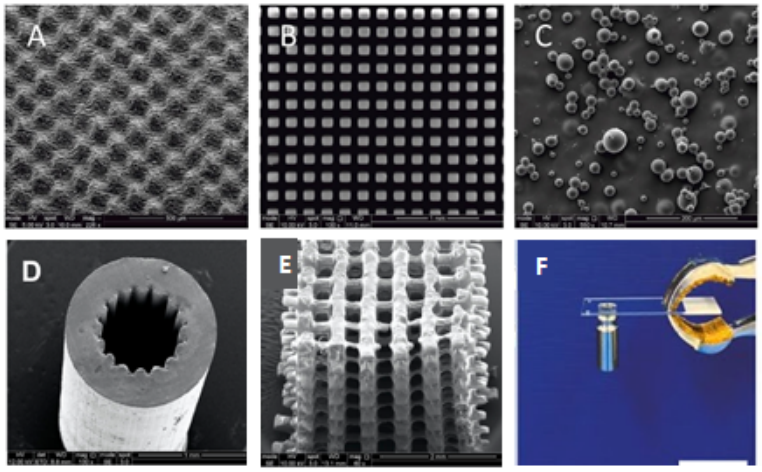
Polyglycerol sebacate methacrylate (PGSM)

Polyglycerol sebacate methacrylate resin for a variety of applications such as coatings, 3D printable inks, microporous scaffolds for tissue engineering, and alternative food matrices.



Category

Research Reagents/New Research Reagents

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Our photocurable resins are suitable as sustainable coatings and packaging, for 3D printing, cultured meat and tissue engineering scaffolding applications.

We offer a wide range of polymeric resins. The resin properties can be tuned to align with the customer's demands, allowing us to cater to industries/companies developing materials in the field of biocompatible and elastic coatings, medical devices, cultured meat, and 3D printing inks.

Our resins:

- Are suitable for bio-based applications with proven biocompatibility with a variety of primary cells/cell lines
- Have tuneable mechanical properties and tailored biodegradability
- Fit with scalable manufacturing process, which can be tailored for sustainable approaches (e.g. green solvents, surfactant-free)
- Are photocurable (which makes them suitable as 3D printing inks), thermally stable between 60-80 , and adhesive under both wet and dry conditions

For more information, visit - https://www.sheffield.ac.uk/commercialisation/current-opportunities/biocompatible-and-biodegradable-resins, or contact the team directly.

References

1. Rachel Furmidge, Caitlin E. Jackson, María Fernanda Velázquez de la Paz, Victoria L. Workman, Nicola H. Green, Gwendolen C. Reilly, Vanessa Hearnden, Frederik Claeyssenscorresponding author 1 , 2 ,*(2023) , https://pubmed.ncbi.nlm.nih.gov/37681209/, Frontiers in Chemistry, 11, 1236944
2. Dharaminder Singh, Adam J Harding, Emad Albadawi, Fiona M Boissonade, John W Haycock, Frederik Claeyssens(2018) , https://www.sciencedirect.com/science/article/pii/S1742706118304586?via%3Dihub, Acta Biomaterialia, 78, 48-63