Labmix24 GmbH
Kesseldorfer Rott 24
46499 Hamminkeln
Germany

Tel: +49 (0) 2852 96064 00
Fax: +49 (0) 2852 96064 24
Web: www.labmix24.com
E-Mail: info@labmix24.com

PhotoGel-IRG, Methacrylated Gelatin Hydrogel Kit Photocrosslinked gelatin hydrogel (CC323 Kit Component 2)

Art. ID	SAF-CC323-2
Unit	EA

Description

3D cell culture, including bioprinting, allows for the creation of more physiological cell models by allowing cells to simultaneously interact with integrins on all cell surfaces, resulting in the activation of specific signaling pathways not activated in traditional 2D cell culture methods. Hydrogels are water swollen polymers that allow for the culture of cells in 3-dimensions and can have profound effects on cellular development, differentiation, migration, and function. New areas of tissue engineering such as 3D bioprinting, have utilized UV photocrosslinked methacrylated hydrogel biomaterials (PEGMA, GelMA, HAMA and ColMA etc.) to encapsulate cells to make printable bioinks. The PhotoGel-IRG, Methacrylated Gelatin Hydrogel Kit (CC323: CC323-1, CC323-2) is based upon purified porcine gelatin methacrylate (GelMA), which when photocrosslinked provides a native-like 3D environment for cells. Gelatin derived from denatured collagen retains many natural cell binding motifs such as RGD and MMP sites. In addition to porcine gelatin methacrylate, the kit includes the photoinitiator Irgacure 2959 for users to easily fine tune their photocrosslinking experiments (i.e. altering hydrogel stiffness or gelling speeds). Gelatin methacrylate is produced from porcine, type A, 300 bloom gelatin. Gelatin macromers containing primary amino groups were reacted with methacrylic anhydride (MA) to add methacrylate pendant groups. The gelatin methacrylate achieves a degree of substitution of >70% for maximum crosslinking and range of stiffness.PhotoGel is a registered trademark of Advanced BioMatrix, Inc.