



# ZHUZHOU LAND MSM PLANT

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## CERTIFICATE OF ANALYSIS

<b>Product Name</b>	Methyl Sulfonyl Methane (MSM)	<b>Manufacture date</b>	Nov.28, 2014
<b>Grade</b>	Pharmaceutical Grade	<b>Analysis date</b>	Nov.28, 2014
<b>Batch No.</b>	20141128	<b>Expiry date</b>	Nov.27, 2014
<b>Batch quantity</b>	1000KG	<b>Test Standard</b>	USP & BP

ITEMS	PRODUCT STANDARD	RESULT	TEST METHOD
Purity %	>99.90 of C <sub>2</sub> H <sub>6</sub> O <sub>2</sub> S on an anhydrous basis	99.95%	USP32, page 1053(GC)
DMSO Content %	≤0.01	0	USP32, page 1053(GC)
Appearance	White crystalline, free flow powder	Complies	Sensory evaluation
Odor/ Taste	Odorless / Tasteless	Complies	Sensory evaluation
Melting Point@760mmHg	108.5°-110.5°C	Complies	USP31/ BP appendix V A (Method I)
Boling point	238°C	Complies	USP31
Bulk Density g/ml	>0.68	0.70	USP31
Tap Density g/ml	>0.78	0.80	USP31
Water Content %	<0.10	<0.10	BP Appendix IX; determined on 0.500 g
Solubility	Freely soluble in water	Complies	BP supplementary chapter IV K
Total Heavy Metals: ppm	<3	<3	BP
As	<0.1	<0.1	BP
Cd	<0.1	<0.1	BP
Hg	<0.1	<0.1	BP
Pb	<1	<1	BP
Residue on Ignition%	<0.20	<0.01	USP32, page 1053
Microbiological			
Total Plate Count	<1000cfu/g	<1000cfu/g	BP
Yeast/Mold	<10cfu/g	<10cfu/g	BP
E.Coli	Negative	Negative	BP
Salmonella	Negative	Negative	BP
Staphylococcus aureus	Negative	Negative	BP
Standard Aerobic Plate Count	<10cfu/g	<10cfu/g	BP
Particle Size	60-80Mesh	Conform	Sieve analysis
Storage	Store in cool and dry place & keep away from strong light and heat		
Packing standard	Cardboard Food Grade Drums; Woven bag; Kraft paper bags; Ton bag etc.		
Conclusion	Meet the specifications		

Inspector: 宋瑞



Q.C. Manager: 周伟