

# P **Calendula officinalis**

## Common Name(s)

Calendula, Pot-Marigold

## How Used

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| Chemical | Plant Part                                       | Low PPM            | High PPM | StdDev | Reference | Citation |
|----------|--|--------------------|----------|--------|-----------|----------|
| 0        | 12-URSENE-3,6,21-TRIOL                           | Plant              | --       | --     |           |          |
| 0        | 2,4-METHYLENE-CHOLESTEROL                        | Flower             | --       | --     |           |          |
| 0        | 24-METHYLCHOLEST-5,22-DIEN-3-BETA-OL             | Sprout<br>Seedling | --       | --     |           |          |
| 0        | 24-METHYLCHOLEST-7-EN-7-BETA-OL                  | Sprout<br>Seedling | --       | --     |           |          |
| 0        | 28-ISOFUCOSTEROL                                 | Flower             | --       | --     |           |          |
| 0        | 4-ALPHA-METHYL-24-METHYLENE-CHOLEST-7EN-3BETA-OL | Plant              | --       | --     |           |          |
| 0        | 4-ALPHA-METHYLSTIGMASTA-7,24(28)-DIEN-3BETA-OL   | Plant              | --       | --     |           |          |
| 0        | 4-BETA-METHYLERGOSTA-7,24(28)-DIEN-3-BETA-OL     | Flower             | --       | --     |           |          |
| 0        | 4-BETA-METHYLSTIGMASTA-7,24(28)-DIEN-3BETA-OL    | Plant              | --       | --     |           |          |
| 0        | 5-PHYTYLTOLUQUINONE                              | Plant              | --       | --     |           |          |

| Chemical Plant Part |   | Low PPM | High PPM | StdDev | Reference           | Citation |
|---------------------|---|---------|----------|--------|---------------------|----------|
| 0                   | 6-PHYTYLTOLUQUINONE                           | Plant   | --       | --     |                     |          |
| 0                   | 7-METHYLTOCOL                                 | Plant   | --       | --     |                     |          |
| 0                   | 8-METHYL-TOCOL                                | Plant   | --       | --     |                     |          |
| 0                   | 9'-CIS-LUTEIN                                 | Flower  | --       | --     |                     |          |
| 0                   | 9-HYDROXY-TRANS-10,CIS-12-OCTADECADIENIC-ACID | Seed    | --       | --     |                     |          |
| 0                   | ALKALOIDS                                     | Plant   | 190000   | 190000 | 4.845499988585718   |          |
| 10                  | ALPHA-AMYRIN                                  | Flower  | --       | --     |                     |          |
| 32                  | ALPHA-TOCOPHEROL                              | Leaf    | --       | --     |                     |          |
| 0                   | ALPHA-TOCOPHEROLQUINONE                       | Plant   | --       | --     |                     |          |
| 0                   | ARNADIOL                                      | Flower  | --       | --     |                     |          |
| 112                 | ASCORBIC-ACID                                 | Flower  | 1330     | 3100   | 0.11959038436316784 |          |
| 0                   | AUROCHROME                                    | Flower  | --       | --     |                     |          |
| 0                   | AUROXANTHIN                                   | Flower  | --       | --     |                     |          |
| 9                   | BETA-AMYRIN                                   | Flower  | --       | --     |                     |          |
| 47                  | BETA-SITOSTEROL                               | Flower  | --       | --     |                     |          |
| 0                   | BREIN   | Flower  | --       | --     |                     |          |
| 102                 | CAFFEIC-ACID                                  | Plant   | --       | --     |                     |          |
| 28                  | CALCIUM                                       | Leaf    | 30400    | 30400  | 0.8173912787097098  |          |
| 0                   | CALENDINE                                     | Flower  | 100      | 100    |                     |          |

