



MSM (methylsulfonylmethane) Safety Data

Author/Year	Design/Title	Result
1958	LD-50	LD-50 not reached; highest tested dose, 20 grams/kg body weight not toxic; toxicity threshold too high to observe.
1968	Acute Oral Toxicity	Acute Oral LD50 > 17,020 mg/kg BW
1999	Ocular and Dermal Irritation Assay	MSM tested non-irritant to eyes and skin
2003	Subchronic 90-Day Oral Toxicity-organs/tissues	No treatment related histopathological lesions found in the organs and tissues of male and female rats treated with 1,500 mg/kg MSM daily for 90 days.
2005	Ames Test (salmonella typhimurium reverse mutation assay)	In this biological assay for mutagenicity, the five strains tested did not meet the criteria for a potential mutagen.
2013	Patch Test (dermal irritation and sensitization potential)	MSM did not demonstrate a potential for eliciting dermal irritation or sensitization in test population of 50 human subjects.
Takiyama, 2010 ¹	Single and 13-week repeated oral tox study in Mice	NOAEL for MSM at 3% drinking water (8.1 and 8.8g/kg BW - 100x recommended dosage in humans). No toxicity observed at 13 weeks.
Magnuson, 2007 ²	Oral Developmental Toxicity Study in Rats	NOAEL for maternal and developmental toxicity of MSM intake a 1g/kg; no evidence of maternal or fetal toxicity over gestation days 6-20.
Magnuson, 2007 ³	Pharmacokinetics and Distribution of MSM	MSM rapidly absorbed, well distributed and completely excreted from the body after dosage of 500 mg/kg.
Lee, 2006 ⁴	Evaluation of Genotoxicity	MSM not genotoxic in reverse mutation test, in vitro chromosome aberration test, in vivo micronucleus test.
Horvath, 2002 ⁵	Acute & Chronic Toxicity Assessments in Rats	Daily doses of 1.5g/kg and a single dose of 2g/kg for 90 days showed no toxicity in rats.

1. Pharmacometrics 2010;79(1/2):23-30

2. Food and Chemical Toxicology 2007;45:977-984

3. Journal of Agricultural and Food Chemistry 2007;55:1033-1038.

4. J. Microbiol biotechnol 2006;16(5):817-820

5. Food and Chemical Toxicology 2002;40:1459-1462



Toll Free: 888-733-5676, (888-SEEK-MSM)
sales@bergstromnutrition.com

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