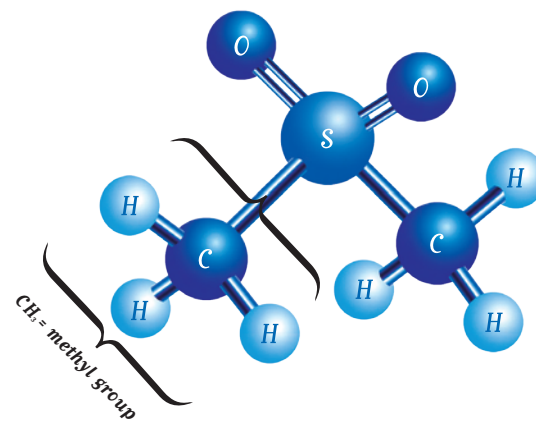


OptiMSM® PHYSICOCHEMICAL SPECIFICATION	
Volatile purity	> 99.8%
Melt point	109.5°C ± 1.0°C
Water Content	< 0.1%
DMSO Content	< 0.05%
Aerobic Plate Count	< 10 cfu/g
Yeast/ Mold	< 10 cfu/g
Enterobacteria	Absent
Escherichia coli	Absent
Salmonella	Absent
Staphylococcus aureus	Absent
Aluminum	< 1.0 ppm
Arsenic	< 0.01 ppm
Cadmium	< 0.005 ppm
Mercury	< 0.001 ppm
Lead	< 0.01 ppm

TECHNICAL DATA	
Boiling Point	248°C
Flash Point	143°C
HMIS ratings	Health: 0
	Flammability: 1
	Reactivity: 0
CH3	= methyl group
MSM is 34.06% elemental sulfur, 25.52% carbon, 6.42% hydrogen and 34% oxygen.	



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720-01-204 1.1

About Bergstrom Nutrition

Bergstrom Nutrition produces the world's only GRAS-designated proprietary and patented forms of MSM (methylsulfonylmethane) in its GMP-compliant, ISO 9001:2008 registered and FSSC22000 certified, MSM-dedicated production facility, exceeding industry standards for optimal purity and product consistency. The Vancouver, Washington-based company pioneered the use of MSM for human consumption in 1989.

For information on Bergstrom Nutrition call 1.888.733.5676 or visit bergstromnutrition.com.

These statements have not been evaluated by the Food & Drug Administration. This product is not intended to diagnose, treat, cure or prevent disease.

OptiMSM®

OptiMSM® The World's Most Trusted MSM

One in three U.S. adults are concerned about their joint health, as evidenced by the growth of the U.S. joint health supplement market (NMI Research). Currently the market for joint health supplements represents \$1.6 billion in sales and continues to show growth (NBJ VolXV No. 11/12).

Consumers concerned about their mobility prefer to use nutritional supplements rather than prescription medication to stop the progression of issues they are managing (NMI Research). Methylsulfonylmethane (MSM) is recognized as a leading ingredient in this category—but not all MSM is created equal.

U.S.-made OptiMSM is a premium form of trademarked MSM that is GRAS-designated and supported by U.S. clinical published research. OptiMSM is manufactured in a GMP-compliant, ISO 9001:2008 registered, FSSC22000 certified MSM production facility. Introduced in 1989, it has been a leading ingredient for joint health products and the choice of quality brand manufacturers.



A Commitment to Quality

Unmatched, consistent quality is our goal. That's why OptiMSM is produced in the only single-purpose MSM production facility in North America.

Manufacturing Excellence

- Only MSM to have GRAS-designation, receiving a letter of non-objection from the FDA
- GMP compliant facility
- ISO 9001:2008 Quality Management System
- FSSC22000 Certified for Food Safety

Unmatched Purity

- OptiMSM is distilled for optimal purity, not crystallized
- Proprietary four stage distillation process removes heavy metals and other contaminants
- Single-purpose, closed system plant design eliminates the possibility of cross contamination
- Real-time process control technology monitors every facet of production resulting in consistent product
- Each batch is third-party tested and exceeds USP MSM monograph standards for dietary supplements

Nutritional Safety

- Kosher and Halal certified
- Non-GMO
- Gluten and allergen free
- Non-shellfish derived
- Vegan

Superior Customer Service

We are a customer-focused organization dedicated to continuous improvement, uncompromising quality and service that is second to none. Our dedication to taking care of our customers means we make sure OptiMSM is delivered on time with no back order, and then flows correctly through your equipment and is supported at every level of your sales process. We're here for our customers, from start to finish.

The Healthful Benefits of OptiMSM

OptiMSM is a biomimetic source of MSM, identical to that found in nature, comprised of sulfur and methyl groups displaying a variety of health-promoting benefits.

Joint Health – Several pre-clinical and clinical studies support the efficacy of MSM in supporting joint health and range of motion. Research shows that MSM reduces inflammatory markers that damage cartilage as we age, protecting its integrity.

Efficacy of methylsulfonylmethane (MSM) in osteoarthritis pain of the knee: a pilot clinical trial; L.S. Kim, L.J. Axelrod, P. Howard, N. Buratovich, R.F. Waters Osteoarthritis Cartilage 2006 Mar; 14(3):286-94. Epub 2005 Nov 23

Seasonal Immune Health – MSM may support a healthy immune response to allergens, based on an open-label clinical study and animal studies.

A Multi-Centered, Open Label Trial on the Safety and Efficacy of Methylsulfonylmethane in the Treatment of Seasonal Allergic Rhinitis; E. Barrager, J.R. Veitmann, A.G. Schauss, R.N. Schiller; J Altern Complement Med 2002; 8:167-73

Liver Support – MSM may support liver health and metabolism, based upon an animal study showing elevated liver glutathione after MSM supplementation. Glutathione is a sulfur-rich antioxidant involved in detoxification.

