

# HUBERCAL<sup>®</sup>

Naturally Occurring Calcium Carbonate



# Calcium Market Leadership

A passion for serving our customers with the highest quality calcium products backed by superior technical and customer service has driven J.M. Huber Micropowders Inc. to create a market leading FCC and USP calcium carbonate business. As a producer of both calcium carbonate powders and granulations, we have control over the quality and reliability of our supply chain. Our prime central Midwest location in Quincy, IL (US) is a key advantage as it minimizes freight costs.



## The HuberCal® Calcium Carbonate ICH-Q3D Advantage

HuberCal® calcium carbonate products offer formulators their best option to comply with ICH-Q3D. All HuberCal grades meet the high purity requirements of ICH-Q3D and USP <232>. Huber's experienced technical staff also has the background and expertise to help address your risk assessment needs.

HuberCal calcium carbonate is available in powder and granulation form - in both FCC and USP grades. HuberCal offers a combination of outstanding performance, high purity and exceptional value vs. other calcium carbonates.

**ICH-Q3D Class 1 and 2A Values for HuberCal® Elite Powders**

Element	ICH-Q3D Class	Analytic Method Used	Limit of Detection (µg/g)	Typical Product Values (µg/g)
Cadmium Cd	1	ICP-MS	0.1	0.7
Lead Pb	1	ICP-MS	0.05	0.08
Arsenic As	1	ICP-MS	0.05	0.06
Mercury Hg	1	ICP-MS	0.05	0.05
Cobalt Co	2A	ICP-MS	1	1
Vanadium V	2A	ICP-MS	1	4
Nickel Ni	2A	ICP-MS	1	12



# The HuberCal® Calcium Carbonate Advantage

To be confident in your calcium carbonate, you must be satisfied with its quality. Whether you're fortifying food products, producing other calcium salts or manufacturing pharmaceutical or dietary supplement dosage forms, your formulation begins with a calcium carbonate product that offers extremely high purity. Every time. That's HuberCal® naturally occurring calcium carbonate. HuberCal gives you a higher calcium carbonate assay – consistently greater than 99%. This degree of purity is why food companies, calcium salts producers and pharmaceutical and dietary supplement manufacturers have come to rely on HuberCal naturally occurring calcium carbonate.

Typical HuberCal® Powder Properties		
Parameters	Typical Product Values	Units
Calcium Carbonate	99.4	%
Magnesium and Alkali Salts	0.4	%
Acid Insolubles	0.1	%
Loss in Drying	0.1	%
Fluoride	20	(µg/g)
Barium	30	(µg/g)
Iron	30	(µg/g)
Chlorides	< 330	(µg/g)
Sulfates	< 0.25	%
Crystalline Quartz	0.02	%

Typical HuberCal Powder Physical Properties					
HuberCal® Product Grade	Bulk Density Loose (g/cc)	Surface Area BET (m <sup>2</sup> /g)	D50 (Microns)	D98 (Microns)	Screen Residue 325 Mesh (%)
150	1.2	0.9	20	–	35
250	1.1	1.1	10	–	40
500	0.9	1.2	6	–	0.1
850	0.7	1.7	4	< 20	0.0
950	0.7	1.7	3.6	< 18	0.0

X-ray particle size analysis used for 500, 850, & 950 products  
Laser Light Scattering particle size analysis used for 150 & 250 products

## Industry Leading Low Lead, Mercury and Arsenic Impurities

Consumers and regulators alike are increasingly concerned with lead and other heavy metals ingestion. The HuberCal product family helps formulators to address this concern. HuberCal calcium carbonate is industry leading in low lead, mercury and arsenic versus competitive calcium carbonates. The HuberCal Elite product specifications confirm confidence in an industry low lead level of below 0.12 (µg/g) - significantly lower than competitive products. Refer to the HuberCal powder specifications at right for additional product specification information.

HuberCal Powder Specifications			
	FG	USP	Elite
Calcium Carbonate	> 98%	> 98%	> 98%
Loss on Drying	< 2%	< 2%	< 2%
Mg and Alkali Salts	< 1%	< 1%	< 1%
Acid Insolubles	< 0.2%	< 0.2%	< 0.2%
Lead	< 0.5 (µg/g)	< 0.25 (µg/g)	< 0.12 (µg/g)
Arsenic	< 3 (µg/g)	< 1 (µg/g)	< 0.5 (µg/g)
Mercury	–	< 0.5 (µg/g)	< 0.5 (µg/g)
Barium	–	Pass	Pass
Iron	–	< 1000 (µg/g)	< 200 (µg/g)
Fluoride	< 50 (µg/g)	< 50 (µg/g)	< 50 (µg/g)
Chlorides	–	–	< 330 (µg/g)
Sulfates	–	–	< 0.25%

FG products meet Food Chemicals Codex (FCC)  
USP products meet U.S. Pharmacopeia (USP)  
Elite products meet European Pharmacopoeia (EP) and E170

# Huber Offers Granulations, Made With HuberCal® Calcium Carbonate:

- Granulations are available that use both FCC and USP calcium carbonate
- Granulations are normally 95% calcium carbonate / 5% binder
- Maltodextrin is the most popular binder
- Other binder systems available by request
- Products are available in 25 KG bags or semi-bulk bags

HuberCal® Granulation Specifications		
Mineral	FG	USP
Calcium Carbonate	> 92.4%	> 92.4%
Loss on Drying	< 2%	< 2%
Mg and Alkali Salts	< 1%	< 1%
Acid Insolubles*	< 0.2%	< 0.2%
Lead*	< 0.5 (µg/g)	< 0.25 (µg/g)
Arsenic*	< 3 (µg/g)	< 1 (µg/g)
Mercury*	–	< 0.5 (µg/g)
Barium*	–	Pass
Iron*	–	< 1000 (µg/g)
Fluoride*	< 50 (µg/g)	< 50 (µg/g)
Bulk Density Loose	0.8 to 1.2 g/cc	
Through 16 Mesh	100%	
On 60 Mesh	75%	
Through 200 Mesh	15%	

FG granulations use calcium carbonate that meets the Food Chemicals Codex (FCC)

USP granulations use calcium carbonate that meets the U.S. Pharmacopeia (USP)

\* = Specifications based on source powder

## HuberCal® Calcium Carbonate Granulation Properties

HuberCal® calcium carbonate FCC and USP granulation grades are engineered to exact specifications and great care is taken to ensure you get a product you can count on for superior purity, performance, consistency and quality.

HuberCal granulations have been a trusted source for both branded products and nation brand equivalents.

It's time for you to consider HuberCal® calcium carbonate in your next FCC and USP formulation. In addition to our broad product line of calcium powder and granulation products, we provide unsurpassed customer care and technical service. Contact Huber today for more information and to order samples of our high performing HuberCal calcium carbonate products. We look forward to working with you.

**Call:** 866-252-3699

**Click:** [hubercal.com](http://hubercal.com)

**Email:** [hubermaterials@huber.com](mailto:hubermaterials@huber.com)

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