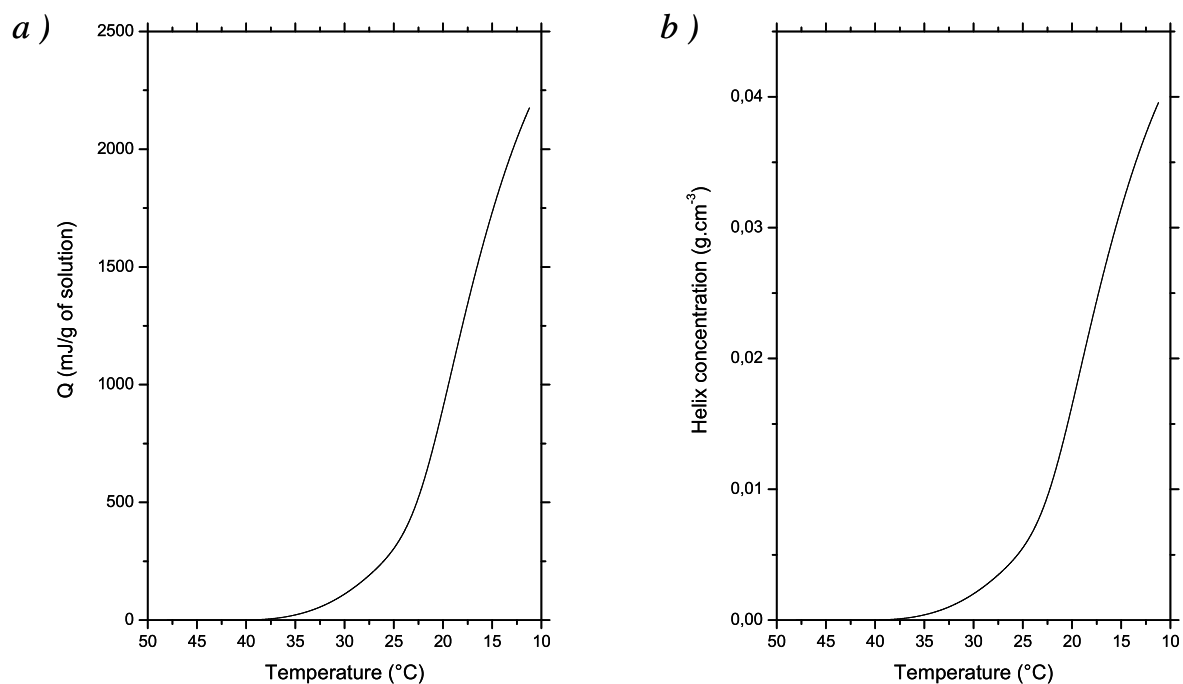


## Supporting Information

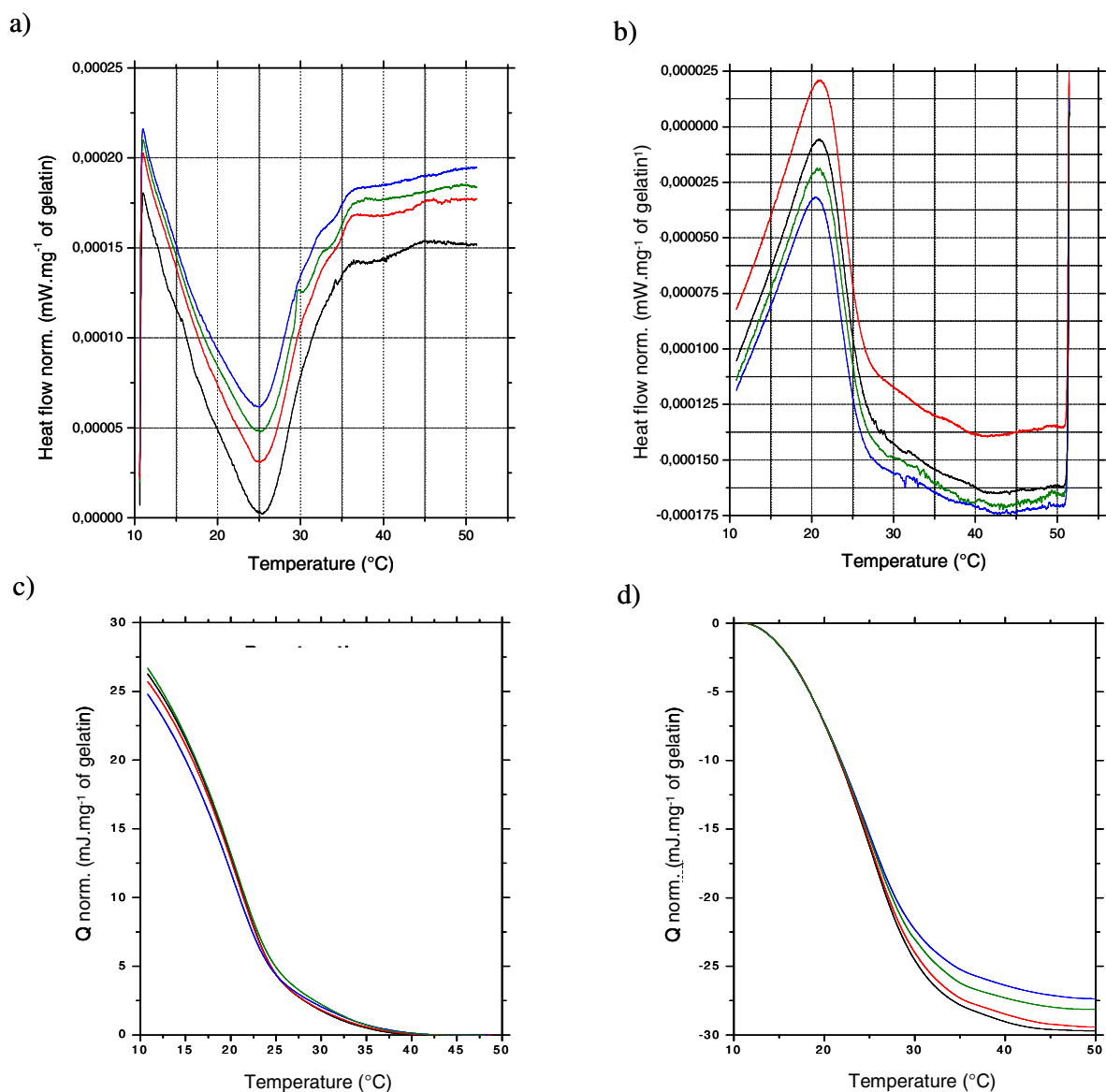
### “Influence of Decavanadate Clusters on the Rheological Properties of Gelatin”

By Florent Carn, Madeleine Djabourov,\* Thibaud Coradin, Jacques Livage, Nathalie Steunou\*

