

Supporting Information for:

**Preparation of Calcium Alginate Nanoparticles Using Water-in-Oil (W/O)
Nanoemulsions**

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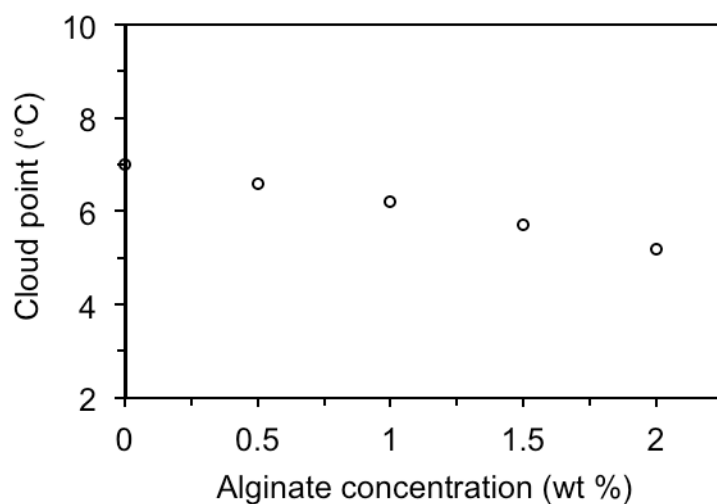


Figure S1. Variation in the cloud point of 1 wt % $C_{12}E_4$ in water with the concentration of alginate.

The experimental error was estimated to be within ± 0.2 °C.

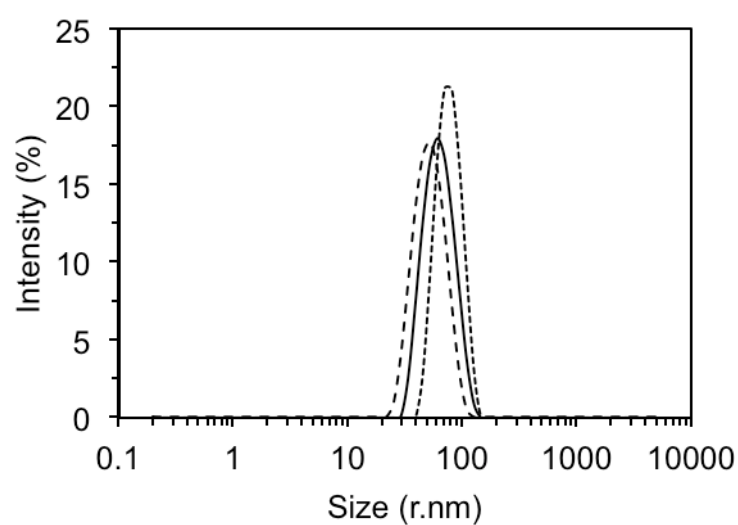


Figure S2. Dynamic light scattering size distributions of the nanoemulsions containing 1 wt % (dashed line), 1.5 wt % (solid line) or 2 wt % alginate (dotted line) in the aqueous phase one hour after the addition of $CaCl_2$. The samples were prepared with $\phi_w/\phi_o = 0.07$ and $\phi_w/\phi_s = 5$. All the measurements were performed at 40 °C.

