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Capillary pinch-off of a viscous suspension. JORIS CHATEAU, ELISABETH GUAZZELLI, HENRI LHUISSIER, Aix Marseille Univ. CNRS — We study how the presence of non-Browian, non-colloidal and neutrally buoyant beads suspended in a Newtonian liquid affects the break-up of a capillary thread. Both unstable capillary bridges and threads stretched behind a dripping drop are considered. On the early stage of pinch-off, the suspension behaves as a continuous medium. On the later stage, when the neck diameter reaches a few particle sizes, the pinch-off accelerates continuously until the thinning rate of a pure liquid thread is recovered. We will discuss how these two regimes and their transition depend on the particle volume fraction, size and wettability, as well as on the pinch-off configuration.

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