

Abstract Submitted
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Generating double emulsions W/O/W in PDMS systems for pharmaceutical applications HERVE WILLAIME, Laboratoire MMN UMR7083 CNRS-ESPCI, NADIA SNOUSSI, Laboratoire de Physique Pharmaceutique UMR CNRS 8612-Université Paris-Sud — Vesicular systems, and especially water/oil/water multiple emulsions, present fascinating properties of pharmaceutical interest (release of fragile pharmaceutically active molecule, detoxification). Their implementation requires a strict control of their governing physical parameters, since their properties (stability, efficiency) crucially depends on the size of the internal droplets, and of the globules containing these droplets. However, traditional methods for generating emulsions with the help of high shear mixers do not allow to produce calibrated systems, thus limiting their characterization. It is well known that microfluidics provides a prominent tool to generate simple or multiple emulsions in a controlled way, with a very low diameter dispersion (below 5%). In this talk, we will present preliminary results concerning the generation of such objects (sizes distributions, stabilities...) and compare them to traditional methods.

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