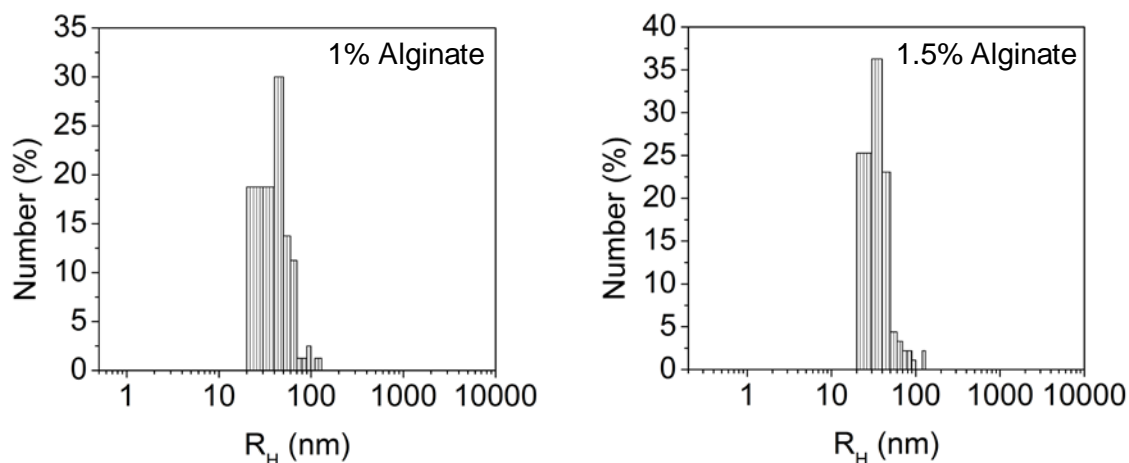


Figure S3. Graphics representing the size distribution of the nanoparticles observed in cryo-TEM experiments for samples prepared with different initial concentrations of alginate (wt %). The size of the particles was measured using the public domain image analysis software Image J 1.45l (National Institutes of Health, USA, <http://imagej.nih.gov/ij>). Measurements were performed in at least 80 particles present in the different images recorded for each sample.

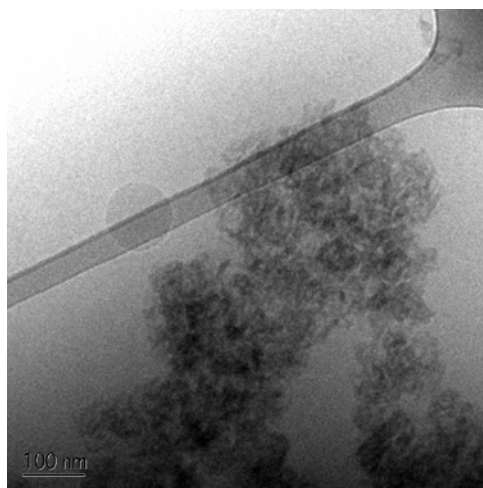


Figure S4. Cryo-TEM micrograph showing the coexistence of nanoparticles with irregular structures.

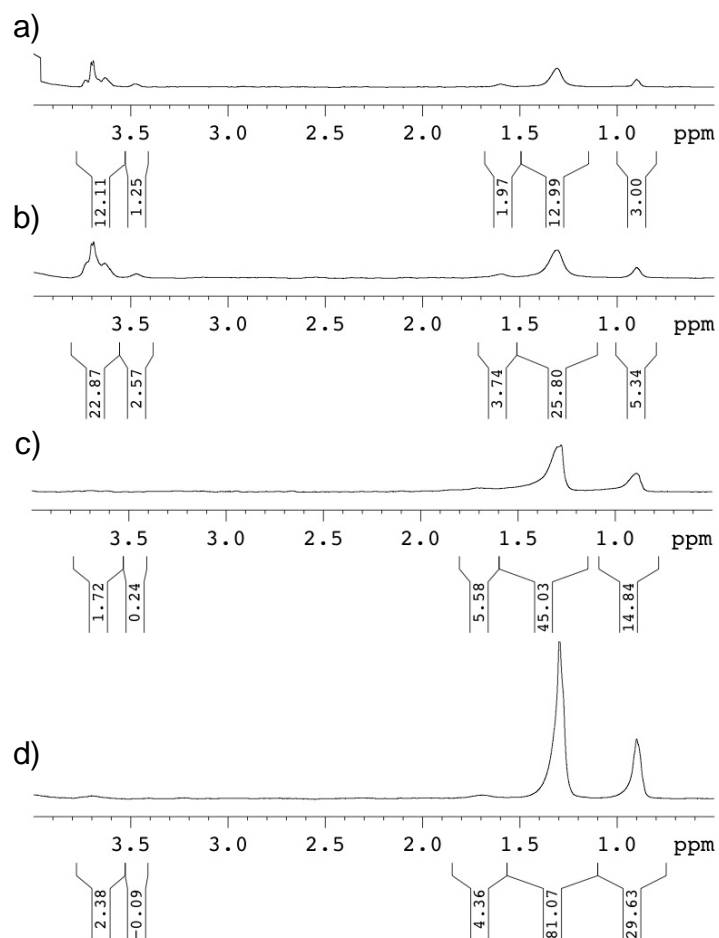


Figure S5. ^1H NMR spectra of the samples initially prepared with 1 wt % (c) and 1.5% (d) alginate after the purification procedure. The spectra of two standards of C_{12}E_4 , 0.05 wt % (a) and 0.1 wt % (b), are also shown as reference. The measurements were performed at 5 $^\circ\text{C}$.