| Chemical Plant Part |                        | Low PPM            | High PPM | StdDev | Reference | Citation |
|---------------------|------------------------|--------------------|----------|--------|-----------|----------|
| 0                   | CALENDOL               | Plant              | --       | --     |           |          |
| 0                   | CALENDRIN              | Plant              | --       | --     |           |          |
| 0                   | CALENDULADIOL          | Flower             | --       | --     |           |          |
| 0                   | CALENDULOSIDES         | Root               | --       | --     |           |          |
| 0                   | CAMPESTANOL            | Shoot              | --       | --     |           |          |
| 2                   | CAMPESTEROL            | Flower             | --       | --     |           |          |
| 0                   | CAROTENOIDS            | Flower             | 30000    | 30000  |           |          |
| 31                  | CARYOPHYLLENE          | Flower             | --       | --     |           |          |
| 0                   | CERYL-ALCOHOL          | Flower             | --       | --     |           |          |
| 77                  | CHLOROGENIC-ACID       | Flower             | --       | --     |           |          |
| 0                   | CHOLEST-7-EN-3-BETA-OL | Sprout<br>Seedling | --       | --     |           |          |
| 0                   | CHOLESTANOL            | Sprout<br>Seedling | --       | --     |           |          |
| 1                   | CHOLESTEROL            | Flower             | --       | --     |           |          |
| 0                   | CHRYSANTHEMAXANTHIN    | Flower             | --       | --     |           |          |
| 0                   | CIS-FLAVOXANTHIN       | Flower             | --       | --     |           |          |
| 0                   | CIS-LUTEOXANTHIN       | Flower             | --       | --     |           |          |
| 0                   | CITROXANTHIN           | Plant              | --       | --     |           |          |
| 1                   | DIMORPHECOLIC-ACID     | Seed               | --       | --     |           |          |

| Chemical Plant Part |                             | Low PPM | High PPM | StdDev | Reference Citation   |
|---------------------|-----------------------------|---------|----------|--------|----------------------|
| 0                   | EO                          | Flower  | 200      | 4000   | -0.29015360760420156 |
| 0                   | ERYTHRODIOL                 | Flower  | --       | --     |                      |
| 2                   | FARADIOL                    | Flower  | --       | --     |                      |
| 0                   | FAT                         | Seed    | 260000   | 450000 | 0.9724195926436688   |
| 0                   | FLAVOCHROME                 | Flower  | --       | --     |                      |
| 0                   | FLAVOCHROME                 | Plant   | --       | --     |                      |
| 0                   | FLAVONOIDS                  | Flower  | 3300     | 8000   | -0.8781392402034289  |
| 0                   | FLAVOXANTHIN                | Flower  | --       | --     |                      |
| 0                   | FUCOSTANOL                  | Plant   | --       | --     |                      |
| 1                   | GALACTOSE                   | Flower  | --       | --     |                      |
| 14                  | GAMMA-TOCOPHEROL            | Leaf    | --       | --     |                      |
| 8                   | GENTISIC-ACID               | Flower  | --       | --     |                      |
| 0                   | HELIANTRIOL-C               | Flower  | --       | --     |                      |
| 0                   | HELIANTRIOL-F               | Flower  | --       | --     |                      |
| 19                  | INULIN                      | Root    | --       | --     |                      |
| 1                   | ISORHAMNETIN-3-GLUCOSIDE    | Flower  | --       | --     |                      |
| 0                   | ISORHAMNETIN-3-O-RUTINOSIDE | Flower  | --       | --     |                      |
| 2                   | ISORHAMNETIN-3-RUTINOSIDE   | Flower  | --       | --     |                      |
| 75                  | KAEMPFEROL                  | Plant   | --       | --     |                      |

| Chemical Plant Part |                                      | Low PPM | High PPM | StdDev | Reference             | Citation |
|---------------------|--------------------------------------|---------|----------|--------|-----------------------|----------|
| 0                   | LAPENETRIOL                          | Flower  | --       | --     |                       |          |
| 7                   | LAURIC-ACID                          | Plant   | 10000    | 17500  | 1.71672185861966      |          |
| 27                  | LINOLEIC-ACID                        | Seed    | 100000   | 177500 | 0.6030040062751071    |          |
| 0                   | LINOLENIC-ACID                       | Seed    | 18600    | 32200  | -0.017729945554310577 |          |
| 0                   | LONGISPINOGENINE                     | Flower  | --       | --     |                       |          |
| 0                   | LUP-20(29)-ENE-3BETA,16BETA,28-TRIOL | Flower  | --       | --     |                       |          |
| 21                  | LUPEOL                               | Flower  | --       | --     |                       |          |
| 15                  | LUTEIN                               | Flower  | --       | --     |                       |          |
| 0                   | LUTEIN-EPOXIDE                       | Flower  | --       | --     |                       |          |
| 0                   | LUTEOXANTHIN                         | Flower  | --       | --     |                       |          |
| 16                  | LYCOPENE                             | Flower  | --       | --     |                       |          |
| 15                  | MALIC-ACID                           | Flower  | 6400     | 6400   | -1                    |          |
| 0                   | MANILADIOL                           | Flower  | --       | --     |                       |          |
| 0                   | METHYL-PENTOSE                       | Flower  | --       | --     |                       |          |
| 3                   | MUCILAGE                             | Flower  | 15000    | 15000  | -1.6128887758414006   |          |
| 0                   | MUTATOCHROME                         | Plant   | --       | --     |                       |          |
| 0                   | MUTAXANTHIN                          | Flower  | --       | --     |                       |          |
| 6                   | MYRISTIC-ACID                        | Seed    | 10300    | 16100  | -0.08524029367925882  |          |
| 0                   | NARCISSIN                            | Flower  | --       | --     |                       |          |

