

BaseBulk

CERTIFICATE OF ANALYSIS

Product Name	KSM-66 Ashwagandha Root Extract (Vegan)
Botanical name	Withania somnifera (L.) Dunal
Part Used	Roots
Batch Number	KSM/VG/FG/24/1128/B
Manufacture Date	2024/11 (November)
Expiry Date	2027/10 (October)
Shelf Life / Stability	3 years from MFG date
Country of Origin	India

Identification

Analysis Item	Specification	Result
By HPTLC	Should comply with reference standard	Complies
By HPLC	Should comply with reference standard	Complies

Physical & Chemical Characteristics

Analysis Item	Specification	Result
Description	Light yellowish brown, slightly hygroscopic powder	Complies
Water Content (% w/w)	NMT 5.0%	3.19%
Sulfated Ash (% w/w)	NMT 8.0%	5.43%
Acid insoluble ash (% w/w)	NMT 5.0%	2.27%
pH of 5% w/v solution	4.0 – 6.0	4.22
Passing through 40-mesh sieve	NLT 95% (w/w)	Complies
Passing through 80-mesh sieve	NLT 80% (w/w)	Complies
Bulk density (g/cc)	0.2 – 0.6	0.58 g/cc
Tapped bulk density (g/cc)	0.4 – 0.8	0.78 g/cc

Heavy Metals

Analysis Item	Specification	Result
Lead (Pb)	NMT 0.5 ppm	<0.1 ppm
Cadmium (Cd)	NMT 0.5 ppm	<0.1 ppm
Arsenic (As)	NMT 0.5 ppm	<0.1 ppm
Mercury (Hg)	NMT 0.1 ppm	<0.05 ppm

Microbiological Tests

Analysis Item	Specification	Result
Total Aerobic Microbial Count	NMT 1.0×10^4 CFU/g	$<1.0 \times 10^4$ CFU/g
Total Yeast & Mold	NMT 1.0×10^3 CFU/g	$<1.0 \times 10^3$ CFU/g
Enterobacterial Count (Bile-Tolerant Gram-Negative)	NMT 1.0×10^2 CFU/g	$<1.0 \times 10^2$ CFU/g
E. coli (1 g)	Absent	Absent
Salmonella (10 g)	Absent	Absent
Staphylococcus aureus (1 g)	Absent	Absent

Other Analyses

Analysis Item	Specification	Result
Aflatoxins (B1, B2, G1, G2)	NMT 10 ppb	<4 ppb
Pesticide Residues – Organochlorine	Meets EU 2021/1165 limits	Complies
Pesticide Residues – Organophosphorus	Meets EU 2021/1165 limits	Complies
Pesticide Residues – Organosulfur	Meets EU 2021/1165 limits	Complies

Assay

Analysis Item	Specification	Result
Withanolides (HPLC)	$\geq 5.0\%$ (w/w)	5.32%
Withaferin A (HPLC)	NMT 0.1% (w/w)	0.04%

General Status	Vegan product; Country of Origin: India.
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