Methylsulfonylmethane (MSM) Intake in Mice Produces Elevated Liver Glutathione and Partially Protects Against Carbon Tetrachloride-Induced Liver Injury R. DiSilvestro, D. DiSilvestro, and D. DiSilvestro; FASEB J. 2008; 22:445.8

Dosage Ranges

OptiMSM is extremely safe. Extensive toxicology data shows that it can be taken in high doses for a long period of time. Supplementation recommendations are between 1-3 grams taken twice daily.

A Pharmacokinetic Dose-Escalating Evaluation of MSM in Healthy Male Volunteers. D. Krieger, H. Schwartz, R. Feldman, I. Pino, A. Vanzant, D. Kalman, S. Feldman, A. Acosta, P. Pardo, J. Pezzullo; 2009; Miami Research Associates

Research

Bergstrom Nutrition invests in research to advance our understanding of MSM, prove safety and efficacy, and aid regulatory registration. Abstract summaries of our research are shared through our website, www.bergstromnutrition.com and our sponsored educational website, www.msmsguide.com.

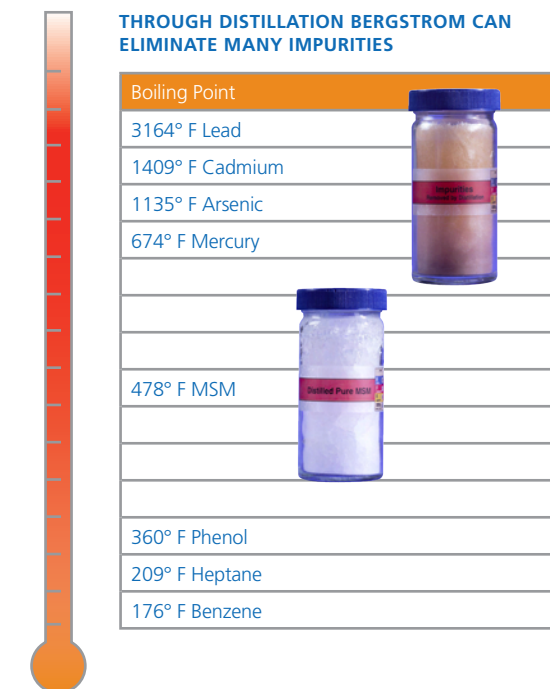
Purity like no other MSM

Bergstrom Nutrition's focus on purity sets OptiMSM apart. Bergstrom Nutrition pioneered the distillation process of MSM to ensure the highest levels of purity and safety. Today, the distillation we use for purification is still recognized by chemical engineers and other experts as the most superior method on the market.

While MSM is created in nature through the earth's sulfur cycle and found in small quantities in vegetation, animals and the human body, all commercial MSM must be manufactured because the amount found in nature is too small to be extracted.

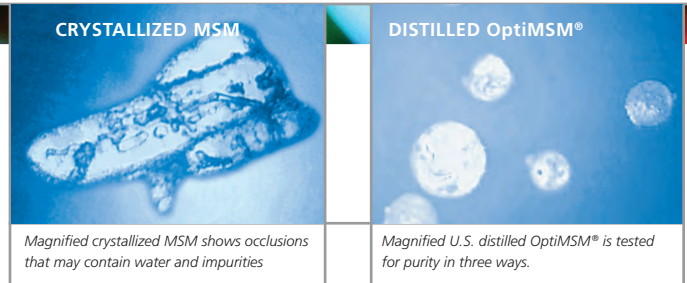
Distillation Method

Bergstrom Nutrition's proprietary four-stage distillation process uses heat to separate impurities and by-products of manufacturing based on their unique boiling points. MSM's boiling point of 478° F (248° C) allows pure MSM to be isolated from solution. In addition to being a very pure product, distilled OptiMSM has a low moisture content, which reduces the risk of microbial contamination and product degradation.



Crystallization Method

Unlike Bergstrom's distillation method, MSM purified by crystallization can develop occlusions in the crystals as they form that entrap contaminants present in the solution, resulting in decreased purity.



Magnified crystallized MSM shows occlusions that may contain water and impurities

Magnified U.S. distilled OptiMSM® is tested for purity in three ways.

Rigorous Analytical Testing Verifies Consistent Identity and Purity

Bergstrom Nutrition mandates tight specifications for OptiMSM and analytical methods that are more stringent than other MSM on the market resulting in increased purity and safety:

- DMSO, central to the manufacturing of MSM is a powerful solvent and a pharmaceutical agent which has been shown to cause degradation of capsules, active ingredients and organoleptic properties. OptiMSM reports the lowest levels of DMSO at <0.05%.
- OptiMSM is third-party tested to ensure its heavy metal content is at least 100 times less than guaranteed by USP standard. This supports Proposition 65 compliance in products containing OptiMSM.
- Microbial standards for OptiMSM are set to USP pharmaceutical standards which are more rigorous than those for dietary supplements and support the Global Food Safety Initiative.

Freedom from volatile environmental toxins

Purity by HRGC > 99.8% - A highly specific quantitative method for determining the volatile purity of MSM and provides the best assurance of freedom from DMSO and other volatile environmental toxins.

Freedom from non-volatile impurities

Melting Point 109.5°C + 1.0°C - Extremely pure compounds have a distinct melt point. OptiMSM's definitive melting point assures freedom from non-volatile impurities.

Low microbial growth risk

Water Content < 0.1% - Water content by Karl Fischer Titration is preferred for MSM. Other methods such as loss on drying and using a moisture balance can give erroneous results, as some of the MSM may be driven off by the heat, giving higher results than actual. Increased water content is associated with the potential for microbial growth and can impact the shelf life of finished products.