

**CERTIFICATE OF ANALYSIS****Product: Ashwagandha (Withania somnifera) - root extract / powder**

Report ref.: BB-COA-ASH-USUK-2026502

Report ID: BBLLP/ASH/USUK/2026/502

Batch / lot no.: B-ASH-26-08

Sample ID: ASH-USUK-26-002

Sample date (drawn): 30 March 2026

Date of sample submission: 31 March 2026

Date received at lab: 01 April 2026

Analysis period: 01 April 2026 to 09 April 2026

Date of issue: 09 April 2026

Analytical summary

Parameter	Specification	Result	Method / ref.
Appearance	Brown powder; characteristic odour	Complies	Organoleptic
Identification	Positive for Withania somnifera	Complies	HPTLC / HPLC
Loss on drying	NMT 6.0% w/w	2.2% w/w	USP <731>
Total ash	NMT 8.0% w/w	5.3% w/w	USP <561>
Assay (withanolides)	NLT 2.5% w/w	3.2% w/w	HPLC

Adulterant screening

S. No.	Parameter	Test result	Status	Protocol
1	Sand content	Absent	Pass	FSSAI manual
2	Added colour	Absent	Pass	FSSAI manual
3	Artificial flavour	Absent	Pass	FSSAI manual
4	Black extraneous matter	Absent	Pass	FSSAI manual
5	Rice bran powder	Absent	Pass	FSSAI manual
6	Sudan dye	Absent	Pass	FSSAI manual
7	Metanil yellow	Absent	Pass	FSSAI manual

Heavy metal analysis

S. No.	Parameter	Test result	Unit	Limit	Status	Protocol
1	Lead	0.04	mg/kg	< 3.0 mg/kg	Pass	ICP-MS / USP <233>
2	Arsenic	0.025	mg/kg	< 1.0 mg/kg	Pass	ICP-MS / USP <233>
3	Cadmium	0.045	mg/kg	< 0.5 mg/kg	Pass	ICP-MS / USP <233>
4	Mercury	0.013	mg/kg	< 0.1 mg/kg	Pass	ICP-MS / USP <233>
5	Ethylene oxide	Not detected	-	Absent / LOQ	Pass	GC-MS

Mycotoxin and pesticide profile

Parameter	Result	Unit	Limit	Status	Protocol
Aflatoxin B1	<= 0.75	ug/kg	<= 5 ug/kg	Pass	HPLC-FLD
Aflatoxin total (B1+B2+G1+G2)	<= 1.38	ug/kg	<= 10 ug/kg	Pass	HPLC-FLD
Ochratoxin A	8	ug/kg	<= 15 ug/kg	Pass	HPLC
Total pesticide residue	0.023	mg/kg	<= 0.05 mg/kg	Pass	LC-MS/MS

Microbiological analysis (US/UK importer panel)



Microbiological analysis (US/UK importer panel)

Parameter	Test result	Unit	Limit	Status	Protocol
Total aerobic microbial count (TAMC)	< 1380	cfu/g	< 100000 cfu/g	Pass	USP <2021>
Total yeast & mould count (TYMC)	< 145	cfu/g	< 10000 cfu/g	Pass	USP <2021>
E. coli	Absent	per 1 g	Absent	Pass	USP <2022>
Salmonella spp.	Absent	per 10 g	Absent	Pass	USP <2022>
Staphylococcus aureus	Absent	per 1 g	Absent	Pass	USP <2022>

Residual solvent profile (extract process control)

Parameter	Result	Unit	Limit	Status	Protocol
Ethanol	1090	ppm	< 5000 ppm	Pass	USP <467>
Methanol	97	ppm	< 3000 ppm	Pass	USP <467>
Acetone	475	ppm	< 5000 ppm	Pass	USP <467>
n-Hexane	41	ppm	< 290 ppm	Pass	USP <467>

US / UK market-facing compliance reference matrix

Region	Regulatory reference	Control area	Conformance note	Status
USA	21 CFR Part 111	Dietary supplement cGMP documentation	Batch traceability and QC release reviewed	Conforms
USA	USP <2021> / <2022>	Microbial limits and specified pathogens	Panel completed within acceptance criteria	Conforms
USA	USP <233> / ICH Q3D	Elemental impurities	Pb/As/Cd/Hg below importer limits	Conforms
UK	Retained EU Reg. 2023/915	Food contaminant framework	Mycotoxin and contaminant profile acceptable	Conforms
UK	Reg. (EC) 396/2005	Pesticide MRL context	Screening indicates compliant residue profile	Conforms

Remarks, instruction and disclaimer

Certification status: PASSED.

NABL remark: The analyzed Ashwagandha sample is compliant with the tested heavy-metal, microbial, mycotoxin, and residual-solvent controls generally requested by US and UK nutraceutical import channels. Identity and assay support the declared botanical profile and potency.

Instruction / note: This certificate applies only to the stated lot and sampling event. For technical queries, cite report ID, batch no., and sample ID.

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