



## Product Profile

### Nutraceutical Grade Fulvic Acid (NGFA)

### フルボ酸粉末 データ

#### Disclaimer

This Product Profile includes an exclusive index of product testing criteria and results. Regular COA reports issued with each product lot include those criteria as agreed upon between FulvicXcell Products and its customer(s). This Product Profile neither implies nor constitutes an understanding, expectation, or agreement concerning the composition of future COA reports.

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| <b>PHYSICAL ASSAY</b>   |                                                |                                                       |                    |
|-------------------------|------------------------------------------------|-------------------------------------------------------|--------------------|
|                         | <u>NGFA Powder</u>                             | <u>NGFA Concentrate</u>                               |                    |
| <u>Criterion</u>        | <u>Result</u>                                  | <u>Result</u>                                         | <u>Test Method</u> |
| <b>Color</b>            | Dark brown/yellow/red to black, shiny and dull | Dark brown/yellow/red to black, opaque unless diluted |                    |
| <b>pH</b>               | 5.66                                           | 5.5 – 6.5                                             | pH Meter           |
| <b>Moisture Content</b> | 2.81%                                          |                                                       | Karl Fischer       |

| <b>ANIONS/CATIONS ASSAY</b>    |                    |                         |                                                |                    |
|--------------------------------|--------------------|-------------------------|------------------------------------------------|--------------------|
|                                | <u>NGFA Powder</u> | <u>NGFA Concentrate</u> | <u>NGFA One (1) Dose</u>                       |                    |
| <u>Criterion</u>               | <u>Result</u>      | <u>Result*</u>          | <u>Result per Dose**</u>                       | <u>Test Method</u> |
|                                | <i>mg/kg (ppm)</i> | <i>mg/L (ppm)</i>       | <i>mg/150 mg Powder or mg/5 mL Concentrate</i> |                    |
| <b>Bromide</b>                 | <100               |                         |                                                | Ion Chromatography |
| <b>Chloride</b>                | 484                | 14.52                   | 0.0726                                         | Ion Chromatography |
| <b>Fluoride</b>                | <100               |                         |                                                | Ion Chromatography |
| <b>Nitrate</b>                 | 117                | 3.51                    | 0.01755                                        | Ion Chromatography |
| <b>Nitrite</b>                 | <100               |                         |                                                | Ion Chromatography |
| <b>Total Kjeldahl Nitrogen</b> | 3000               | 90.0                    | 0.45                                           | Colorimeter        |
| <b>Sulfate</b>                 | 6340               | 190.2                   | 0.951                                          | Ion Chromatography |
| <b>Total Cyanide</b>           | 0.5                | 0.015                   | 0.000075                                       | Colorimeter        |
| <b>Total Organic Carbon</b>    | 41.7%              |                         |                                                | Titration          |

\* Results calculated to a 3% w/v concentration using NGFA Powder test results.  
 \*\* Results calculated on a per dose quantity using NGFA Powder test results; one (1) dose of NGFA Powder equals 150 mg; one (1) dose of NGFA Concentrate equals 5 mL; 5 mL of NGFA Concentrate contains approximately 150 mg of NGFA Powder.



| <b>NUTRITIONAL LABEL ASSAY</b>                            |                    |                         |                                                      |                    |
|-----------------------------------------------------------|--------------------|-------------------------|------------------------------------------------------|--------------------|
|                                                           | <u>NGFA Powder</u> | <u>NGFA Concentrate</u> | <u>NGFA One (1) Dose</u>                             |                    |
| <u>Criterion</u>                                          | <u>Result</u>      | <u>Result*</u>          | <u>Result per Dose**</u>                             | <u>Test Method</u> |
|                                                           |                    | <i>Per 1 L</i>          | <i>Per 150 mg Powder or<br/>Per 5 mL Concentrate</i> |                    |
| <b>Fat by Acid Hydrolysis</b><br>脂肪                       | <0.25 g/100g       |                         |                                                      | Gravimetry         |
| <b>Protein</b><br>タンパク質                                   | 7.53 g/100g        | 2.259 g                 | 11.295 mg                                            | Kjeldahl           |
| <b>Ash</b><br>灰                                           | 65.5 g/100g        | 19.65 g                 | 98.25 mg                                             | Gravimetry         |
| <b>Carbohydrate</b><br>炭水化物                               | 24.4 g/100g        | 7.32 g                  | 36.6 mg                                              | Calculation        |
| <b>Calories</b><br>カロリー                                   | 128 kcal/100g      | 38.4 kcal               | 0.1925 kcal                                          | Calculation        |
| <b>Saturated Fatty Acids</b><br>飽和脂肪酸                     | <0.10 g/100g       |                         |                                                      | GC/FID             |
| <b>Mono-unsaturated Fatty Acids</b><br>一価不飽和脂肪酸           | <0.10 g/100g       |                         |                                                      | GC/FID             |
| <b>Poly-unsaturated Fatty Acids</b><br>多価不飽和脂肪酸           | <0.10 g/100g       |                         |                                                      | GC/FID             |
| <b>Trans Mono-unsaturated Fatty Acids</b><br>トランス一価不飽和脂肪酸 | <0.10 g/100g       |                         |                                                      | GC/FID             |
| <b>Trans Poly-unsaturated Fatty Acids</b><br>トランス多価不飽和脂肪酸 | <0.10 g/100g       |                         |                                                      | GC/FID             |
| <b>Omega-3 Fatty Acids</b><br>オメガ 3 脂肪酸                   | <0.10 g/100g       |                         |                                                      | GC/FID             |
| <b>Omega-6 Fatty Acids</b><br>オメガ 6 脂肪酸                   | <0.10 g/100g       |                         |                                                      | GC/FID             |
| <b>Cholesterol</b><br>コレステロール                             | <1 mg/100g         |                         |                                                      | GC/FID             |
| <b>Dietary Fiber</b><br>食物繊維                              | 10.9 g/100g        | 3.27 g                  | 16.35 mg                                             | Enzymatic          |
| <b>Calcium (Food)</b><br>カルシウム                            | 70 mg/100g         | 21 mg                   | 0.105 mg                                             | ICP-OES            |
| <b>Iron (Food)</b><br>鉄                                   | 11.2 mg/100g       | 3.36 mg                 | 0.0168 mg                                            | ICP-OES            |
| <b>Sodium (Food)</b><br>ナトリウム                             | 1279 mg/100g       | 383.7 mg                | 1.9185 mg                                            | ICP-OES            |
| <b>Sugars</b><br>糖類                                       | <0.10 g/100g       |                         |                                                      | HPLC               |
| <b>Vitamin A</b><br>ビタミンA                                 | <4 ER/100g         |                         |                                                      | HPLC               |
| <b>Vitamin Beta-Carotene</b><br>ビタミンβ-カロチン                | <4 ER/100g         |                         |                                                      | HPLC               |
| <b>Vitamin C</b><br>ビタミンC                                 | <0.20 mg/100g      |                         |                                                      | HPLC               |
| <b>Moisture</b><br>水分                                     | 2.59%              |                         |                                                      | Gravimetry         |



\* Results calculated to a 3% w/v concentration using NGFA Powder test results.

\*\* Results calculated on a per dose quantity using NGFA Powder test results; one (1) dose of NGFA Powder equals 150 mg; one (1) dose of NGFA Concentrate equals 5 mL; 5 mL of NGFA Concentrate contains approximately 150 mg of NGFA Powder.



