

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Harpagophytum procumbens*

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Refernce Citation |
|------------------|------------------|------------|---------|----------|----------------------|-----------------------------|
| 112 | ASCORBIC-ACID | Root | | | | -- |
| 102 | CAFFEIC-ACID | Root | | | | -- |
| 89 | URSOLIC-ACID | Tuber | | | | -- |
| 89 | URSOLIC-ACID | Root | | | | -- |
| 78 | LUTEOLIN | Root | | | | -- |
| 78 | LUTEOLIN | Tuber | | | | -- |
| 77 | CHLOROGENIC-ACID | Root | | | | -- |
| 77 | CHLOROGENIC-ACID | Tuber | | | | -- |
| 77 | ZINC | Root | 0.3 | 1.8 | -0.9801103054105488 | -- |
| 75 | KAEMPFEROL | Root | | | | Abstract (See species file) |
| 75 | KAEMPFEROL | Tuber | | | | -- |
| 65 | MAGNESIUM | Root | 1034.0 | 5440.0 | 1.5316389141216484 | -- |
| 64 | OLEANOLIC-ACID | Tuber | | | | -- |
| 64 | OLEANOLIC-ACID | Root | | | | -- |
| 60 | SELENIUM | Root | 0.3 | 1.5 | -0.25574803129140883 | -- |
| 53 | BETA-CAROTENE | Root | | | | -- |
| 47 | BETA-SITOSTEROL | Tuber | | | | -- |
| 39 | NIACIN | Root | 15.0 | 79.0 | 0.8335630063290778 | -- |
| 28 | CALCIUM | Root | 1151.0 | 6060.0 | -0.1470613057174478 | -- |
| 27 | LINOLEIC-ACID | Tuber | | | | -- |
| 24 | CHROMIUM | Root | 0.2 | 1.2 | -0.32076409255495114 | -- |
| 20 | VERBASCOSIDE | Root | | | | -- |
| 20 | VERBASCOSIDE | Plant | | | | -- |
| 18 | CINNAMIC-ACID | Root | | | | -- |
| 18 | OLEIC-ACID | Tuber | | | | -- |
| 18 | CINNAMIC-ACID | Tuber | | | | -- |
| 15 | FISETIN | Tuber | | | | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Refernce Citation |
|------------------|---------------|------------|---------|----------|-----------------------|-----------------------------|
| 15 | RIBOFLAVIN | Root | | | | -- |
| 15 | FISETIN | Root | | | | Abstract (See species file) |
| 14 | ARGININE | Root | | 840.0 | -0.4965861004016072 | -- |
| 14 | POTASSIUM | Root | 1883.0 | 9910.0 | -0.4297324351495235 | -- |
| 14 | SUCROSE | Root | | 27300.0 | -0.9841312900669343 | -- |
| 14 | MANGANESE | Root | 2.0 | 7.7 | -0.4539282012059865 | -- |
| 14 | SUCROSE | Tuber | | | | -- |
| 13 | PALMITIC-ACID | Tuber | | | | -- |
| 12 | STIGMASTEROL | Tuber | | | | -- |
| 12 | GLYCINE | Root | | | | -- |
| 10 | SQUALENE | Tuber | | | | -- |
| 8 | STEARIC-ACID | Tuber | | | | -- |
| 8 | GLUTAMIC-ACID | Root | | | | -- |
| 8 | FRUCTOSE | Root | | 2700.0 | -0.529803942677962 | -- |
| 8 | FRUCTOSE | Tuber | | | | -- |
| 7 | HISTIDINE | Root | | | | -- |
| 7 | PHENYLALANINE | Root | | | | -- |
| 7 | GLUCOSE | Root | | 2500.0 | -0.9499312356047811 | -- |
| 7 | GLUCOSE | Tuber | | | | -- |
| 6 | IRON | Root | 55.0 | 290.0 | -0.020343963862057824 | -- |
| 6 | HARPAGOSIDE | Root | 1000.0 | 30000.0 | | -- |
| 6 | HARPAGIDE | Tuber | | | | -- |
| 6 | HARPAGIDE | Root | | 546.7 | | -- |
| 6 | HARPAGOSIDE | Tuber | | | | -- |
| 6 | HARPAGOSIDE | Leaf | | | | -- |
| 6 | HARPAGOSIDE | Stem | | | | -- |
| 6 | HARPAGOSIDE | Fruit | | | | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Refernce Citation |
|------------------|------------------|----------------|---------|----------|----------------------|-----------------------------|
| 6 | HARPAGOSIDE | Flower | | | | -- |
| 6 | HARPAGOSIDE | Tissue Culture | | | | -- |
| 5 | DAUCOSTEROL | Tuber | | | | -- |
| 5 | DAUCOSTEROL | Root | | | | -- |
| 5 | ALUMINUM | Root | 178.0 | 939.0 | 0.1913466692650815 | -- |
| 5 | KAEMPFERIDE | Tuber | | | | -- |
| 4 | SILICON | Root | 0.8 | 4.3 | -0.32315188483809987 | -- |
| 4 | LYSINE | Root | | | | -- |
| 4 | PHOSPHORUS | Root | 134.0 | 707.0 | -0.49387369829927447 | -- |
| 4 | TIN | Root | 5.0 | 24.0 | 0.7637747609302243 | -- |
| 3 | ASPARTIC-ACID | Root | | 160.0 | -1.2748319398126813 | -- |
| 3 | N-HENTRIACONTANE | Tuber | | | | -- |
| 3 | ALANINE | Root | | 60.0 | -1.665072432864305 | -- |
| 3 | VALINE | Root | | | | -- |
| 2 | N-HEXACOSANE | Tuber | | | | -- |
| 2 | CAMPESTEROL | Tuber | | | | -- |
| 2 | LEUCINE | Root | | | | -- |
| 2 | COBALT | Root | 3.0 | 14.5 | -0.23048536047099405 | -- |
| 1 | RAFFINOSE | Tuber | | | | -- |
| 1 | STACHYOSE | Tuber | | | | -- |
| 1 | RAFFINOSE | Root | 3000.0 | 24000.0 | -0.8101404467277987 | -- |
| 1 | SERINE | Root | | 450.0 | -1.6398861309683237 | -- |
| 1 | N-NONACOSANE | Tuber | | | | -- |
| 1 | IRIDOIDS | Root | 1000.0 | 30000.0 | | -- |
| 1 | ACETOSIDE | Root | | | | Abstract (See species file) |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|-----------------------------------|------------|---------|----------|----------------------|--|
| 1 | IRIDOIDS | Leaf | | | | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. |
| 1 | GALACTOSE | Root | | 3600.0 | -1.0 | -- |
| 1 | GALACTOSE | Plant | | | | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. |
| 1 | STACHYOSE | Root | 6000.0 | 460000.0 | 0.31750232929843175 | -- |
| 1 | SODIUM | Root | 136.0 | 718.0 | -0.17846091709932732 | -- |
| 0 | PROCUMBOSIDE | Plant | | | | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. |
| 0 | 2-METHOXY-BENZYL ALCOHOL | Tuber | | | | -- |
| 0 | 8-O-(P-COUMAROYL)-HARPAGIDE | Plant | | | | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. |
| 0 | MYO-INOSITOL | Root | | | | -- |
| 0 | HARPAGOQUINONE | Tuber | | | | -- |
| 0 | STIGMASTEROL-3-O-BETA-D-GLUCOSIDE | Root | | | | -- |
| 0 | N-DOCOSANE | Tuber | | | | -- |
| 0 | PROCUMBIDE-6'-O-P-COUMAROYL-ESTER | Root | | | | Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp. |
| 0 | 6'-O-(P-COUMAROYL)-PROCUMBIDE | Plant | | | | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. |
| 0 | HARPAGOGENIN | Tuber | | | | -- |

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|------------------|------------------------------|------------|---------|----------|----------------------|--|
| 0 | ISOVERBASCOSIDE | Root | | | | -- |
| 0 | N-ALKANES | Root | | | | Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp. |
| 0 | ISOACETOSIDE | Root | | | | Abstract (See species file) |
| 0 | THIAMINE | Root | | | | -- |
| 0 | 3-BETA-ACETYL-OLEANOLIC ACID | Root | | | | -- |
| 0 | 8-P-COUMAROYL-HARPAGIDE | Tuber | | | | -- |
| 0 | PROCUMBIDE | Tuber | | | | -- |
| 0 | MYO-INOSITOL | Plant | | | | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. |
| 0 | SUGARS | Root | 11400.0 | 60000.0 | -0.424742309250878 | -- |
| 0 | OLEANOLIC-ACID-ACETATE | Tuber | | | | -- |
| 0 | 8-O(P-COUMAROYL)-HARPAGIDE | Root | | 184.0 | | -- |
| 0 | N-TRICOSANE | Tuber | | | | -- |
| 0 | PROTEIN | Root | 19380.0 | 102000.0 | -0.18431196193487812 | -- |
| 0 | URSOLIC ACID ACETATE | Tuber | | | | -- |
| 0 | LUTEOLIN-GLUCOSIDES | Root | | | | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| 0 | BIOSIDE | Root | | | | Abstract (See species file) |
| 0 | N-HENEICOSANE | Tuber | | | | -- |
| 0 | N-OCTACOSANE | Tuber | | | | -- |
| 0 | PROCUMBIDE | Root | 60.0 | 210.0 | | -- |
| 0 | KAEMPFEROL-GLUCOSIDES | Root | | | | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |

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|------------------|--|------------|---------|----------|----------------------|---|
| 0 | HARPAGOQUINONE | Root | | | | Abstract (See species file) |
| 0 | HARPAQUINONE | Root | | | | -- |
| 0 | N-HEPTACOSANE | Tuber | | | | -- |
| 0 | CHARPAGOSIDE | Root | | | | -- |
| 0 | PROLINE | Root | | | | -- |
| 0 | WATER | Root | | 810000.0 | 0.26675246191923024 | -- |
| 0 | FAT | Root | 4750.0 | 25000.0 | 0.07070501587931635 | -- |
| 0 | N-DOTRIACONTANE | Tuber | | | | -- |
| 0 | N-TRIACONTANE | Tuber | | | | -- |
| 0 | CAMPESTEROL-3-O-BETA-D-GLUCOSIDE | Tuber | | | | -- |
| 0 | PROCUMBOSIDE | Root | | 28.0 | | -- |
| 0 | FIBER(DIETARY) | Root | | 420000.0 | 0.23558261041932288 | -- |
| 0 | N-TETRACOSANE | Tuber | | | | -- |
| 0 | HARPAGOGENIN | Plant | | | | Lawrence Review of Natural Products, Jul-87. |
| 0 | 6'-O-(P-COUMAROYL)-PROCUMBIDE | Root | | 31.3 | | -- |
| 0 | FIBER(CRUDE) | Root | | 110000.0 | -0.03773656051453802 | -- |
| 0 | BETA-(3'-4'-DIHYDROXY-PHENYL)-ETHYL-O-ALPHA-L-RHAMNOPYRANOSYL(1-3)BETA-D-GLUCOPYRANOSIDE | Root | | | | -- |
| 0 | STEROLS | Root | | | | Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp. |
| 0 | STIGMASTEROL-3-O-BETA-D-GLUCOSIDE | Tuber | | | | -- |
| 0 | 4-METHOXY-BENZYL ALCOHOL | Tuber | | | | -- |
| 0 | CINNAMIC-ACID-ESTER | Root | | | | Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp. |
| 0 | N-PENTACOSANE | Tuber | | | | -- |

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|------------------|----------|------------|---------|----------|---------------------|-------------------|
| 0 | ASH | Root | 13490.0 | 71000.0 | 0.09826540137057557 | -- |