

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in Brassica napus var. napobrassica

| Activities Count | Chemical         | Plant Part | Low PPM | High PPM | StdDev               | Reference Citation                 |
|------------------|------------------|------------|---------|----------|----------------------|------------------------------------|
| 77               | ZINC             | Root       | 1.7     | 33.0     | 0.38637779530428495  | USDA's Ag Handbook 8 and sequelae) |
| 3                | VALINE           | Root       | 480.0   | 4640.0   | 0.3309238530229536   | USDA's Ag Handbook 8 and sequelae) |
| 8                | TYROSINE         | Root       | 230.0   | 2225.0   | 0.3484594002519018   | USDA's Ag Handbook 8 and sequelae) |
| 29               | TRYPTOPHAN       | Root       | 130.0   | 1255.0   | 1.3418488078003312   | USDA's Ag Handbook 8 and sequelae) |
| 4                | THREONINE        | Root       | 460.0   | 4445.0   | 0.22067202021034055  | USDA's Ag Handbook 8 and sequelae) |
| 31               | THIAMIN          | Root       | 1.0     | 9.0      | 0.20687378151698016  | USDA's Ag Handbook 8 and sequelae) |
| 14               | SULFUR           | Root       | 350.0   | 5000.0   | 0.6721985672075504   | ACTA AGRIC SCAND SUPPL 22: 1980    |
| 8                | STEARIC-ACID     | Root       | 30.0    | 290.0    | -0.18860255369586548 | USDA's Ag Handbook 8 and sequelae) |
| 1                | SODIUM           | Root       | 200.0   | 1930.0   | 0.3858644625823273   | USDA's Ag Handbook 8 and sequelae) |
| 4                | SILICON          | Root       | 1.0     | 30.0     | -0.20509399754262064 | ACTA AGRIC SCAND SUPPL 22: 1980    |
| 1                | SERINE           | Root       | 350.0   | 3385.0   | 0.012451729341143537 | USDA's Ag Handbook 8 and sequelae) |
| 60               | SELENIUM         | Stem       |         | 0.017    | -0.428602555754419   | --                                 |
| 60               | SELENIUM         | Root       |         | 0.002    | -0.3623106990048751  | ACTA AGRIC SCAND SUPPL 22: 1980    |
| 60               | SELENIUM         | Leaf       |         | 0.031    | -0.3801649499638808  | --                                 |
| 7                | SALICYLATES      | Root       |         | 0.0      | -0.6998023989548637  | --                                 |
| 15               | RIBOFLAVIN       | Root       | 0.4     | 4.0      | -0.0163136920018201  | USDA's Ag Handbook 8 and sequelae) |
| 4                | PUFA             | Root       | 880.0   | 8800.0   | 1.4969964331379306   | USDA's Ag Handbook 8 and sequelae) |
| 14               | POTASSIUM        | Root       | 2200.0  | 43850.0  | 2.0554708036839013   | --                                 |
| 5                | PHYLLOQUINONE    | Root       |         | 0.02     | 1.0                  | --                                 |
| 4                | PHOSPHORUS       | Root       | 290.0   | 7250.0   | 0.6557923409686905   | --                                 |
| 7                | PHENYLALANINE    | Root       | 310.0   | 3000.0   | 0.09680714819601026  | USDA's Ag Handbook 8 and sequelae) |
| 11               | PANTOTHENIC-ACID | Root       | 2.0     | 15.0     | -0.35963628154828453 | USDA's Ag Handbook 8 and sequelae) |
| 13               | PALMITIC-ACID    | Root       | 240.0   | 2320.0   | -0.291367632582844   | USDA's Ag Handbook 8 and sequelae) |
| 18               | OLEIC-ACID       | Root       | 250.0   | 2415.0   | 0.12622998370595992  | USDA's Ag Handbook 8 and sequelae) |