| <b>ELEMENTAL ASSAY</b>       |                    |                         |                                                    |                    |
|------------------------------|--------------------|-------------------------|----------------------------------------------------|--------------------|
|                              | <u>NGFA Powder</u> | <u>NGFA Concentrate</u> | <u>NGFA One (1) Dose</u>                           |                    |
| <u>Criterion</u>             | <u>Result</u>      | <u>Result*</u>          | <u>Result per Dose**</u>                           | <u>Test Method</u> |
|                              | <i>mg/kg (ppm)</i> | <i>mg/L (ppm)</i>       | <i>mg/150 mg Powder or<br/>mg/5 mL Concentrate</i> |                    |
| <b>Aluminum</b><br>アルミニウム    | 1635.000           | 49.05                   | 0.245250                                           | ICP-OES            |
| <b>Antimony</b><br>アンチモン     | 2.300              | 0.069                   | 0.000345                                           | ICP-OES            |
| <b>Arsenic</b><br>ヒ素         | 9.336              | 0.28008                 | 0.001400                                           | ICP-MS             |
| <b>Barium</b><br>バリウム        | 32.500             | 0.975                   | 0.004875                                           | ICP-OES            |
| <b>Beryllium</b><br>ベリリウム    | <0.500             |                         |                                                    | ICP-OES            |
| <b>Bismuth</b><br>ビスマス       | <0.500             |                         |                                                    | ICP-OES            |
| <b>Boron</b><br>ホウ素          | 225.000            | 6.75                    | 0.033750                                           | ICP-OES            |
| <b>Cadmium</b><br>カドミウム      | 0.069              | 0.00207                 | 0.000010                                           | ICP-MS             |
| <b>Calcium</b><br>カルシウム      | 2542.000           | 76.26                   | 0.381300                                           | ICP-OES            |
| <b>Carbon</b><br>カーボン        | 367000.000         | 11010                   | 55.050000                                          | LECO               |
| <b>Cerium</b><br>セリウム        | 1.927              | 0.05781                 | 0.000289                                           | ICP-MS             |
| <b>Cesium</b><br>セシウム        | 0.225              | 0.00675                 | 0.000034                                           | ICP-MS             |
| <b>Chloride</b><br>塩化物       | 656.100            | 19.683                  | 0.098415                                           | Titration AgNO3    |
| <b>Chromium</b><br>クロム       | 2.200              | 0.066                   | 0.000330                                           | ICP-OES            |
| <b>Cobalt</b><br>コバルト        | 3.670              | 0.1101                  | 0.000551                                           | ICP-OES            |
| <b>Copper</b><br>銅           | 12.600             | 0.378                   | 0.001890                                           | ICP-OES            |
| <b>Dysprosium</b><br>ジスプロシウム | 0.186              | 0.00558                 | 0.000028                                           | ICP-MS             |
| <b>Erbium</b><br>エルビウム       | 0.140              | 0.0042                  | 0.000021                                           | ICP-MS             |
| <b>Europium</b><br>ユーロピウム    | 0.040              | 0.0012                  | 0.000006                                           | ICP-MS             |
| <b>Fluoride</b><br>フッ化物      | 0.103              | 0.00309                 | 0.000015                                           | AOAC 939.11        |
| <b>Gadolinium</b><br>ガドリニウム  | 0.211              | 0.00633                 | 0.000032                                           | ICP-MS             |
| <b>Gallium</b><br>ガリウム       | 1.325              | 0.03975                 | 0.000199                                           | ICP-MS             |
| <b>Germanium</b><br>ゲルマニウム   | 0.139              | 0.00417                 | 0.000021                                           | ICP-MS             |
| <b>Gold</b><br>金             | 3.180              | 0.0954                  | 0.000477                                           | ICP-OES            |
| <b>Hafnium</b><br>ハフニウム      | 0.983              | 0.02949                 | 0.000147                                           | ICP-MS             |

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3151 Lakeshore Road, Unit 4369, Kelowna, British Columbia, Canada V1W 3S9



