

Dr. Duke's Phytochemical and Ethnobotanical Database

Chemicals Found in *Symphytum officinale*

| Activity Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|----------------|------------------|------------|---------|----------|-----------------------|---|
| 12 | ALLANTOIN | Leaf | 1100 | 20000 | 1 | |
| 12 | ALLANTOIN | Root | 6000 | 8000 | 1.414211703032736 | |
| 5 | ALUMINUM | Leaf | 26 | 237 | -0.5262242971508979 | |
| 5 | ALUMINUM | Root | 237 | 237 | -0.18531623688311008 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 112 | ASCORBIC-ACID | Leaf | 88 | 800 | -0.3696902910647434 | |
| 112 | ASCORBIC-ACID | Root | 132 | 132 | -0.5705165097451346 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 2 | ASPARAGINE | Root | 10000 | 30000 | 0 | |
| 53 | BETA-CAROTENE | Root | 660 | 660 | 3.7837756184374194 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 53 | BETA-CAROTENE | Leaf | 12 | 108 | -0.6676049250693852 | |
| 102 | CAFFEIC-ACID | Root | -- | -- | | |
| 28 | CALCIUM | Root | 11300 | 11300 | 0.4268132451111813 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 28 | CALCIUM | Leaf | 1980 | 18000 | -0.029871524092770517 | |
| 77 | CHLOROGENIC-ACID | Root | -- | -- | | |
| 20 | CHOLINE | Root | -- | -- | | |
| 24 | CHROMIUM | Root | 8 | 8 | 1.034555549691094 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |

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|----------------|-------------------|------------|---------|----------|----------------------|---|
| 24 | CHROMIUM | Leaf | 0.2 | 1.8 | -0.4929482981471673 | |
| 2 | COBALT | Root | 129 | 129 | 2.254743268218843 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 2 | COBALT | Leaf | -- | -- | | |
| 3 | CONSOLICINE | Root | -- | -- | | |
| 4 | CONSOLIDINE | Root | 17 | 17 | | |
| 3 | ECHIMIDINE | Root | -- | -- | | |
| 15 | FIBER | Root | 72000 | 72000 | -0.35781867764508235 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 8 | FRUCTOSE | Root | -- | -- | | |
| 22 | GABA | Root | -- | -- | | |
| 7 | GLUCOSE | Root | -- | -- | | |
| 4 | GLUCURONIC-ACID | Root | -- | -- | | |
| 6 | IRON | Root | 810 | 810 | 0.7351070892840852 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 6 | IRON | Leaf | 1.3 | 12 | -0.890161290433994 | |
| 3 | LASIOCARPINE | Root | -- | -- | | |
| 3 | LITHOSPERMIC-ACID | Root | -- | -- | | |
| 1 | LYCOPSAMINE | Root | -- | -- | | |
| 65 | MAGNESIUM | Leaf | 77 | 700 | -1.3227963811163561 | |

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|----------------|---------------------|------------|---------|----------|----------------------|---|
| 65 | MAGNESIUM | Root | 1700 | 1700 | -0.45843259303324313 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 14 | MANGANESE | Leaf | 0.6 | 5.8 | -0.4502436253607189 | |
| 14 | MANGANESE | Root | 67 | 67 | 0.2541689976431844 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 3 | MUCILAGE | Root | 290000 | 290000 | 1.2769493662553644 | |
| 1 | MUCOPOLYSACCHARIDES | Root | 250000 | 300000 | | |
| 39 | NIACIN | Leaf | 10 | 89 | -0.10339986544967049 | |
| 39 | NIACIN | Root | -- | 67 | 0.48577546650469927 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 4 | PHOSPHORUS | Root | 2111 | 2111 | -0.24717782192265478 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 4 | PHOSPHORUS | Leaf | 242 | 2200 | -0.5099115436962968 | |
| 14 | POTASSIUM | Root | 15900 | 15900 | 0.008875914897978466 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 14 | POTASSIUM | Leaf | 1870 | 17000 | -0.5892446041503846 | |
| 15 | RIBOFLAVIN | Root | 7.2 | 7.2 | 0.6839813792958593 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 15 | RIBOFLAVIN | Leaf | 0.8 | 7.2 | -0.1441116267822773 | |
| 57 | ROSMARINIC-ACID | Leaf | 5000 | 5000 | -0.34272410314857343 | |
| 60 | SELENIUM | Leaf | 0.1 | 1.2 | -0.29034536355768803 | |

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|----------------|--------------|------------|---------|----------|----------------------|---|
| 60 | SELENIUM | Root | -- | 5.7 | 0.043025803419244356 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 1 | SILICIC-ACID | Leaf | 40000 | 40000 | | |
| 1 | SILICIC-ACID | Root | -- | -- | | |
| 4 | SILICON | Leaf | 1 | 9 | -0.38642290679786806 | |
| 4 | SILICON | Root | 35 | 35 | -0.18212553697929784 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 1 | SODIUM | Leaf | 12 | 110 | -0.6277481449277332 | |
| 1 | SODIUM | Root | 3510 | 3510 | 1.1215361621673223 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 12 | STIGMASTEROL | Root | -- | -- | | |
| 14 | SUCROSE | Root | -- | -- | | |
| 1 | SYMPHYTINE | Root | -- | -- | | |
| 35 | TANNIN | Plant | 80000 | 90000 | 0.09291261850435828 | |
| 31 | THIAMIN | Root | 1.2 | 1.2 | -0.48699564487025615 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 4 | TIN | Leaf | 0.7 | 6.7 | -1.0681794992129428 | |
| 4 | TIN | Root | 6.7 | 6.7 | -0.9947649249747477 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 3 | XYLOSE | Root | -- | -- | | |
| 77 | ZINC | Leaf | -- | -- | | |

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|----------------|----------|------------|---------|----------|---------------------|---|
| 77 | ZINC | Root | 2.8 | 2.8 | -0.9363126098748169 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |