

TECHNICAL DATASHEET**Part 1: General Information**

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| Product: | Organic Ginseng 12% dry extract |
| Code: | BSA16912 |
| Botanic name: | Panax ginseng C.A. Meyer |
| INCI name: | PANAX GINSENG ROOT EXTRACT |
| CAS number: | 84650-12-4 |
| EINECS/ELINCS number: | 283-493-7 |
| Extraction solvent: | ethanol from organic neutral wheat / water |
| Carrier and/or auxiliary substances: | organic maltodextrin (from maize) added up to stated assay |
| Botanic family: | Araliaceae |
| Product origin: | Italy |
| Origin of the raw material used for this product: | China |
| Growing condition: | cultivated |
| Vegetable period: | at maturity |
| Collection period: | Autumn |
| Part of plant used: | root |
| Preparation type: | dry extract |
| Particle size: | not less than 90% through 300 microns |
| Intended use: | As raw material (ingredient) intended for manufacturing of food and a wider range of final products. |

Active substances of the plant:

triterpenoid saponins (ginsenosides Rg1, Rc, Rd, Rb1, Rb0) determined in the extract as total ginsenosides expressed as Rg1 \geq 12.0 %; also it contains essential oil, amino acids and pectins, vitamins, sterols and fatty acids not determined in the extract

Biologic marker:

Ginsenosid RG1

Physiologic and healthcare applications:

Tonic, adaptogen. Antioxidant. Tonic (used in physical and mental fatigue). Carbohydrates metabolism. Topical use: emollient, hair conditioning, skin protecting, tonic.

Toxicological data:

"Ginseng Abuse Syndrome" (hypertension, nervousness, sleeplessness, skin eruptions, edema, diarrhea) has been described after long-term of use up to 15g/die of ginseng together with caffeinated beverages. The duration of use should not exceed 3 months.

Radioactivity:

< 600 Bq/kg

Contra-indications; warnings:

Not give during treatment with IMAO, sedatives, anxiolytics and anticoagulants. Not extend its use for more than two to three months

Eventual particular notes:

The possible variation of colour from batch to batch, and presence of small dots (stippling), does not affect the final quality of the extract, indeed, it demonstrates its naturalness.

Nutritional values:

available upon request

Preservatives:

absent

Antioxidants:

absent

Storage conditions:

store in a well closed container away from moisture and direct sun light

Retest Date:

three years from production date

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| 1 | 03/04/2024 | Dott.ssa L.Colombo |
| REV. | DATE | WRITTEN QA |

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PART 2: Technical Specification

(Analytical methods from Ph. Eur current edition, except where otherwise specified; mentioned Regs. include subs. amendments and updates)

Product: Organic Ginseng 12% dry extract
Code: BSA16912
E/D Ratio: up to stated assay

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|---|---|
| Description: | hygroscopic powder |
| Colour: | light brown |
| Odor: | characteristic |
| Taste: | characteristic |
| TLC:complies with the analysis performed on the raw material | complies* |
| Assay:ginsenosides derivatives as Ginsenoside Rg1 (spectr. met.) | >= 12,0 % w/w |
| Bulk density: | 350 - 700 g/l |
| Loss on drying: | <= 5,0 % w/w |
| pH: | 4,0 - 6,0 |
| Hydrosolubility Solubility in cold or hot water | partially watersoluble |
| Heavy metals: | < 20 ppm (method C Ph. Eur. current edition) |
| Lead (Reg. No (EU) 2023/915 and subs. amendments and updates): | <= 3.0 ppm* |
| Cadmium (Reg. No (EU) 2023/915 and subs. amendments and updates): | <= 1.0 ppm* |
| Mercury (Reg. No (EU) 2023/915 and subs. amendments and updates): | <= 0.10 ppm* |
| Residual solvents: | complies to Ph. Eur. current edition and Directive 2009/32/EC* |
| Pesticides: | complies to Ph. Eur. current edition and Reg. 2005/396/EC and amendments concerning pesticides residues searched (with reference to E/D ratio)* |
| Aflatoxins: | Aflatoxin B1: < 2 ppb* Aflatoxin B1,B2,G1,G2: < 4 ppb* |
| Benzo(a)pyrene (Reg. No (EU) 2023/915 and subs. amendments and updates) | - 0,00 ppm |
| Sum of 4 PAHs: Reg. No (EU) 2023/915 and subs. amendments and updates | - 0,00 |
| Pyrrolizidine alkaloids: Reg. No (EU) 2023/915 and subs. amendments and updates | <= 400 ppb* |
| Microbiological quality (Ref. Ph. Eur. current edition) | |
| Bacterial count (TAMC): | <= 5 x 10.000 ufc/g |
| Yeasts and Moulds (TYMC): | <= 5 x 100 ufc/g |
| Pathogens: | Salmonella: absent in 25 g* Escherichia coli: absent in 1 g* |
| Bile-tolerant gram-negative bacteria: | <= 100 ufc/g* |
| Note: | DNA CERTIFIED RAW MATERIAL |

GMO: Free from GMO (Reg. (EC) 1829/2003 and 1830/2003)

BSE/TSE FREE - GLUTEN FREE

ALLERGENS: Free from substances or products causing allergies or intolerances (Reg. (EU) 1169/2011 Annex II)

Organic product ((Reg. (EC) 834/2007)

(*)analysis performed on the basis of the specific self-control plan. TLC is performed on raw material.

The data reported in this Technical Data Sheet (excluding analytical ones) are taken from literature, among which (if applicable) Italian ministerial guidelines for physiological effects and CosIng (European Commission database for information on cosmetic substances).

Our extracts must be considered as raw materials (ingredients), produced in a food manufacturing site and they are non intended to be used by the final Consumer.

EPO srl guarantees that extracts are completely conforming to local and European legal frameworks. If belonging to specific category, otherwise the Customers must check the intended use (including the final formulation) and legal requirements for their final product at local a regional level

-The drug extract ratio (DER) is intended as drug (final) extract ratio, included any excipient, as per Ph. Eur. current edition "Monographs on herbal drug extracts"

- Herbal extracts with assay are intended as standardised extracts, unless otherwise specified

- In standardised extract the excipient is added for adjust the content of constituent(s) (assay) and for guarantee the final DER in extracts based on this parameter

- Concerning the pesticides residues, the stated conformity includes an uncertainty of measurement(according to SANTE') and processing factor coming from manufacturing process. MRL (Maximum Residue Levels) are not applied to extract, but it is applied to vegetal raw material.

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| 1 | 02/04/2024 | Dott.ssa A.Colace | Dott.ssa L.Colombo | Dott.ssa S. Vicentini |
| REV. | DATE | WRITTEN CQ | VERIFIED QA | APPROVED DT |

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