

### FINISHED PRODUCT SPECIFICATION

PRODUCT NAME	PIPERINE 95.0%	SPEC: FPS/B01/1582-01
		Effective Date: 23-02-2022

Botanical/ Scientific name	<i>Piper nigrum</i>	Plant part used	Fruit
Standardization	Piperine	Production Method	Drying
Shelf Life	5 years	Extraction Solvent	Ethanol

SL No	Protocol	Test Parameter	Test Limit
<b>Physical</b>			
01	Organoleptic	Description	Off white to creamish color* Powder
02	TM/1582	Identification	To Comply by HPLC
03	USP	Solubility	Soluble in alcohol
04	USP <731>	Loss on drying	Not more than 5.0%w/w
05	USP <281>	Ash content	Not more than 5.0%w/w
06	USP <616>	Untapped bulk density	Between 0.30 to 0.50g/ml
07	USP <616>	Tapped bulk density	Between 0.40 to 0.70g/ml
08	USP <786>	Particle size	100% passing through 40 mesh
<b>Chemical</b>			
09	TM /1582	Content of Piperine by HPLC	Not less than 95.0% w/w
<b>Heavy Metal</b>			
10	USP <233>Procedure 1	Lead	Not more than 3.0 ppm
	USP <233>Procedure 1	Arsenic	Not more than 1.0 ppm
	USP <233>Procedure 1	Cadmium	Not more than 0.5 ppm
	USP <233>Procedure 1	Mercury	Not more than 0.1 ppm
<b>Microbiological</b>			
11	USP <2021>	Total plate count	Not more than 3000cfu/g
	USP <2021>	Total yeast and mold count	Not more than 100cfu/g
	USP <2022>	Escherichia coli	Absent / 10g
	USP <2022>	Salmonella spp.	Absent / 10g
	USP <2021>	Coliforms	Absent / 10g
	USP <2022>	Staphylococcus aureus	Absent / 10g
	USP <62>	Pseudomonas aeruginosa	Absent / 10g



**Bio-Med Ingredients Pvt Limited**

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ADDITIONAL INFORMATION	
Sanitizing treatment	Non –irradiated and not treated with ETO
GMO Status	GMO free
Standard Packing	25 Kg in single HDPE container.
Certifications	ISO 22000:2005, ISO 9001:2015, GMP, HALAL certified
Storage condition	Store in a cool and dry place away from sunlight and heat. The preferred storage is below 30 <sup>0</sup> C.

\* The product is of herbal origin. There may be minor color difference because of the geographical and seasonal variations of the plant material.

*This is a computer generated copy. Hence signature not required*



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