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SUPPORTING INFORMATION

CALCIUM ALTERS THE INTERFACIAL ORGANISATION OF HYDROLYSED LIPIDS DURING INTESTINAL DIGESTION

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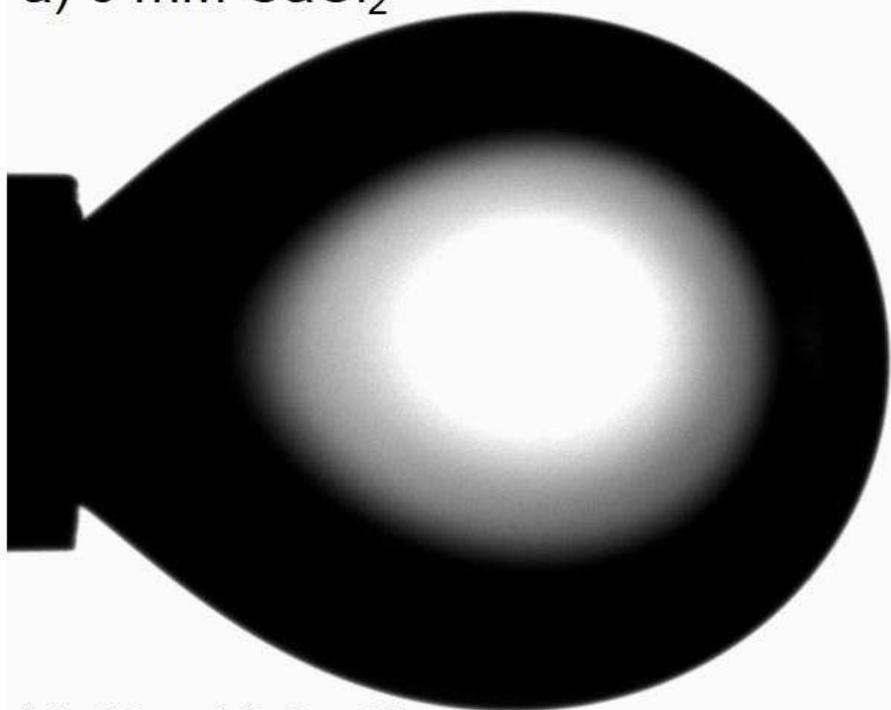
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- Images of calcium soaps formed at the oil droplet surface during lipolysis in the absence and presence of bile salt.
- Interfacial tension and dilatational modulus results:
 - Effect of calcium on adsorption of inactive lipase and/or bile salt.
 - Effect of lipase concentration on calcium soap formation.

