

Electronic Supplementary Information

Shear Banding in Concentrated Na-caseinate Emulsions

Hui Lin Tan, Kirk W. Feindel and Kathryn M. McGrath*

The MacDiarmid Institute for Advanced Materials and Nanotechnology,

School of Chemical and Physical Sciences, Victoria University of Wellington, Wellington, New Zealand

* Author for correspondence (kathryn.mcgrath@vuw.ac.nz)

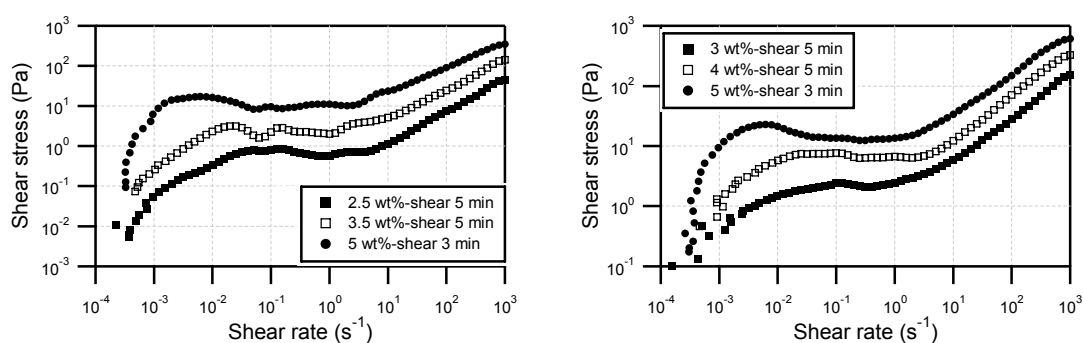


Figure 1. Steady state stress vs. shear rate curves for 53 wt% palm oil/2.5, 3.5 and 5 wt% Na-caseinate/water emulsions (left) and 55 wt% tetradecane/3, 4 and 5 wt% Na-caseinate/water emulsions (right) during up-stress ramping: 1 min rest between each shear rate, from 0.0001 to 1000 s^{-1} . Shearing times required to yield a steady state response varied with concentration and are given in the legend. $\dot{\gamma}_1$ and $\dot{\gamma}_2$ values (see definition in Fig. 5) remain similar and span approximately two orders of magnitude on increasing Na-caseinate concentration.

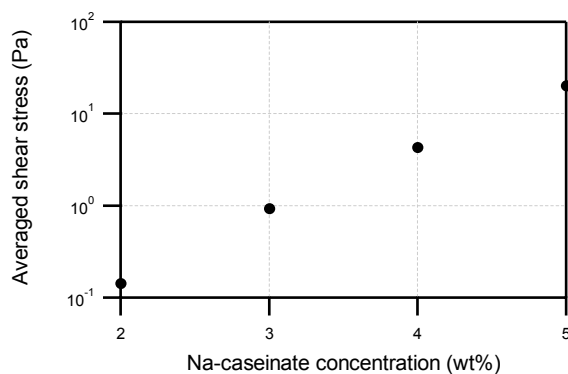


Figure 2. Variation of the average shear stress value in the plateau region upon increasing Na-caseinate concentration for 55 wt% soybean oil.