

# Medical Grade Collagen

## Soluble & Fibrous



### Medical grade collagen platform, trusted for its safety, performance, and ability to enhance your medical device offerings.

DSM's fibrous and soluble collagen have been implanted in over 40 million patients over the past 30 years. Having partnerships with the leading global medical device companies, DSM manufactures collagen-based devices with a range of architecture, hydrophilicity, resorption time, and mechanical properties that address the widest array of regenerative medical applications.

### Product description

DSM Biomedical offers medical-grade type I/III collagen powder sourced from closed-herd cattle.

### Availability & storage

- Samples available in 25g or 100g quantities.
- Larger volumes available upon request
- Supplied Non-sterile
- Short term storage: room temperature
- Long term storage: refrigerated, 4-6°C

### Processing methods



Acid-soluble collagen powder can be solubilized in acidic, or slightly basic, aqueous environments. Once solubilized, it can be mixed into your desired

formulation. The resulting mixture can be lyophilized into a porous 3-D shape, cast into thin films, coated onto a substrate or formulated for 3D printing & electrospinning applications.



Fibrous collagen powder can be suspended in acidic or basic environments, then mixed into your desired formulation. The resulting

mixture can be lyophilized into a porous 3-D shape, cast into films or coated onto a substrate.

Ideal for use within the following parameters:



Adjusting these parameters and using solvents or additives will allow you to modulate viscosity, cohesiveness, and porosity in the resulting product.

Feature	Benefit	Specification
Delivered as a dry powder or slurry	Increases slurry concentration possibilities  Enhances shelf-stability as compared to aqueous products	Appearance: White to off-white
		Ash Content 5% max
		Controlled Moisture Content >85% solids
Fully characterized* with established Material Masterfile	Enables use of collagen as starting material for surgical implants and substrates for tissue engineered medical products.  40+ million devices sold using DSM Collagen	SDS-PAGE comparison
		Hydroxyproline >9%
		Nitrogen >9%
		Hexane Extractables 10%
Purification process minimizes endotoxin and bacteria levels	Limits risk of foreign body reaction and negative immune response	LAL Endotoxin Level (<0.025 EU/mg)*
		Total Bacterial count (<100 CFU/g)*
Soluble collagen: Purification process breaks down native fibers to tropocollagen units	Enhances flowability and cohesiveness in scaffolds and slurries	Injectable through a 20 G needle when made into a .51% slurry
Fibrous collagen: Purification process preserves native fibrils and fibers	Fibrous entanglement provides skeletal support for cohesive putties and cross- linked preforms	N/A

+ Typical process values are undetectable

\* Characterized per ASTM 2212-11