |
| 0              | LUTEIN-MONOMYRISTATE      | Flower     | --      | --       |                      | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.                                |
| 0              | N-NONYL-ALDEHYDE          | Plant      | 24      | 60       |                      | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                               |
| 2              | OCIMENE                   | Plant      | 257     | 298      | -0.5135251210379392  |  |
| 0              | PHYTOFLUENE               | Flower     | --      | --       |                      | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                               |
| 0              | PROTEIN                   | Seed       | 238000  | 240000   | 0.055187192253383005 |  |
| 0              | PYRETHRINS                | Flower     | 9000    | 9000     |                      | Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar. |
| 8              | QUERCETAGETIN             | Flower     | --      | --       |                      |  |
| 0              | QUERCETAGETIN-3-GLUCOSIDE | Flower     | --      | --       |                      | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.   |

| Activity Count | Chemical                       | Plant Part | Low PPM | High PPM | StdDev              | Reference Citation   |
|----------------|--------------------------------|------------|---------|----------|---------------------|--|
| 0              | QUERCETAGETIN-7-GLUCOSIDE      | Flower     | --      | --       |                     | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.   |
| 3              | QUERCETAGITRIN                 | Flower     | --      | --       |                     | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                               |
| 12             | STIGMASTEROL                   | Flower     | --      | --       |                     | Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar. |
| 0              | TAGETIIN                       | Flower     | --      | --       |                     |  |
| 2              | TAGETONE                       | Plant      | 47      | 62       | -0.7611555906745682 |  |
| 0              | TERTHIENYL                     | Plant      | --      | --       |                     |  |
| 0              | XANTHOPHYLL-MYRISTATE-STEARATE | Plant      | --      | --       |                     | Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar. |
| 0              | XANTHOPHYLL-PALMITATE-STEARATE | Plant      | --      | --       |                     | Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar. |