

DETERMINATION	SPECIFICATION	METHODS
IDENTIFICATION Appearance Odor Taste Fingerprint	Fine light brown powder Characteristic Characteristic Corresponds to reference chromatogram	ENI.SOP.E502.7.1 ENI.SOP.E502.7.1 ENI.SOP.E502.7.1 TLC/HPLC
ASSAY* Rosavins (Rosavin, Rosarin, and Rosin) Salidroside	$\geq 3.00\%$ $\geq 1.00\%$	HPLC HPLC
TEST Loss on Drying Bulk Density Mesh Size Arsenic* Cadmium* Lead* Mercury* Pesticides**	$\leq 5.0\%$ 0.45 - 0.60 g/ml 100% thru 80 mesh ≤ 1.0 ppm ≤ 1.0 ppm < 1.0 ppm*** ≤ 0.2 ppm Complies with USP standard	USP ENI.SOP.E502.7.6 ENI.SOP.E502.7.5 ICP-MS ICP-MS ICP-MS ICP-MS USP
MICROBIOLOGICAL* Total Plate Count Yeast & Mold Escherichia coli Staphylococcus aureus Salmonella Coliforms Pseudomonas aeruginosa	$\leq 10,000$ cfu/g $\leq 1,000$ cfu/g Negative (< 10 cfu/g) Negative (< 10 cfu/g) Negative (< 10 cfu/g) Negative (< 10 cfu/g) Negative (< 10 cfu/g)	ENI.SOP.H804.5.7 ENI.SOP.H804.5.7 ENI.SOP.H804.5.7 ENI.SOP.H804.5.7 ENI.SOP.H804.5.7 ENI.SOP.H804.5.7

Remarks:

Extracted by food-grade Ethanol and Distilled Water with extract ratio of 6:1; no excipients or carriers used; non-GMO; ETO-free and non-irradiated.

(*) Representative sample derived from drums of each lot, using the 'square root of N + 1' method (ENI.SOP.E502.7.2).

Assay verified at an FDA Registered lab (ENI.SOP.H804.7.1).

(**) Verified by skip lot testing at an FDA Registered lab in accordance with ENI testing protocol (ENI.SOP.H804.7.2).

(***) In compliance with California Proposition 65 (< 0.5 µg/day) based on the typical daily recommendation of 200 - 400 mg

Please note: Actual results may vary $\pm 5\%$ to the specifications due to laboratory test variability.

Shelf life and Storage: 3 years at room temperature; in closed container(s), in a cool and low humidity ($< 55\%$) environment, away from strong light

References:

- 1] I.F. Satsyprova et al., Biologically active substances in rhizomes of *Rhodiola rosea*, Rastit Resur, 29(2), 26-31, 1993
- 2] L.V. Maslova et al., The cardioprotective and antiadrenergic activity of an extract of *Rhodiola rosea* in stress, Eksp Klin Farmakol, 57 (6) 61-63, 1994.
- 3] S. Wang et al., HPLC determination of salidroside in the root of *Rhodiola* genus plants, Yao Hsueh Pao, 27 (11), 849-52, 1992.