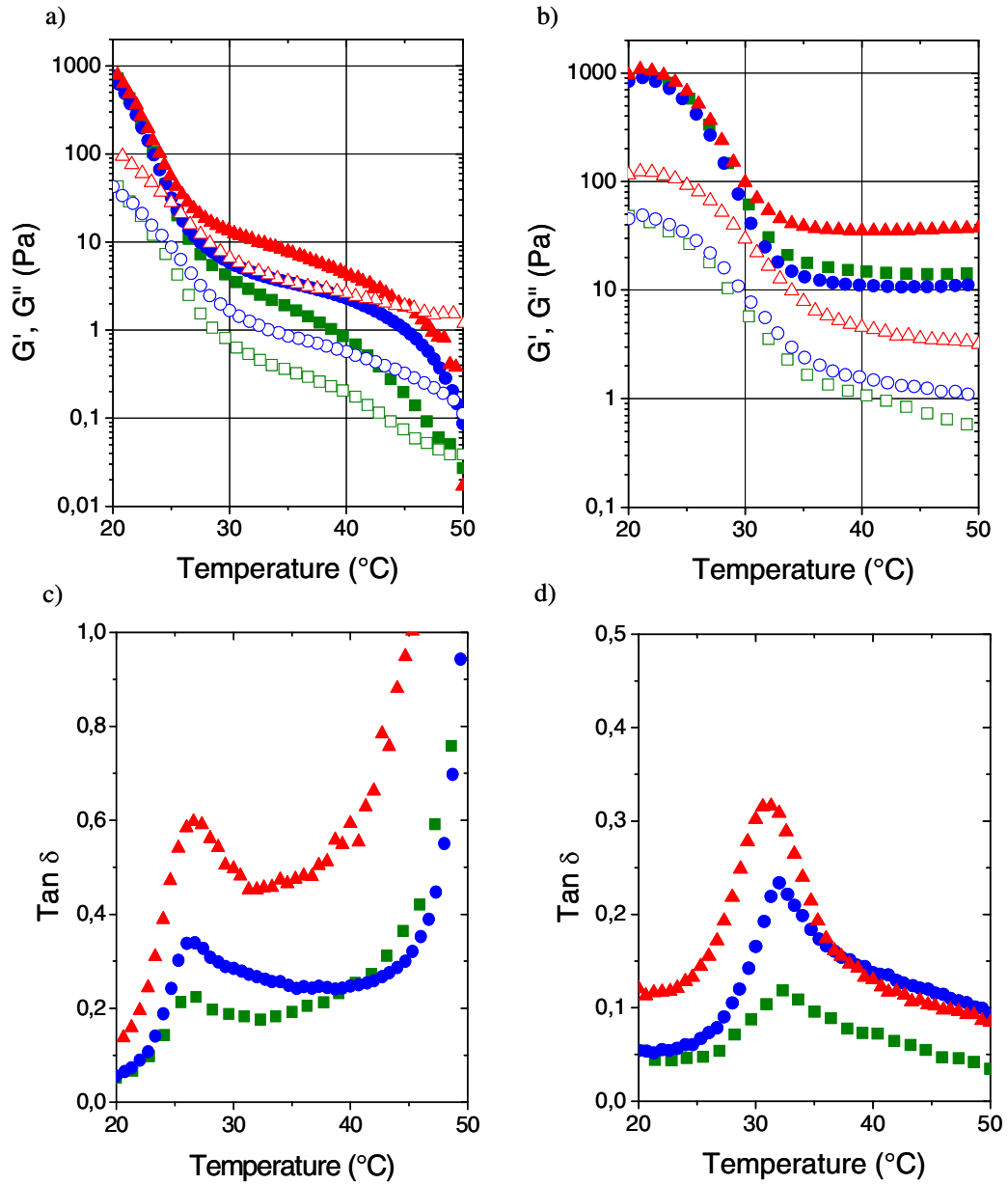
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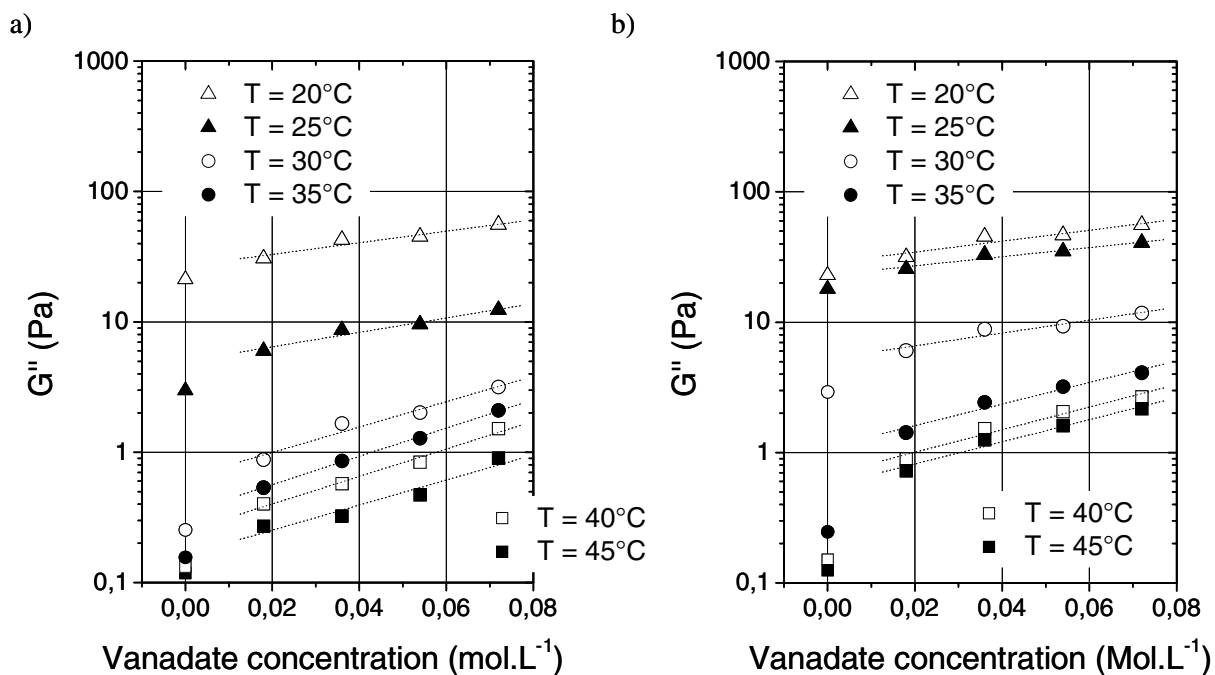
**Figure 1.** (a) The heat exchange measured by  $\mu$ -DSC during the helix renaturation ( $-0.2$  °C/min) of an aqueous gelatin solution ( $c = 10$  wt.%,  $\text{pH} = 3.4$ ). (b) Helix concentration measured by optical rotation during the helix renaturation ( $-0.2$  °C/min) for the same aqueous gelatin solution ( $c = 10$  wt.%,  $\text{pH} = 3.4$ ).