|                                |                    |                         |                                                    |                                                         |
|--------------------------------|--------------------|-------------------------|----------------------------------------------------|---------------------------------------------------------|
| Holmium<br>ホルミウム               | 0.042              | 0.00126                 | 0.000006                                           | ICP-MS                                                  |
| Indium<br>インジウム                | <0.001             |                         |                                                    | ICP-MS                                                  |
| Iodine<br>ヨウ素                  | 0.261              | 0.00783                 | 0.000039                                           | Titration Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> |
| Iridium<br>イリジウム               | 0.007              | 0.00021                 | 0.000001                                           | ICP-MS                                                  |
| Iron<br>鉄                      | 622.000            | 18.66                   | 0.093300                                           | ICP-OES                                                 |
| Lanthanum<br>ランタン              | 2.540              | 0.0762                  | 0.000381                                           | ICP-OES                                                 |
| Lead<br>リード                    | 2.488              | 0.07464                 | 0.000373                                           | ICP-MS                                                  |
| Lithium<br>リチウム                | <0.500             |                         |                                                    | ICP-OES                                                 |
| Lutetium<br>ルテチウム              | 0.040              | 0.0012                  | 0.000006                                           | ICP-MS                                                  |
| <b>ELEMENTAL ASSAY (Cont.)</b> |                    |                         |                                                    |                                                         |
|                                | <u>NGFA Powder</u> | <u>NGFA Concentrate</u> | <u>NGFA One (1) Dose</u>                           |                                                         |
| <b>Criterion</b>               | <b>Result</b>      | <b>Result*</b>          | <b>Result per Dose**</b>                           | <b>Test Method</b>                                      |
|                                | <i>mg/kg (ppm)</i> | <i>mg/L (ppm)</i>       | <i>mg/150 mg Powder or<br/>mg/5 mL Concentrate</i> |                                                         |
| Magnesium<br>マグネシウム            | 422.000            | 12.66                   | 0.063300                                           | ICP-OES                                                 |
| Manganese<br>マンガン              | 117.000            | 3.51                    | 0.017550                                           | ICP-OES                                                 |
| Mercury<br>水銀                  | 0.088              | 0.00264                 | 0.000013                                           | ICP-MS                                                  |
| Molybdenum<br>モリブデン            | 9.140              | 0.2742                  | 0.001371                                           | ICP-OES                                                 |
| Neodymium<br>ネオジム              | 0.936              | 0.02808                 | 0.000140                                           | ICP-MS                                                  |
| Nickel<br>ニッケル                 | <0.500             |                         |                                                    | ICP-OES                                                 |
| Niobium<br>ニオブ                 | <0.500             |                         |                                                    | ICP-OES                                                 |
| Osmium<br>オスミウム                | 0.003              | 0.00009                 | 0.000000                                           | ICP-MS                                                  |
| Palladium<br>パラジウム             | 6.843              | 0.20529                 | 0.001026                                           | ICP-MS                                                  |
| Phosphorus<br>リン               | 5981.000           | 179.43                  | 0.897150                                           | ICP-OES                                                 |
| Platinum<br>プラチナ               | 0.050              | 0.0015                  | 0.000008                                           | ICP-MS                                                  |
| Potassium<br>カリウム              | 200000.000         | 6000                    | 30.000000                                          | ICP-OES                                                 |
| Praseodymium<br>プラセオジム         | 0.234              | 0.00702                 | 0.000035                                           | ICP-MS                                                  |
| Rhenium<br>レニウム                | 0.002              | 0.00006                 | 0.000000                                           | ICP-MS                                                  |
| Rhodium<br>ロジウム                | 0.001              | 0.00003                 | 0.000000                                           | ICP-MS                                                  |
| Rubidium<br>ルビジウム              | 10.219             | 0.30657                 | 0.001533                                           | ICP-MS                                                  |

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|                      |           |         |          |         |
|----------------------|-----------|---------|----------|---------|
| Ruthenium<br>ルテニウム   | 0.003     | 0.00009 | 0.000000 | ICP-MS  |
| Samarium<br>サマリウム    | 0.188     | 0.00564 | 0.000028 | ICP-MS  |
| Scandium<br>スカンジウム   | 0.713     | 0.02139 | 0.000107 | ICP-MS  |
| Selenium<br>セレン      | 4.870     | 0.1461  | 0.000731 | ICP-OES |
| Silicon<br>シリコン      | 238.000   | 7.14    | 0.035700 | ICP-OES |
| Silver<br>シルバー       | <0.500    |         |          | ICP-OES |
| Sodium<br>ナトリウム      | 16390.000 | 491.7   | 2.458500 | ICP-OES |
| Strontium<br>ストロンチウム | 23.400    | 0.702   | 0.003510 | ICP-OES |
| Sulfur<br>硫黄         | 23600.000 | 708     | 3.540000 | ICP-OES |
| Tantalum<br>タンタル     | 0.066     | 0.00198 | 0.000010 | ICP-MS  |
| Tellurium<br>テルル     | <0.500    |         |          | ICP-OES |
| Terbium<br>テルビウム     | 0.030     | 0.0009  | 0.000005 | ICP-MS  |
| Thallium<br>タリウム     | <0.500    |         |          | ICP-OES |
| Thorium<br>トリウム      | <0.500    |         |          | ICP-OES |
| Thulium<br>チュリウム     | 0.023     | 0.00069 | 0.000003 | ICP-MS  |
| Tin<br>錫             | 0.172     | 0.00516 | 0.000026 | ICP-MS  |
| Titanium<br>チタン      | 99.200    | 2.976   | 0.014880 | ICP-OES |
| Tungsten<br>タングステン   | <0.500    |         |          | ICP-OES |
| Vanadium<br>バナジウム    | 23.500    | 0.705   | 0.003525 | ICP-OES |