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|------------------|-------------------|------------|---------|----------|----------------------|--|
| 3                | NICKEL            | Root       | 0.02    | 1.0      | -0.6074520694182507  | ACTA AGRIC SCAND SUPPL 22: 1980  |
| 39               | NIACIN            | Root       | 7.0     | 68.0     | 0.5147577614900641   | USDA's Ag Handbook 8 and sequelae)   |
| 1                | NEOGLUCOBRASSICIN | Plant      |         |          |                      | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 13               | MUFA              | Root       | 250.0   | 2500.0   | 0.07398045035870428  | USDA's Ag Handbook 8 and sequelae)   |
| 2                | MOLYBDENUM        | Stem       |         | 0.32     | -0.6821525679507198  | --   |
| 2                | MOLYBDENUM        | Root       |         | 0.1      | -0.46089530570591497 | ACTA AGRIC SCAND SUPPL 22: 1980  |
| 2                | MOLYBDENUM        | Leaf       |         | 0.65     | -0.7555970707143209  | --   |
| 15               | METHIONINE        | Root       | 100.0   | 965.0    | -0.19695207353540853 | USDA's Ag Handbook 8 and sequelae)   |
| 1                | MERCURY           | Root       | 0.0     | 0.01     | -0.4761926805350732  | ACTA AGRIC SCAND SUPPL 22: 1980  |
| 14               | MANGANESE         | Root       | 1.3     | 17.0     | -0.342877544388157   | ACTA AGRIC SCAND SUPPL 22: 1980  |
| 65               | MAGNESIUM         | Root       | 110.0   | 2610.0   | 0.025782666729043294 | --   |
| 4                | LYSINE            | Root       | 390.0   | 3770.0   | 0.029990875485301268 | USDA's Ag Handbook 8 and sequelae)   |
| 16               | LYCOPENE          | Root       |         |          |                      | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 27               | LINOLEIC-ACID     | Root       | 350.0   | 3385.0   | 0.09816926627523243  | USDA's Ag Handbook 8 and sequelae)   |
| 2                | LEUCINE           | Root       | 380.0   | 3675.0   | -0.3939386812418397  | USDA's Ag Handbook 8 and sequelae)   |
| 3                | ISOLEUCINE        | Root       | 500.0   | 4835.0   | 0.7114548943031703   | USDA's Ag Handbook 8 and sequelae)   |
| 6                | IRON              | Root       | 2.0     | 62.0     | -0.3515801948569051  | --   |
| 7                | HISTIDINE         | Root       | 300.0   | 2900.0   | 1.0788641098044627   | USDA's Ag Handbook 8 and sequelae)   |
| 12               | GLYCINE           | Root       | 270.0   | 2610.0   | -0.1322498781605236  | USDA's Ag Handbook 8 and sequelae)   |
| 8                | GLUTAMIC-ACID     | Root       | 1420.0  | 13730.0  | -0.12656879284513156 | USDA's Ag Handbook 8 and sequelae)   |

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|------------------|--------------------|-----------------|---------|----------|----------------------|--|
| 1                | GLUCOBRASSICIN     | Plant           |         |          |                      | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 1                | GLUCOBRASSICANAPIN | Plant           |         |          |                      | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 15               | FOLACIN            | Root            | 0.18    | 2.0      | -0.5271708591989388  | USDA's Ag Handbook 8 and sequelae)   |
| 15               | FIBER              | Root            | 11000.0 | 106370.0 | 0.40548188259817086  | USDA's Ag Handbook 8 and sequelae)   |
| 2                | CYSTINE            | Root            | 110.0   | 1065.0   | 0.41416520648682914  | USDA's Ag Handbook 8 and sequelae)   |
| 12               | COPPER             | Root            | 0.2     | 4.0      | -0.8547042082668113  | ACTA AGRIC SCAND SUPPL 22: 1980  |
| 2                | COBALT             | Root            | 0.001   | 0.1      | -0.5430381312407203  | ACTA AGRIC SCAND SUPPL 22: 1980  |
| 24               | CHROMIUM           | Root            | 0.005   | 0.1      | -0.5400069758594586  | ACTA AGRIC SCAND SUPPL 22: 1980  |
| 2                | CAMPESTEROL        | Seed            |         |          |                      | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 28               | CALCIUM            | Root            | 270.0   | 6040.0   | -0.14925166659847308 | --   |
| 3                | CADMIUM            | Root            | 0.004   | 0.1      | -0.7647786809084502  | ACTA AGRIC SCAND SUPPL 22: 1980  |
| 3                | BRASSINOLIDE       | Pollen Or Spore |         |          |                      | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 4                | BORON              | Stem            |         | 24.0     | -0.5283308037270876  | --   |
| 4                | BORON              | Root            | 2.5     | 30.0     | 0.2199887387786964   | ACTA AGRIC SCAND SUPPL 22: 1980  |
| 4                | BORON              | Leaf            |         | 52.0     | -0.2521054051389519  | --   |

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|------------------|---------------|------------|---------|----------|----------------------|--|
| 53               | BETA-CAROTENE | Root       |         | 0.0      | -0.4364222203358877  | USDA's Ag Handbook 8 and sequelae)   |
| 3                | ASPARTIC-ACID | Root       | 870.0   | 8410.0   | -0.20068380455090434 | USDA's Ag Handbook 8 and sequelae)   |
| 112              | ASCORBIC-ACID | Root       | 250.0   | 2415.0   | 0.7345478536486332   | USDA's Ag Handbook 8 and sequelae)   |
| 2                | ARSENIC       | Root       |         | 0.01     | -0.20704596077537676 | ACTA AGRIC SCAND SUPPL 22: 1980  |
| 14               | ARGININE      | Root       | 1480.0  | 14310.0  | 0.17714518801318105  | USDA's Ag Handbook 8 and sequelae)   |
| 5                | ALUMINUM      | Root       | 0.3     | 1.0      | -0.31194365262523716 | ACTA AGRIC SCAND SUPPL 22: 1980  |
| 12               | ALLANTOIN     | Root       |         |          |                      | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 3                | ALANINE       | Root       | 330.0   | 3190.0   | -0.12401447431860009 | USDA's Ag Handbook 8 and sequelae)   |