

X-PURE® GELMA

A CUSTOMIZABLE AND CO-DEVELOPMENT SOLUTION

GelMA biomaterials have key features that make them widely applicable in biomedical and clinical applications:

- Suitable biological properties;
- Tunable physical characteristics.



Gelatin methacryloyl (GelMA) is a polymerizable hydrogel material derived from collagen, a component of the extracellular matrix (ECM).

X-Pure® GelMA: The first GMP¹-grade hydrogel with ultrahigh purity levels



Promotes cell adhesion and proliferation



Ultralow levels of endotoxins and impurities



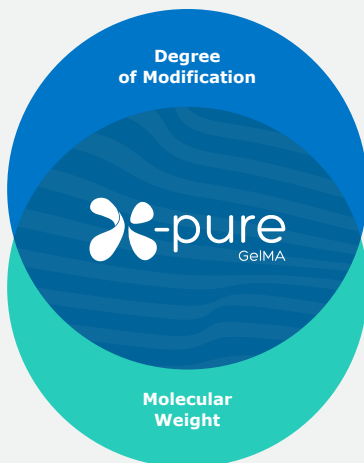
Biodegradable and biocompatible



Batch-to-batch consistency



Customizable mechanical properties



The physical characteristics of the hydrogel can influence cell differentiation and cellular functions

Both **Degree of Modification (DoM)** and **Molecular Weight (MW)** determine the stiffness² and degradation of GelMA hydrogels.

Custom-made solutions

At Rousselot®, we work in close collaboration with our customers to determine the right product specifications and properties.

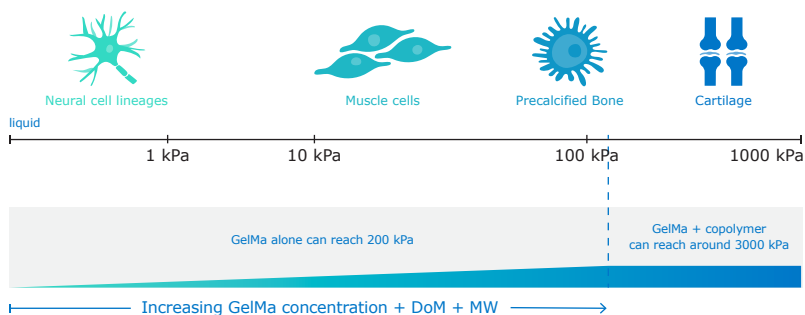
There is a unique and tailor-made X-Pure® GelMA to support your applications:

Molecular Weight (kDa)	160	160	160	90	Custom
Degree of Modification (%)	40	60	80	60	Custom

¹ IPEC – Excipient **Good Manufacturing Practices** Guide, 2017 as of end 2021 ² Defined as the modulus of elasticity or Young's modulus, expressed in kilopascal (kPa).

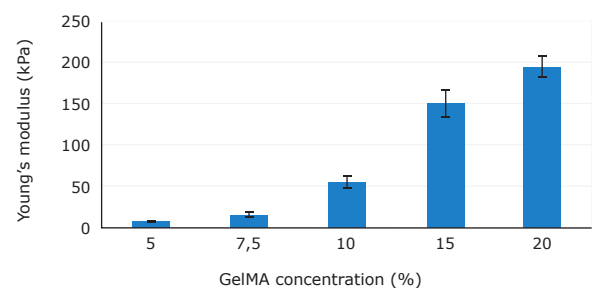
Fine-tuning hydrogel properties is essential for cell culturing.

Different cell types require different environments³.



³ Adapted from Int. J. Mol. Sci. 2015, 16, 15997-16016; doi:10.3390/ijms160715997

Elastic moduli can be adjusted by varying GelMA concentration⁴.



⁴ Source: Zhao et al., 2015, DOI: 10.1002/adhm.201500005