

Measurably Superior Stearates





Over a Century of Production and Progress

In 1908, Mallinckrodt Pharmaceuticals first began producing zinc stearates, and by 1923, other stearates were added to our product line. Today, we sell a broad portfolio of high quality pharmaceutical stearates worldwide. Our production is based in the United States, operating from GMP manufacturing sites located in Saint Louis, MO and Greenville, IL.

We consider our clients to be partners in producing quality healthcare and food products, and focus on providing strong technical support. Our skilled technical and regulatory team is available to help you during all phases of your development and production process. We provide extensive analytic capabilities, including:

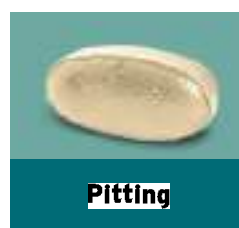
- Scanning electron microscopy
- Gas chromatography
- Infrared spectroscopy
- Microbiology
- Thermogravimetric analysis
- Differential scanning calorimetry

We are determined to protect human and environmental health globally. That's why we use responsibly sourced raw materials, and rigorously comply with environmental regulations concerning clean air, water, and waste management.



Magnesium Stearate: A True *Monohydrate*

Unlike many competitors' products, Mallinckrodt's magnesium stearates are true monohydrate compounds. Customers who use Mallinckrodt's magnesium stearate, including some of the largest global blockbuster medicines, experience a high success rate in **avoiding**:

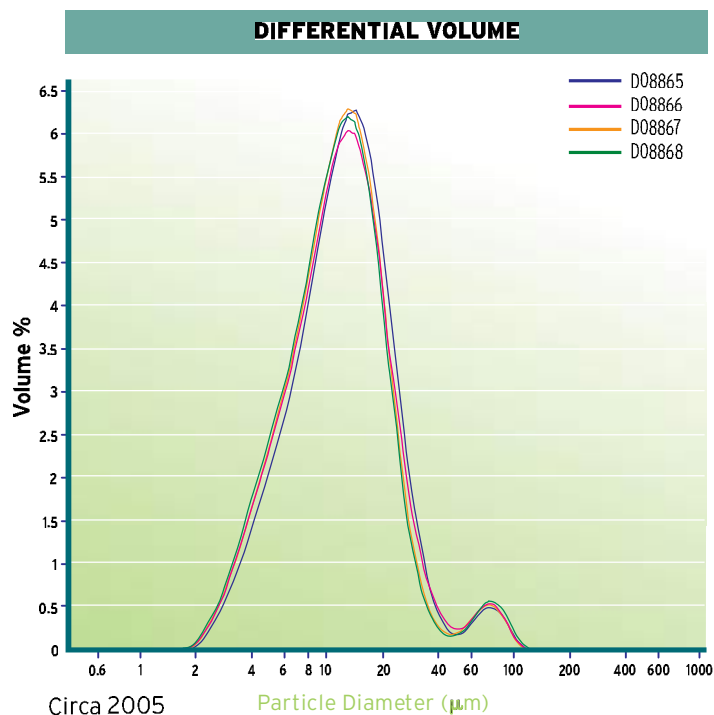


Measurably Better

Our manufacturing process controls result in high purity, high quality, and measurable results. Repeated studies show that our line of magnesium stearates surpasses the leading competitors' products in particle size consistency.

Our stearates provide:

- Powder Flowability
- Blend Uniformity
- Tableting Ease
- Tablet Quality



vs.

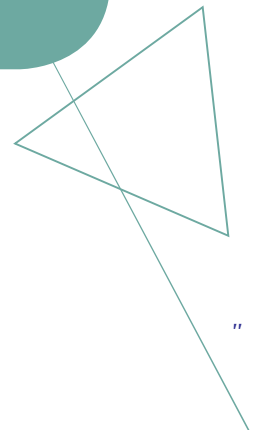
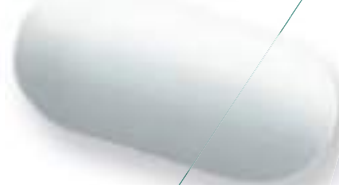


Mallinckrodt Stearates Meet Key Pharmaceutical Application Specifications

PRODUCT	SOURCE	SPECIFICATIONS
Magnesium Stearate NF Veg 1726	Soy	NF/EP/BP/JP/FCC
Magnesium Stearate HyQual 2257	Palm	NF/EP/BP/JP/ChP/FCC
Magnesium Stearate HyQual 5712	Palm	NF/EP/BP/JP/ChP
Stear-O-Wet 8577	Palm	Magnesium Stearate NF/EP/BP/JP/ChP/FCC Sodium Lauryl Sulfate NF
Aluminum Monostearate Hyqual 2263	Palm	NF
Calcium Stearate HyQual 2248	Palm	NF/FCC
Calcium Stearate HyQual 2249	Palm	NF

- Magnesium Stearate NF Veg 1726 is suitable for formulations with a larger particle size
- Magnesium Stearate HyQual 2257 is our most frequently used product for pharmaceutical applications, while Magnesium Stearate HyQual 5712, our second most frequently used product, provides a slightly smaller particle size
- The spray-dried mixture of magnesium stearates and sodium lauryl sulfate in Stear-O-Wet 8577 improves the disintegration and dissolution of drug substances in tablets; RSPO Certification still in process
- Aluminum Monostearate Hyqual 2263 promotes gelling in oil-based preparations, including suppositories, injections and topicals
- Calcium Stearate HyQual 2249 comes in a fine powder, offering a smaller particle size option

All pharmaceutical grade products are Kosher for Passover (except 1726 and Stear-O-Wet which are not Kosher) and Halal-certified (except 1726).



Mallinckrodt Offers a Top Line of Food Grade and Nutraceutical Stearates

PRODUCT	SOURCE	SPECIFICATIONS
Magnesium Stearate Nutraceutical 4024	Palm	NF
Magnesium Stearate Food Grade 3508	Palm	FCC
Calcium Stearate Food Grade 5853	Palm	FCC

All food grade and nutraceutical products are Kosher for Passover and Halal-certified.





Mallinckrodt
Pharmaceuticals

How Important Can 1% Be?
***Very important* if it affects the other**
99% of your tablet.

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385 Marshall Avenue • Webster Groves, MO 63119 • 800-895-9048 • www.mallinckrodt.com