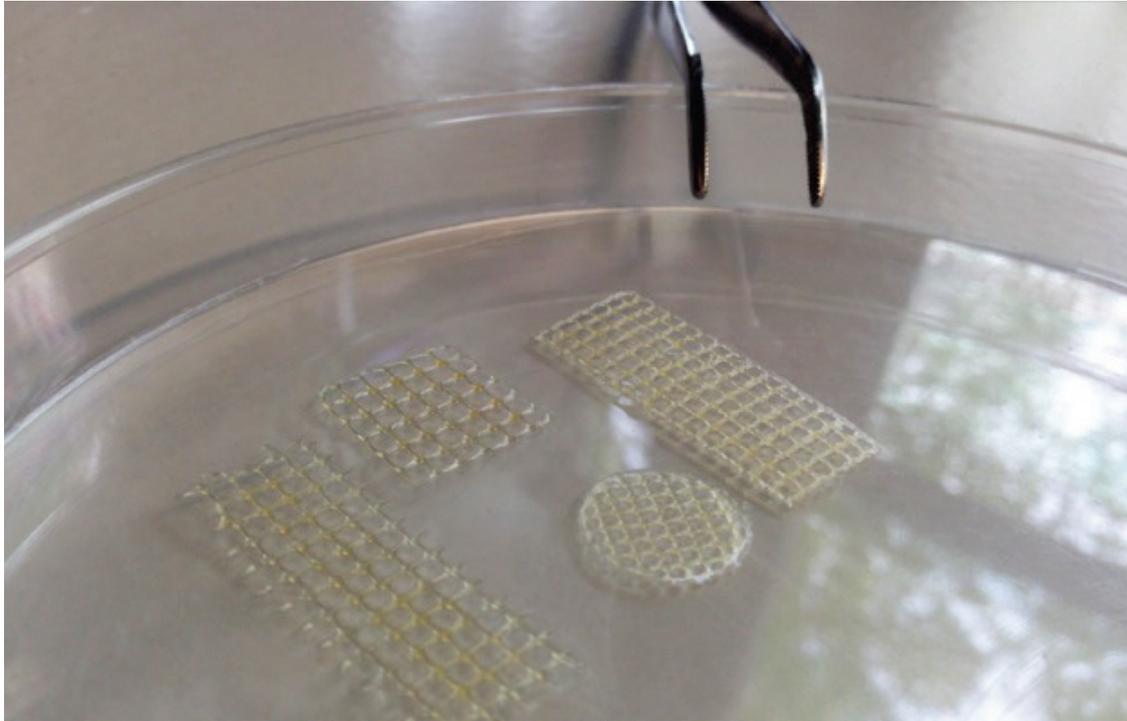


## Bioinks for 3D bioprinters from Biomat research group



### Bioinks for 3D bioprinters

Type I native collagen, fibrillar structure .....	2
Gelatin .....	3
Vegetal proteins (soy protein) .....	4

More information contact: [pedromanuel.guerrero@ehu.es](mailto:pedromanuel.guerrero@ehu.es)

## Type I native collagen, fibrillar structure

### Product Overview

Collagen is a fibrous protein that consists of three  $\alpha$ -chains which can be combined to form a triple helix, providing tensile strength to the ECM. The RGD-sequence can be used in cell differentiation, tissue formation and drug delivery.

This bioink has been specifically developed for bioprinting and advanced 3D cell culture applications. It is biocompatible and has been designed to provide versatility to support different printing applications since the mechanical properties can be adapted.

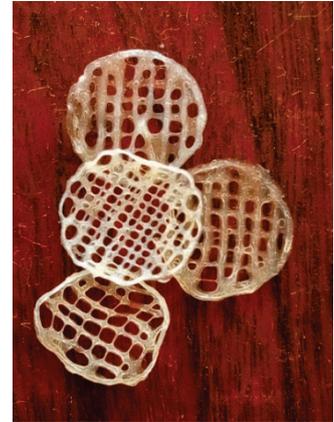
### Product Features

The recommended preparation will provide a printable bioink, capable of producing mechanically stable 3D structures. However, preparation can be modified by users to suit their needs and printer type.

- Collagen I (bovine or porcine) dispersion
- Research grade
- Reproducibility: no batch to batch variation
- Mechanical tuneability
- Excellent printability at room temperature with G20 (0.61mm) needles or larger

### Storage and Handling

Collagen gel should be stored at 4 °C and the shelf life of collagen gel is three months. The bioink is stable for 1 year when stored at -23 °C.



## Gelatin

### Product Overview

Gelatins are proteins produced from the hydrolysis of collagen. These proteins are heteropolymers built from amino acids joined together by peptide bonds, present the RGD-sequence, and are commonly used with skin, muscle cells and mesenchymal stem cells.

This bioink has been specifically developed for bioprinting and advanced 3D cell culture applications. It is biocompatible and has been designed to provide versatility to support different printing applications since the mechanical properties can be adapted.

### Product Features

The recommended preparation will provide a printable bioink, capable of producing mechanically stable 3D structures. However, preparation can be modified by users to suit their needs and printer type.

- Gelatin (bovine, porcine or fish) solution
- Research grade
- Reproducibility: no batch to batch variation
- Mechanical tuneability
- Excellent printability at 27 °C with G22 (0.41mm) needles or larger

### Storage and Handling

Gelatin gel should be stored at 4 °C and the shelf life of gelatin gel is three months. The bioink is stable for 1 year when stored at -23°C.



## Vegetal proteins (Soy protein)

### Product Overview

Soy proteins are composed of a mixture of albumins and globulins with globular structure. Some peptides of soy protein, such as lunasin, possess RGD-like sequences required to promote stable cell adhesion and are commonly used with skin, muscle cells and mesenchymal stem cells.

This bioink has been specifically developed for bioprinting and advanced 3D cell culture applications. It is biocompatible and has been designed to provide versatility to support different printing applications since the mechanical properties can be adapted.

### Product Features

The recommended preparation will provide a printable bioink, capable of producing mechanically stable 3D structures. However, preparation can be modified by users to suit their needs and printer type.

- Soy protein dispersion
- Research grade
- Reproducibility: no batch to batch variation
- Mechanical tuneability
- Excellent printability at 35 °C with G21 (0.51mm) needles or larger

### Storage and Handling

Soy protein gel should be stored at 4 °C and the shelf life of the gel is three months. The bioink is stable for 1 year when stored at -23 °C.