a) 0 mM CaCl_2



b) 20 mM CaCl_2

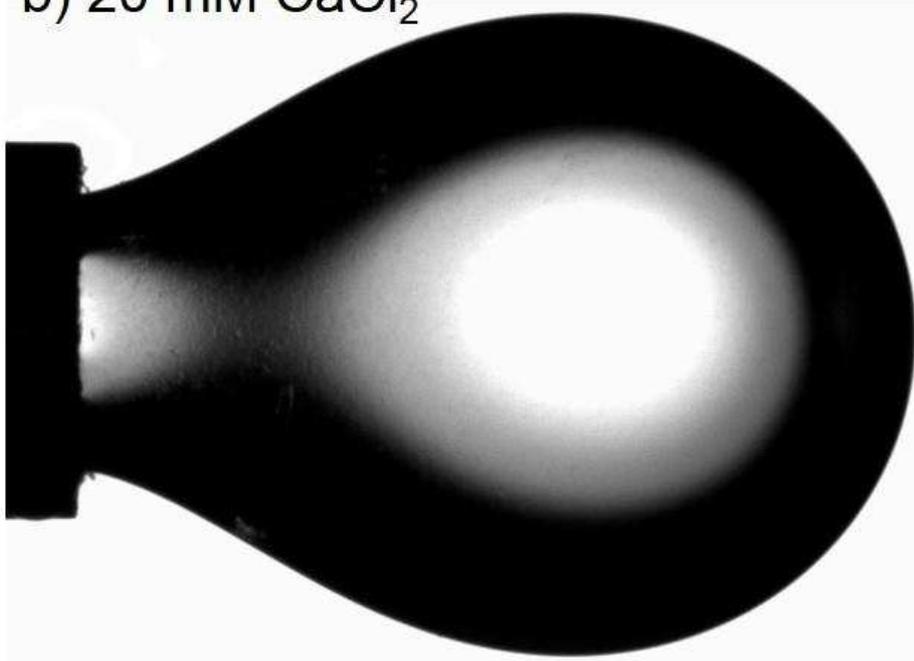


Figure S1: Purified sunflower oil droplets formed at the tip of the capillary immersed in 1 mg/mL active lipase aqueous solution (2 mM BIS-TRIS, 150 mM NaCl, pH 7, 37 °C) in the absence a) or presence of CaCl_2 b).

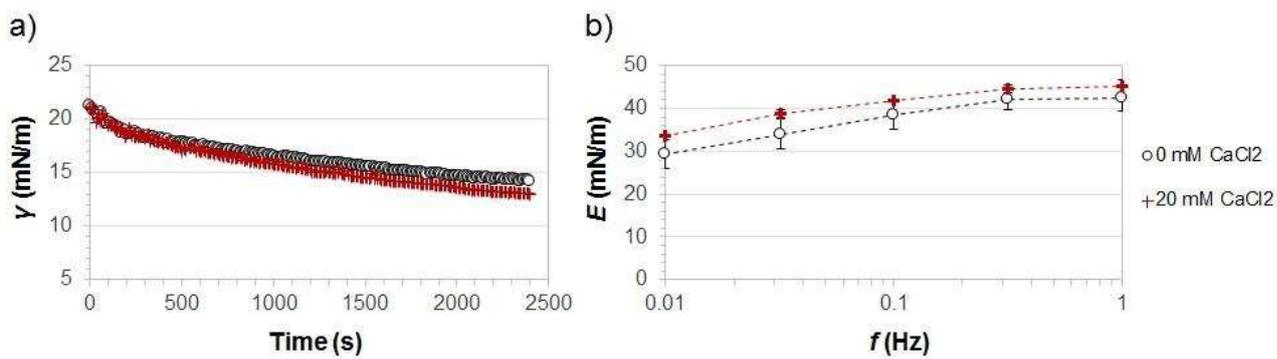


Figure S2: a) Interfacial tension versus time and b) dilatational modulus versus frequency after 40 min of interfacial layer formation, for inactive lipase (1 mg/mL) aqueous solutions (2 mM BIS-TRIS, 150 mM NaCl, pH 7, 37 °C) containing different CaCl₂ concentrations (0 and 20 mM). Lines in b) are a guide for the eye.

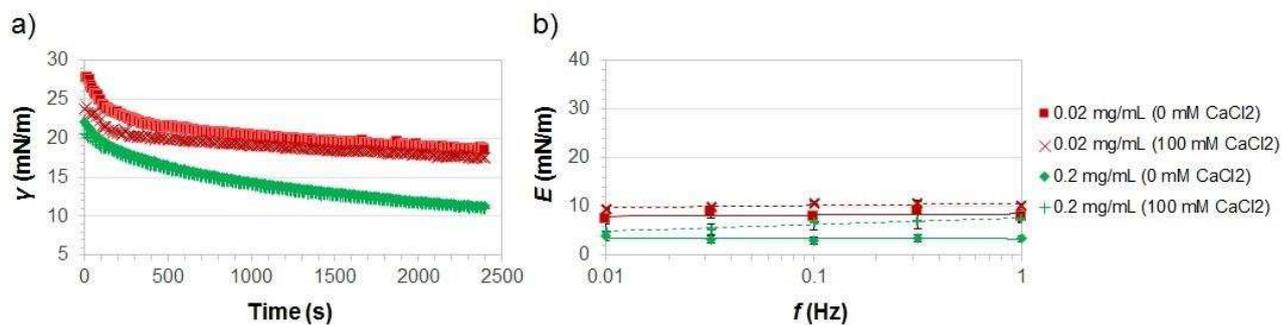


Figure S3: a) Interfacial tension versus time and b) dilatational modulus versus frequency after 40 min of interfacial layer formation, for active lipase aqueous solutions (2 mM BIS-TRIS, 150 mM NaCl, pH 7, 37 °C) at different bulk concentrations (0.02 and 0.2 mg/mL) containing different CaCl₂ concentrations (0 and 100 mM). Lines in b) are a guide for the eye.

