



**Srikem Laboratories Pvt. Ltd.**

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### CERTIFICATE OF ANALYSIS

Product	: Permethrin (Pharma Grade) 99%	COA No.	: 0965/18
Batch No.	: 184046005	Report No.	: FP-288/18
Mfg. Date	: Sep.2018	Mfg. Lic. No.	: KD-324
Exp. Date	: Aug.2023	Dispatch Qty.	: 100 Kg

TEST	OBSERVATION	LIMIT
Characters (Description & Solubility)	Yellow brownish colour liquid which solidify on standing at lower temperature.  Soluble in Alcohol (96 % W/V), Acetone, Ether & Hydrocarbons (Toluene).	Yellow brownish colour liquid which may solidify on standing or at lower temperature.  Soluble in Alcohol (96 % W/V) Acetone, Ether & Hydrocarbons (Toluene).
Identification Infrared Absorption	A) By IR IR Spectrum exhibits maxima which are only at the same wave number as those in spectrum of Permethrin working Standard.	A) By IR IR Spectrum exhibits maxima which are only at the same wave number as those in "Reference Spectrum of Permethrin- Reference Standard".
	B)By HPLC Retention time of Permethrin test sample matches with retention time of Permethrin standard in the assay test.	B)By HPLC Retention time of Permethrin test sample matches with retention time of Permethrin standard in the assay test.
Loss On Drying	0.21 %	Not more than 2.0 %
Related Substance By HPLC	Meta Phenoxy Benzyl Alcohol: 0.0974% Meta Phenoxy Benzaldehyde: 0.0183% DV Acid Ester (Cis+Trans): BDL Unknown Impurity: 0.1698% Total Impurity: 1.0624 %	NMT 0.15 % NMT 0.15 % NMT 0.15 % NMT 0.30 % NMT 2.0 %
Sulphated Ash	0.03 %	Not more than 0.2 %
Assay by HPLC (on dried basis)	99.05%	98.0% to 101.0%
Cis Isomer	26.01%	23.0% to 27.0%
Residual Solvents	Toluene: 14.31 ppm *Benzene: BDL	Not More Than 890 ppm Not More Than 2 ppm

*Note: - Before sampling stir well & warm up to 40°C Permethrin solidifies below 35°C. In case of solidification please warm up to 40 to 45°C to get liquid (Before use). This does not affect the quality.*

Remarks :Passes As Per Specification *Benzene is not used in process, but tested due to the use of Toluene.	
Prepared By/Date:- <i>Uday Vetal</i> Oct. 22, 2018 Mr. Uday Vetal (QA/RA Asst. Manager)	Approved By/Date:- <i>Kanchan Patil</i> Oct. 22, 2018 Mrs. Kanchan Patil (Asst. Manager QA)

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