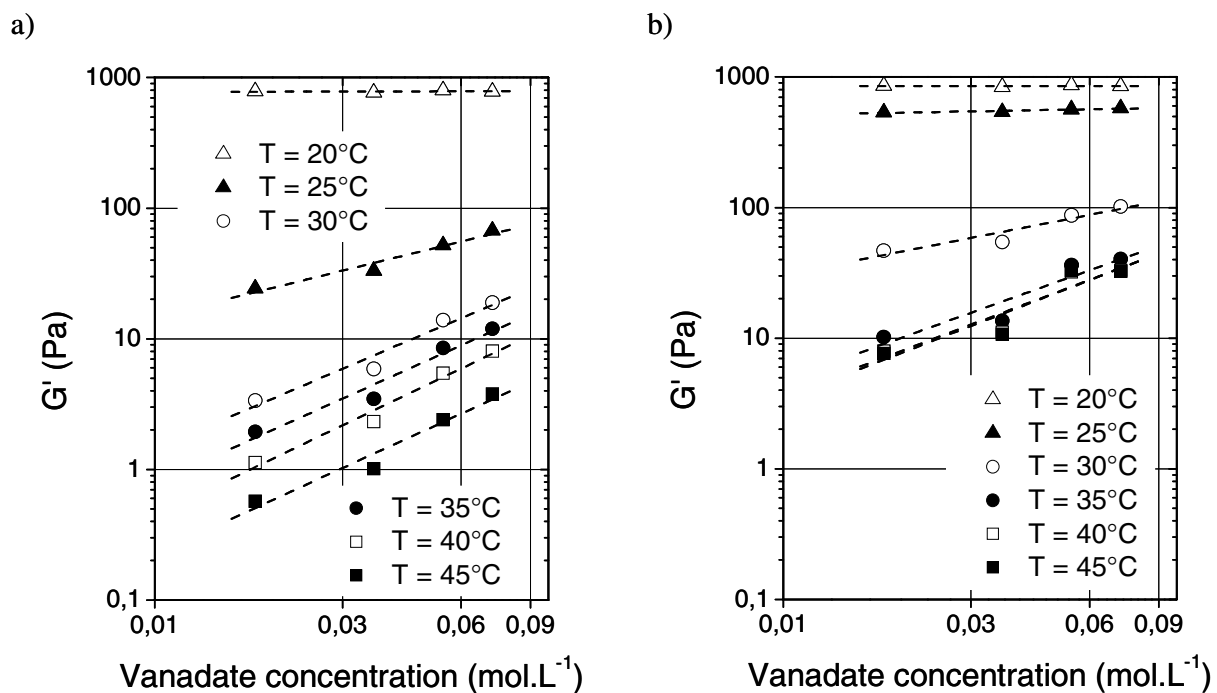
**Figure 2.** Thermograms obtained by  $\mu$ -DSC during the cooling (a) and melting (b) process at 0.05 °C.min<sup>-1</sup> for gelatin solutions ([G] = 10 wt.%, pH = 3.4) with different vanadate concentrations: [V] = 0 mM (black curve), [V] = 18 mM (red curve), [V] = 36 mM (green curve), [V] = 54 mM (blue curve).  $Q_{norm.}$  as a function of temperature for the same previous samples during the cooling (c) and melting (d) process at 0.05 °C.min<sup>-1</sup>.



**Figure 3.** Evolution of the storage  $G'$  (filled symbols) and loss  $G''$  (opened symbols) modulus measured at different frequencies (0.1 Hz: green squares, 1 Hz: blue circles, 10 Hz: red triangles) as a function of temperature during the cooling ramp (a) and the heating ramp (b) at  $0.2\text{ }^{\circ}\text{C}\cdot\text{min}^{-1}$  for gelatin solutions ( $[G] = 10\text{ wt.}\%$ ,  $\text{pH} = 3.4$ ) displaying a vanadate concentration of 0.054 M.  $\tan \delta = G''/G'$  as a function of temperature for the same previous samples during the cooling ramp (c) and the heating ramp (d).



**Figure 4.** Evolution of the loss ( $G''$ ) modulus as a function of vanadate concentration during the cooling ramp (a) and the heating ramp (b) for different temperatures. The dashed lines correspond to exponential fits of experimental data concerning samples containing vanadate species.



**Figure 5.** Storage modulus ( $G'$ ) as a function of vanadate concentration for different temperatures during the cooling (a) and the heating (b) ramp. The dashed lines correspond to power law fits of experimental data concerning samples containing vanadate species.