OptiMSM®

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OptiMSM® is a researched, industry leading branded form of MSM, manufactured in USA in a single-purpose production facility and purified through a proprietary multi-stage distillation process. Research on OptiMSM® demonstrates benefits on joint health, inner beauty, exercise recovery, athletic performance, healthy aging and more.



PRODUCT PROFILE SHEET

MSM, (methylsulfonylmethane) also known as dimethyl sulfone (DMSO2), is a source of organic sulphur (up to 34%), important for optimal health. Sulphur is a nutrient that acts as a critical component of key molecules that make up connective tissue throughout the body, including joint and skin tissue. Sulphur is also a major building block of one of the body's most critical antioxidant defence systems, which helps against oxidative stress and free radicals[1].

We Don't Compromise on MSM Neither Should You

OptiMSM® is the industry leading brand of MSM that has been a pioneer in the field of sulphur nutrition for over 30 years. OptiMSM® is manufactured through a 4-step distillation process, in the only single-purpose facility in North America to ensure commitment to quality.

Research supports OptiMSM®'s ability, as a source of sulphur, to support cartilage to maintain healthy joints and connective tissue[1]. OptiMSM® supplementation has been shown to deliver multiple health benefits – from supporting skin health by decreasing the appearance of fine lines and wrinkles[2], to maintaining the body's antioxidant capacity to help aid in exercise recovery and athletes performance[3,4]. OptiMSM®'s main benefits may help end consumers to live well, age well, and perform well.



Product Advantages

- ✔ **Leading and Trusted Brand Worldwide**
- ✔ **Pure**
  A proprietary multi-stage distillation process that ensures a 99.9% pure product.
- ✔ **+30 Years of Manufacturing Expertise**
- ✔ **Dedicated Facility**
- ✔ **Scientifically Researched**
- ✔ **High Quality**
  Identity verification and third-party assay testing to the tightest specifications in the industry.
- ✔ **Consistent**
  Each batch production is reliable in form and quality.
- ✔ **Safe**
- ✔ **Easy to Formulate**
  Stable at high temperatures, water-soluble, odourless, dissolves quickly, no pH restrictions.
- ✔ **Kosher & Halal Certified**
- ✔ **Gluten-free**
- ✔ **Allergen Free**
- ✔ **Vegetarian & Vegan**
- ✔ **Informed-Ingredient® Certified for Sports Nutrition**

Research

Joint Health

Sulphur is an important nutrient necessary for the maintenance of healthy joints, tendons, ligaments and other connective tissue[1]. Sulphur also supports the production of molecules such as glutathione, which plays a key role in the body's antioxidant response[1].

Healthy joints require cartilage to function properly, providing a buffer between the bones and helping to reduce friction to enable normal movement[5,6]. MSM functions as a source of sulphur, which acts as a key component of important building blocks that build healthy cartilage[1]. In the area of joint health, extensive clinical (human) research has demonstrated the utility of MSM in alleviating joint pain and stiffness while improving mobility and quality of life in persons suffering from joint ailments. Specific research on OptiMSM® has demonstrated the ability to significantly improve overall joint health and comfort[7], while also in combination with other ingredients, such us glucosamine sulphate[8].

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Exercise Performance and Sports Recovery

Clinical studies have demonstrated that OptiMSM® supplementation **reduces post-exercise pain and inflammation**[9] and helps counteract oxidative stress[10], supporting effective recovery after exercise. OptiMSM® offers benefits to both new[11] and experienced athletes[3,9]—whether running on the track[3,10] or lifting weights in the gym[9]. Moreover, evidence suggests OptiMSM® may help mitigate post-exercise immunosuppression[12,13].

A recent study[13] (2025) assessed MSM's impact on **immune response gene expression after prolonged aerobic exercise**. Healthy, experienced runners took either 1 gram a day of MSM or a placebo for 30 days prior to completing a half-marathon (21.1 km, 120–150 minutes). Blood samples collected before and at two and four hours post-race were analysed for 700 immune-related mRNAs. The results indicated improvements in exercise **recovery, post-exercise muscle, and antioxidant capacity after exercise**[13]. These findings reinforce the role of OptiMSM® as a methyl donor[13,14] and as an essential component for cellular health, underpinning recovery[14,15]. In addition, a clinical dose of 3 grams of MSM daily has been shown to reduce muscle pain and inflammation after exercise[9].

Furthermore, the Informed-Ingredient® Certification obtained by OptiMSM®, confirms additional assurance as a safe ingredient choice for sport nutrition formulas.

Skin, Nails and Hair

Sulphur supports skin in two ways: by providing critical building blocks that the skin relies on and supporting important antioxidant systems in the body to help defend against oxidative stress[1]. Supplementation with OptiMSM® provides multiple benefits for the skin: from reducing the appearance of fine lines and wrinkles[16] to improving skin texture and firmness[2]. A clinical study demonstrated that oral ingestion of OptiMSM® may help in reducing signs of aging, like facial wrinkles and skin roughness, and improves skin firmness, elasticity and hydration. With both doses (1 or 3 grams) showing efficacy, researchers pointed towards OptiMSM®'s effectiveness in reducing visual signs of skin aging, even at a low dose of 1 gram per day[16]. Furthermore, other publications on OptiMSM® shown significant improvements in the appearance and condition of hair and nails[17], including potential benefits for hair growth and thickness[18,19].