### ELEMENTAL ASSAY (Cont.)

|                      | <u>NGFA Powder</u> | <u>NGFA Concentrate</u> | <u>NGFA One (1) Dose</u>                           |                    |
|----------------------|--------------------|-------------------------|----------------------------------------------------|--------------------|
| <u>Criterion</u>     | <u>Result</u>      | <u>Result*</u>          | <u>Result per Dose**</u>                           | <u>Test Method</u> |
|                      | <i>mg/kg (ppm)</i> | <i>mg/L (ppm)</i>       | <i>mg/150 mg Powder or<br/>mg/5 mL Concentrate</i> |                    |
| Ytterbium<br>イッテルビウム | 0.175              | 0.00525                 | 0.000026                                           | ICP-MS             |
| Yttrium<br>イットリウム    | <0.500             |                         |                                                    | ICP-OES            |
| Zinc<br>亜鉛           | 19.800             | 0.594                   | 0.002970                                           | ICP-OES            |
| Zirconium<br>ジルコニウム  | 56.400             | 1.692                   | 0.008460                                           | ICP-OES            |

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| <b>AMINO ACIDS ASSAY</b>         |                    |                         |                                                    |                    |
|----------------------------------|--------------------|-------------------------|----------------------------------------------------|--------------------|
|                                  | <u>NGFA Powder</u> | <u>NGFA Concentrate</u> | <u>NGFA One (1) Dose</u>                           |                    |
| <u>Criterion</u>                 | <u>Result</u>      | <u>Result*</u>          | <u>Result per Dose**</u>                           | <u>Test Method</u> |
|                                  | <i>mg/g (ppt)</i>  | <i>mg/L (ppm)</i>       | <i>mg/150 mg Powder or<br/>mg/5 mL Concentrate</i> |                    |
| <b>Alanine</b><br>アラニン           | 0.51               | 15.3                    | 0.0765                                             | Derivative-HPLC    |
| <b>Arginine</b><br>アルギニン         | 0.31               | 9.3                     | 0.0465                                             | Derivative-HPLC    |
| <b>Aspartic acid</b><br>アスパラギン酸  | <0.1               |                         |                                                    | Derivative-HPLC    |
| <b>Cysteine</b><br>システイン         | 0.71               | 21.3                    | 0.1065                                             | Derivative-HPLC    |
| <b>Glutamic acid</b><br>グルタミン酸   | 0.36               | 10.8                    | 0.054                                              | Derivative-HPLC    |
| <b>Glycine</b><br>グリシン           | 0.14               | 4.2                     | 0.021                                              | Derivative-HPLC    |
| <b>Histidine</b><br>ヒスチジン        | 0.05               | 1.5                     | 0.075                                              | Derivative-HPLC    |
| <b>Isoleucine</b><br>イソロイシン      | 1.35               | 40.5                    | 0.2025                                             | Derivative-HPLC    |
| <b>Leucine</b><br>ロイシン           | 1.95               | 58.5                    | 0.2925                                             | Derivative-HPLC    |
| <b>Lysine</b><br>リジン             | 5.29               | 158.7                   | 0.7935                                             | Derivative-HPLC    |
| <b>Methionine</b><br>メチオニン       | 1.59               | 47.7                    | 0.2385                                             | Derivative-HPLC    |
| <b>Phenylalanine</b><br>フェニルアラニン | 1.23               | 36.9                    | 0.1845                                             | Derivative-HPLC    |
| <b>Proline</b><br>プロリン           | 0.72               | 21.6                    | 0.108                                              | Derivative-HPLC    |
| <b>Serine</b><br>セリン             | 0.34               | 10.2                    | 0.051                                              | Derivative-HPLC    |
| <b>Threonine</b><br>スレオニン        | 0.32               | 9.6                     | 0.048                                              | Derivative-HPLC    |
| <b>Tryptophan</b><br>トリプトファン     | 0.71               | 21.3                    | 0.1065                                             | Derivative-HPLC    |
| <b>Tyrosine</b><br>チロシン          | 3.08               | 92.4                    | 0.462                                              | Derivative-HPLC    |
| <b>Valine</b><br>バリン             | 2.62               | 78.6                    | 0.393                                              | Derivative-HPLC    |

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