

SUPPLEMENTARY INFORMATION

PHASE DIAGRAMS OF MIXTURES OF SATURATED MONOGLYCERIDES IN VEGETABLE AND MINERAL OIL AND THEIR IMPACT IN THE OLEOGELS RHEOLOGY

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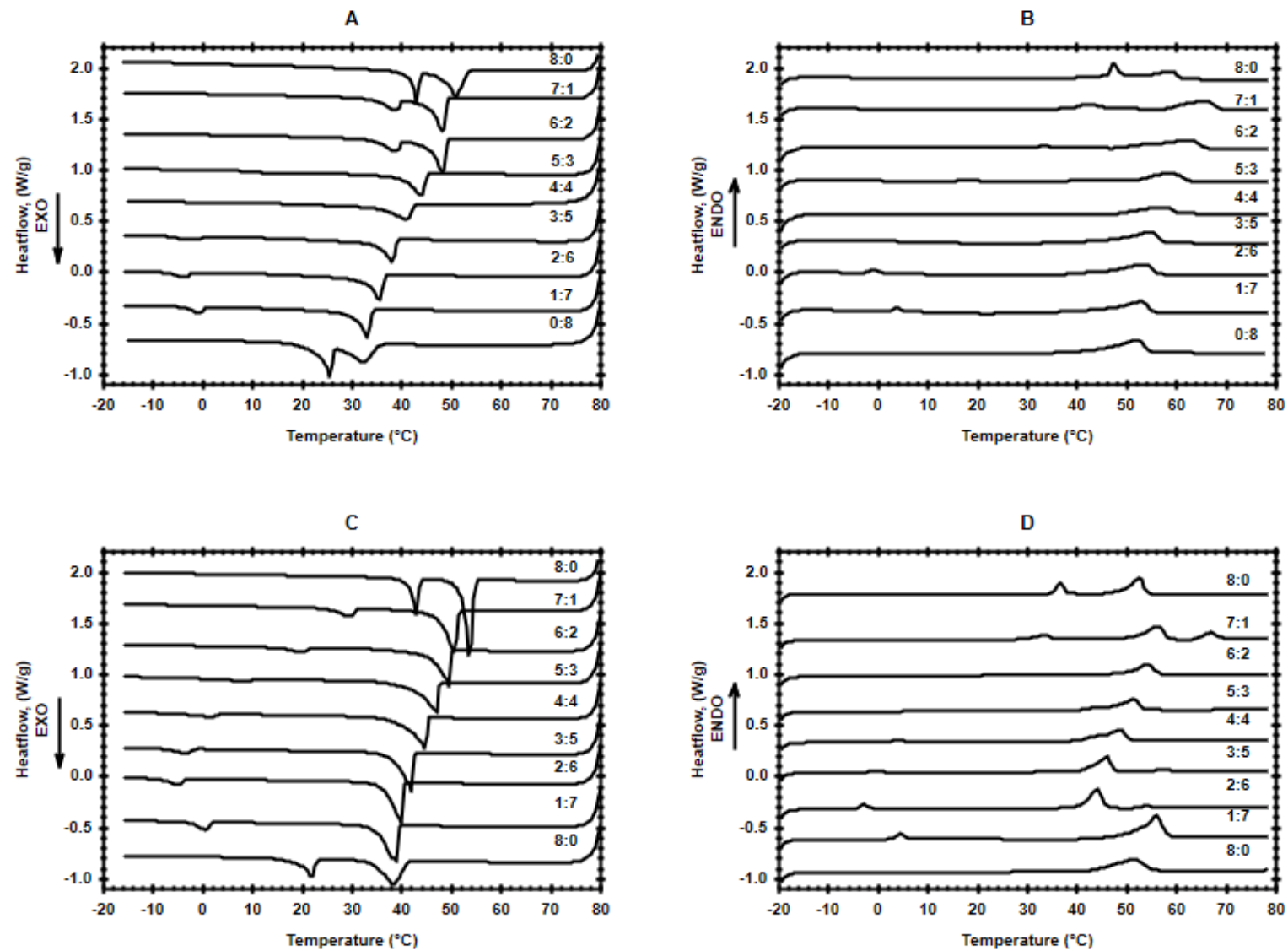


Figure 1SM. Cooling (A and C) and heating (B and D) thermograms at different proportions of the C18:C14 binary mixtures in vegetable oil (A and B) and mineral oil (C and D).

