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*Fine Chemicals * *Cosmeceuticals

*Herbal Extracts *Specialty Chemicals

CERTIFICATE OF ANALYSIS

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Product Code Batch No. TR No. Date of Manufacture	Ashwagandha Extract 0130 H211491 HY21F0620 November 2021 October 2026				
Category	Intended for Nutrace	utical application			
Botanical/Scientific name					
CAS No	90147-43-6				
Plant part	Roots				
Preparation type	Extraction				
Solvent used for extracti					
Solvent used in manufacture	None				
Final extract ratio	5:1 to 8: 1				
Standardization	Alkaloids, Withanolid	Alkaloids, Withanolides, Withaferin-A			
Excipient used	Maltodextrin	Maltodextrin			
	Excipient name	%Used	CAS No.		
	Maltodextrin	25% to 50%	9050-36-6		
Parameters PHYSICAL	Result	Limit	Reference		
Description	Complies	Brown to dark brown powder with characteristic odour*	Visual and Organoleptic		
Identification	Complies	To comply by TLC for a) Alkaloids and b) Withanolides	SLL/STP-A-012		
Solubility			SLL/STP-S-028		
-Water solubles (1% w/v solution in water)	87.08 % w/w	Not less than 70.0% w/w			
-Alcohol solubles (1% w/ solution in 50% v/v alcohol)	′v 76.31 % w/w	Not less than 60.0% w/w			
Loss on drying	1.96 % w/w	Not more than 5.0% w/w (dried at 105°C)	EP 2.2.32		
Ash content	4.20 % w/w	Not more than 15.0% w/w	EP 2.4.16 Method - II		
Tapped bulk density	0.74 g/ml	Between 0.60g/ml and 0.85g/ml	EP 2.9.34 Method - I		

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Not less than 7.0% w/w

and not more than 10.0%

Not more than 2.0% w/w

Not more than 3ppm

Not more than 1ppm

Not more than 1ppm

Not more than 0.1ppm

To comply as per EU

To comply as per EP

Directive 2009/32/EC

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Product Name Product Code Batch No. TR No. Date of Manufacture Date of Expiry	Ashwagandha Extract 0130 H211491 HY21F0620 November 2021 October 2026		
Parameters	Result	Limit	Reference
Loose bulk density	0.49 g/ml	Record	EP 2.9.34 Method - I
Sieve Test (Passes through)			USP <786>
- 20 mesh	100.00 % w/w	Not less than 100% w/w	
- 40 mesh	97.63 % w/w	Not less than 85% w/w	
- 80 mesh	73.38 % w/w	Not less than 70% w/w	
CHEMICAL			
Assay			
-Content of Alkaloids by	/ 1.03 % w/w	Not less than 1.0% w/w	SLL/STP-A-051

w/w

(µg/g)

 $(\mu g/g)$

 $(\mu g/g)$

 $(\mu g/g)$

-Content of Alkaloids by Gravimetry	1.03 % w/w
-Content of total Withanolides (free Withanolides and Glycowithanolides) by Gravimetry	9.07 % w/w
-Content of Withaferin-A by HPLC	0.32 % w/w
OTHERS	
Lead	<0.2 ppm (µg/g)
Arsenic	<0.2 ppm (µg/g)
Cadmium	<0.2 ppm (µg/g)
Mercury	<0.02 ppm (µg/g)
Residual solvents	Complies

Residual pesticides Poly Aromatic Hydrocarbons (PAH)

Complies

USP <561> SLL/STP-P-109

SLL/STP-W-005

SLL/STP-W-004

USP <2232>

USP <2232>

USP <2232>

USP <2232>

USP <467>

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Product Code0Batch No.HTR No.HDate of ManufactureN	shwagandha Extract 130 1211491 1Y21F0620 Iovember 2021 October 2026			
Parameters	Result	Limit	Reference	
-Benzo(a)pyrene	Complies	Not more than 10ppb (μg/kg)		
-PAH4 (Sum of Benzo(a)pyrene, Benz(a)anthracene, Benzo(b)fluoranthene and Chrysene)	Complies	Not more than 50ppb (μg/kg)		
MICROBIOLOGICAL PROFI	LE			
Total aerobic microbial count	<100 cfu/g	Not more than 5000cfu/g	EP 2.6.31	
Total yeasts and molds count	10 cfu/g	Not more than 100cfu/g	EP 2.6.31	
Escherichia coli	Complies	Negative/10g	EP 2.6.31	
Salmonella	Complies	Negative/25g	EP 2.6.31	
Staphylococcus aureus	Complies	Negative/10g	EP 2.6.13	
Pseudomonas aeruginosa	Complies	Negative/10g	EP 2.6.13	
Bile tolerant Gram negative bacteria	<10 cfu/g	Not more than 100cfu/g	EP 2.6.31	
Coliforms	<10 cfu/g	Less than 10cfu/g	BAM 2001, 8th Edition, Chapter 4	
ADDITIONAL INFORMATIC	N			
Nature	Hygroscopic			
Sanitising treatment	Non-irradiated and not	Non-irradiated and not treated with ETO		
Certification Status (Kosher/Halal)	Kosher and Halal certifie	ed		
BSE/TSE status	BSE / TSE free			
Genetic Modification Status	GMO free			
Country of Origin	India			
Cultivated or wild crafted	Cultivated			
Storage condition	Store at room temperat	ure in a air tight container. Avc	id exposure to moisture.	

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Product Name Product Code Batch No. TR No. Date of Manufacture Date of Expiry	Ashwagandha Extract 0130 H211491 HY21F0620 November 2021 October 2026
Manufactured By	Sami-Sabinsa Group Limited - Peenya 19/1, 19/2, I Main II Phase, Peenya Industrial Area, Bangalore. 560 058, Karnataka, India
Manufactured At	Sami-Sabinsa Group Limited - Hyderabad Plot No.12A,Alexandria Knowledge Park, Genome Valley, Turkapally,Shameerpet - Mandal, R.R. District-500 078,Telangana,INDIA
Remarks	*Since it is a herbal product, there is likely to be minor colour variation from batch to batch of the product because of the geographical and seasonal variations of the raw material. *Natural products can be hygroscopic and may agglomerate sometimes. It is suggested to sift the product before use.

The above certificate of analysis is based on Specifications Issue No: 6 Dated: August 26, 2021

NAP:Not Applicable NAV:Not Available

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