| Chemical Plant Part |                                    | Low PPM | High PPM | StdDev | Reference Citation   |
|---------------------|------------------------------------|---------|----------|--------|----------------------|
| 0                   | NEOLYCOPENE                        | Flower  | --       | --     |                      |
| 0                   | OLEAN-12-ENE-3BETA,16BETA,28-TRIOL | Flower  | --       | --     |                      |
| 64                  | OLEANOLIC-ACID                     | Flower  | --       | --     |                      |
| 18                  | OLEIC-ACID                         | Seed    | 42300    | 73000  | -0.37899734969890375 |
| 25                  | P-COUMARIC-ACID                    | Plant   | --       | --     |                      |
| 13                  | P-HYDROXY-BENZOIC-ACID             | Flower  | --       | --     |                      |
| 0                   | P-HYDROXYPHENYLACETIC-ACID         | Flower  | --       | --     |                      |
| 13                  | PALMITIC-ACID                      | Seed    | 38900    | 67000  | 0.6828263466537076   |
| 2                   | PALMITOLEIC-ACID                   | Seed    | 12000    | 20500  | 0.1936260374258411   |
| 1                   | PENTADECANOIC-ACID                 | Flower  | --       | --     |                      |
| 0                   | PHYTOFLUENE                        | Flower  | --       | --     |                      |
| 0                   | PLASTOQUINONE                      | Plant   | --       | --     |                      |
| 0                   | PROTEIN                            | Flower  | 6400     | 6400   | -1.582397698741256   |
| 0                   | PSEUDOTARAXASTEROL                 | Flower  | --       | --     |                      |
| 0                   | PSI-TARAXASTEROL                   | Flower  | --       | --     |                      |
| 0                   | PYROGALLOL-TANNIN                  | Flower  | --       | --     |                      |
| 176                 | QUERCETIN                          | Plant   | --       | --     |                      |
| 0                   | RESIN                              | Flower  | 34000    | 34000  |                      |
| 1                   | RUBIXANTHIN                        | Plant   | --       | --     |                      |

| Chemical Plant Part |  | Low PPM            | High PPM | StdDev | Reference Citation  |
|---------------------|--|--------------------|----------|--------|---------------------|
| 87                  | RUTIN  | Flower             | --       | --     |                     |
| 34                  | SALICYLIC-ACID                               | Plant              | 0.34     | 0.34   | -0.7273973384287522 |
| 0                   | SAPONIN                                      | Flower             | --       | --     |                     |
| 0                   | SAPONOSIDES                                  | Plant              | --       | --     |                     |
| 0                   | STIGMAST-7-EN-3-BETA-OL                      | Sprout<br>Seedling | --       | --     |                     |
| 0                   | STIGMASTANOL                                 | Sprout<br>Seedling | --       | --     |                     |
| 12                  | STIGMASTEROL                                 | Flower             | --       | --     |                     |
| 6                   | SYRINGIC-ACID                                | Flower             | --       | --     |                     |
| 35                  | TANNIN                                       | Leaf               | 64500    | 64500  | -0.561937386622043  |
| 0                   | TARAX-20-ENE-3BETA,16BETA,22ALPHA-TRIOL      | Flower             | --       | --     |                     |
| 0                   | TARAX-20-ENE-3BETA,16BETA,30-TRIOL           | Flower             | --       | --     |                     |
| 2                   | TARAXASTEROL                                 | Flower             | --       | --     |                     |
| 0                   | TRANS-8,TRANS-10,CIS-12-OCTADECATRIENIC-ACID | Seed               | --       | --     |                     |
| 8                   | UBIQUINONE                                   | Root               | --       | --     |                     |
| 0                   | URONIC-ACID                                  | Flower             | --       | --     |                     |
| 0                   | URSA-12-ENE-3BETA,16BETA,21-TRIOL            | Plant              | --       | --     |                     |
| 0                   | URSADIOL                                     | Plant              | --       | --     |                     |
| 0                   | URSATRIOL                                    | Flower             | --       | --     |                     |

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|---------------------|---------------|---------|----------|--------|-----------|----------|
| 24                  | VANILLIC-ACID | Flower  | --       | --     |           |          |
| 2                   | VIOLAXANTHIN  | Plant   | --       | --     |           |          |
| 0                   | ZETA-CAROTENE | Flower  | --       | --     |           |          |