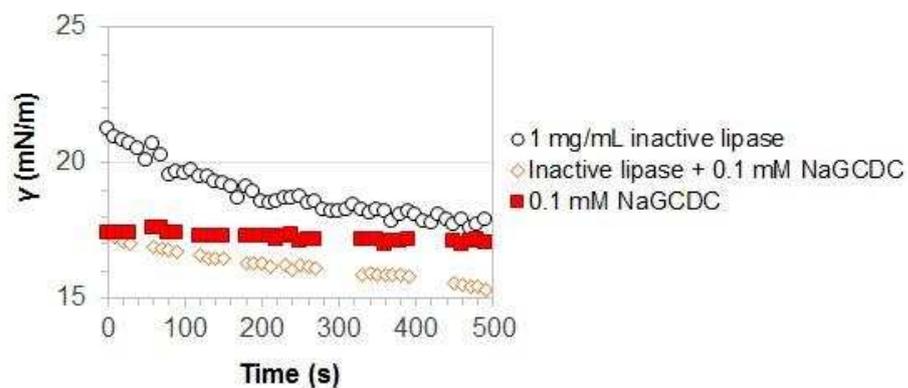


Figure S4: Insert from Figure 6b. Interfacial tension versus time for 1 mg/mL inactive lipase (open symbols) aqueous solutions (2 mM BIS-TRIS, 150 mM NaCl, pH 7, 37 °C) in the absence and presence of 0.1 mM NaGCDC). The curve corresponding to 0.1 mM NaGCDC alone (closed squares) is also included as a reference.



Figure S5: Purified sunflower oil droplet formed at the tip of the capillary immersed in 1 mg/mL active lipase aqueous solution (2 mM BIS-TRIS, 150 mM NaCl, pH 7, 37 °C) in the presence of 0.1 mM NaGDC and 10 mM CaCl₂.

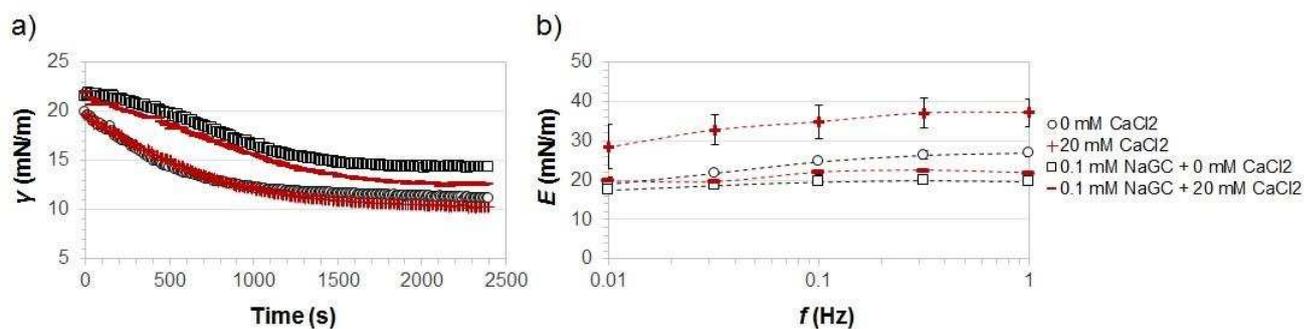


Figure S6: a) Interfacial tension versus time and b) dilatational modulus versus frequency after 40 min of interfacial layer formation, for inactive lipase (1 mg/mL) + 0.1 mM NaGC aqueous solutions (2 mM BIS-TRIS, 150 mM NaCl, pH 7, 37 °C) containing different CaCl_2 concentrations (0 and 20 mM). The curves of pure NaGC are also included. Lines in b) are a guide for the eye.