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# Fabrication of Magnetically Responsive Agarose Microbeads Doped with Live Microbial Cells

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## Abstract

© 2016, Springer Science+Business Media New York.Here, we report a scalable and rapid method to fabricate magnetically responsive agarose microgels doped with microbial cells. Low-temperature melting agarose and food-grade sunflower oil were used to fabricate microbeads during emulsification and gel setting. Microscopic algae and fungi cells were doped into ~100-μm-sized beads as single culture or mixed. Magnetic nanoparticles were deposited either on cell walls or on bead walls. We found that the cells encapsulated in magnetically responsive microbeads were viable and able for germination.

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## Keywords

Agarose, Encapsulation, Magnetic functionality, Viability

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