

Replication of hydrogel microparticle via degassed mold

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Replica molding technique is simple and general technique for producing microparticles. For this, the precursor must be loaded into the microwell of the mold. However, because the wettability of hydrophilic precursor on the PDMS is low, precursor loading is nonspontaneous and time-consuming. Here, we have developed a degassed molding technique to fabricate a various compositions of microparticles regardless of the wettability. As the degassed mold absorbs entrapped air between the precursor and the microwell, precursor can be loaded into the microwell within 1 min. As a result, hydrophilic hydrogel microparticles and protein encapsulated microparticles are successfully fabricated in degassed mold.