

Figure A: Thermo-responsive emulsion foams: Pictures of direct emulsion foams under B-D adapted conditions. The pictures are representative of the foaming behaviour of emulsions at temperatures below (T=18°C) and above (T=26.7°C) PIT for a nitrogen injection rate of 300mL/min. The heights of foams quoted in the Figure are values obtained by averaging measurements of the foam heights after a nitrogen bubbling duration of 5 minutes at different temperatures (between 15°C and 21°C for measurements below PIT and 24.8°C to 29.2°C above PIT) as detailed in the Methods section. In the above Figure, emulsion is contained in a (simple) vial and nitrogen is injected through a porous glass tip, which plunges into the emulsion. With this set-up, the ratio [h<sub>above PIT</sub>/h<sub>below PIT</sub>] is about 2.25±0.6. As shown in the Figure 1 (see manuscript), a ratio of 2.46±0.5 was determined using a porous glass filter topped by the cylinder-shape glass tube. The various geometries give complementary information to estimate the foaming quality of emulsions. Overall, the ratio [h<sub>above PIT</sub>/h<sub>below PIT</sub>] is thus of order of 2.4 irrespective of the used porous glass geometry, therefore showing that emulsion foam stability is efficiently triggered by temperature.



**Figure B : Emulsion foams for inverse emulsions** 

Figure B: Picture shows the poor foamability of an inverse emulsion prepared above PIT  $(T=26^{\circ}C)$  under UV irradiation for a nitrogen injection rate of 300mL/min. The foamability is thus similar to that observed for direct emulsions above PIT after UV irradiation of about 10 minutes, as shown in the Figure 2c (see manuscript).