Synergy with Collagen

Through different mechanisms, collagen[20] and sulphur[21] aid in the production of collagen and other critical architectural components of the skin. Both nutrients also support the body's defences to help preserve healthy collagen in the skin, with collagen aiding in an immune-mediated remodelling of the skin[20] and sulphur aiding in the antioxidant defence by way of supporting glutathione structure and function[21]. A recent study[22] investigated the effects of collagen supplementation with or without OptiMSM® on skin health in women (aged 40-65). At week 12 only those receiving both OptiMSM® and collagen saw improvements in skin thickness, hydration and roughness. Additionally, while supplemental collagen alone reduced skin roughness, the effect was significantly greater in the group that received both OptiMSM® and collagen together. The study concluded that combining MSM with collagen provides even greater benefits for skin health.



Bioavailability

Various OptiMSM® Studies provide data confirming that within 45 minutes, OptiMSM® increased MSM concentrations in blood plasma[22], with peak concentrations reached within 4 weeks[23] of supplementation and persisting through 16 weeks[24].

Healthy Aging

Research suggests that OptiMSM® is bioavailable, supports joints, mobility, protects cartilage, and reduces pain and discomfort following exercise. It supports the structural integrity of skin, hair and nails—A key ingredient for healthy aging formulas.

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OptiMSM®

Immune Support

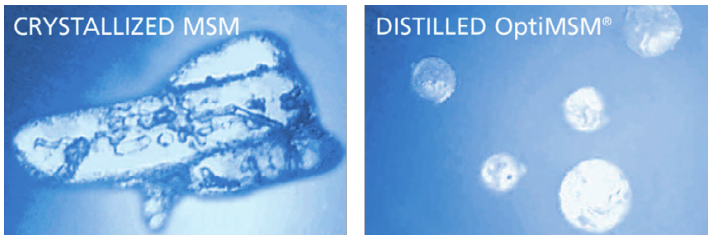
Research suggests MSM conserves the immune system's ability to respond to threats. This response may help boost immunity to fight off infections and improve resistance to viruses and toxic substances.

MSM's ability to increase levels of natural antioxidants, prepares the body to fight off the worst of the cold and flu season. Conversely, when the immune system overreacts and produces too much inflammation, MSM may help to mitigate the excessive response. This is important for lungs, where excessive inflammation causes symptoms like coughing and difficulty breathing.

Manufacturing Process

OptiMSM® is manufactured in the only single-purpose facility in North America to ensure commitment to quality. Only the best starting raw materials are used and carefully processed using a multi-stage distillation process, recognised as the best purification method found on the market. Magnified microscope images below show how OptiMSM® compares to crystallized MSM, which shows occlusions that may contain water and impurities.

Fig 1: OptiMSM® vs Standard MSM



The distillation process removes impurities by utilising unique boiling points to isolate the MSM molecules. Distillation also guarantees low moisture content, reducing the risk of micro-contamination and degradation.

Certifications

INFORMED WE TEST · YOU TRUST
INGREDIENT

OptiMSM® is officially registered in the Informed-Ingredient® Program.

Informed-Ingredient® is a worldwide program developed to minimise the risk of banned substance combination with ingredients and raw materials intended for the sports nutrition industry.

Product Safety

MSM has shown very low toxicity with a reported LD-50 of over 17,000mg/kg BW. OptiMSM® is generally recognised as safe (GRAS).

Several individual toxicity studies have been performed on OptiMSM® and all indicated the ingredient is safe.

Product Range

OptiMSM® is available as a raw material and finished product solution

Ingredient	Active Content	Grade	Mesh Size
OptiMSM®	98%-102% MSM (methylsulfonylmethane)	Flake	NLT 98% thru 12 mesh
OptiMSM®	97.9%-101.9% MSM (methylsulfonylmethane)	Microprill	NLT 95% thru 40 mesh NMT 55% thru 100 mesh

Finished Products

Vegetarian Capsules: Contains 1000mg of OptiMSM®

Product Pack Size

Both OptiMSM® Microprill and Flakes grades are distributed in 20kg bags.

Product Applications

We recommend using OptiMSM® Microprill in tablets (excellent performance on DC tablets) and capsules.

OptiMSM® Flakes can be used in sachets, power blends, cosmetic formulations, and liquid applications.

For liquid applications, the addition of a flavour may be necessary, depending on the quantity used.

Product Dosage

For maintenance of skin, hair, and nails, joint support or exercise recovery, 1-3g daily.

For reparative or acute needs, 3-5g daily. Scientifically proven benefits on skin health have been demonstrated with 1000mg per day[13].

Furthermore, latest published research shows significant benefits on joint health with only 2000mg per day[7].

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OptiMSM®

About

balchem
HUMAN NUTRITION & HEALTH

For over 50 years, Balchem® has developed innovative solutions for the health and nutritional needs of the world.

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