

Abstract Submitted
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Clogging of soft particles in 2D hoppers HAORAN WANG, ERIC WEEKS, Emory Univ — We study the flow of soft hydrogel particles out of a quasi-two dimensional hopper. The hopper chamber is set thin enough for all the particles to stay in one plane without overlapping with each other. We examine the probability of a clog forming as the particles flow out, as a function of the size of the hopper exit. We find that clogging of these soft particles requires the hopper exit to be quite small, only slightly larger than the particle diameter. Also, we investigate how the clogging probability changes as we reduce the influence of gravity (by tilting the hopper chamber away from vertical).

Haoran Wang
Emory Univ

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