



Supplementary Figure 7. Horizontally averaged density and particle concentration profiles, with the fluid phase density in blue, the particle concentration in black (axis on the top) and the bulk mixture density in red. The initial position of the barrier is represented by the dashed lines. A dense unstable region highlighted in green develops below the interface after a certain time t . **(A)** 2 g l^{-1} experiment (small peaks in particle concentration are due to reflection of the laser sheet on the barrier) **(B)** 8 g l^{-1} experiment.