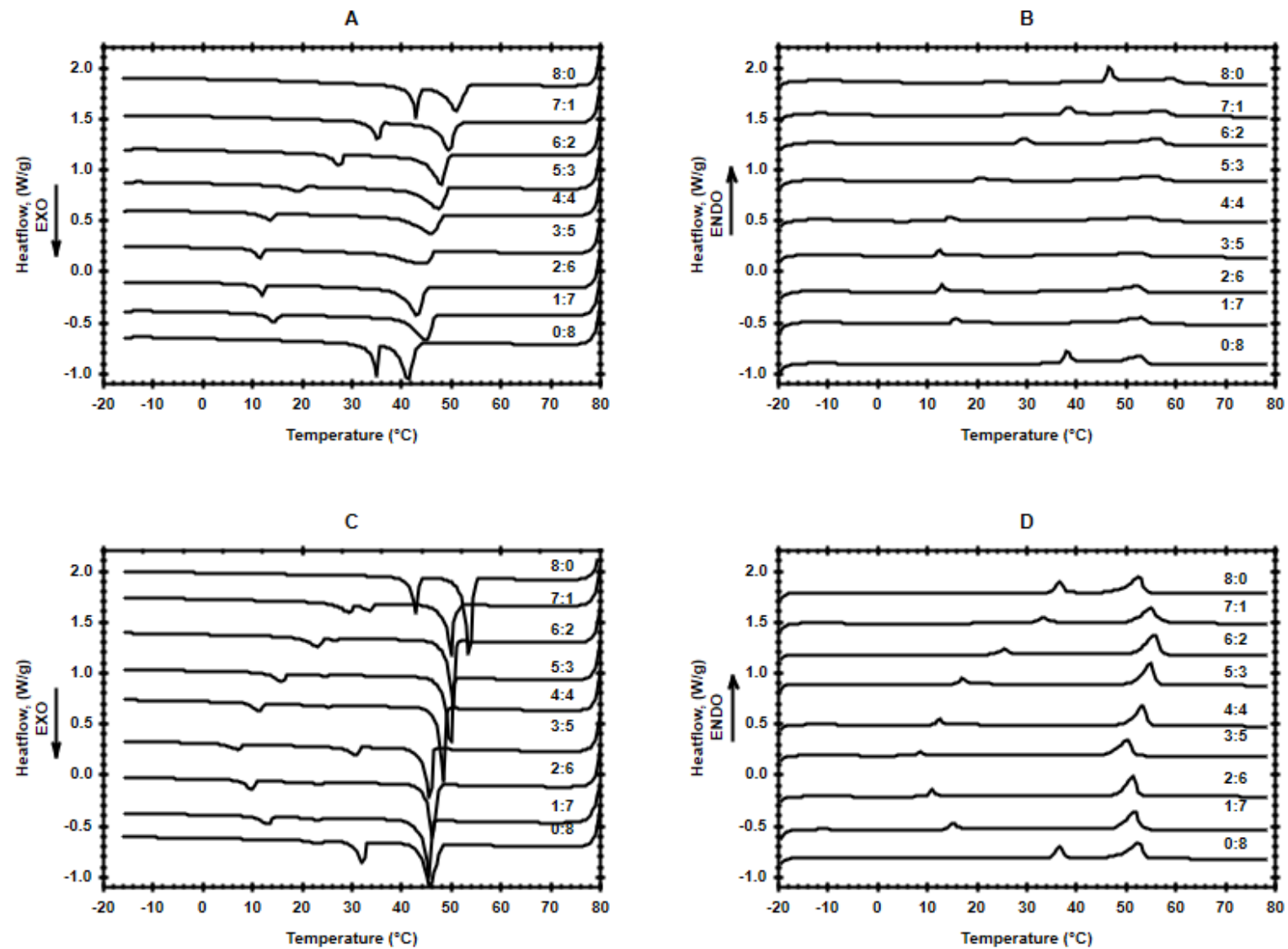


Figure 2SM. Cooling (A and C) and heating (B and D) thermograms at different proportions of the C18:C16 binary mixtures in vegetable oil (A and B) and mineral oil (C and D).

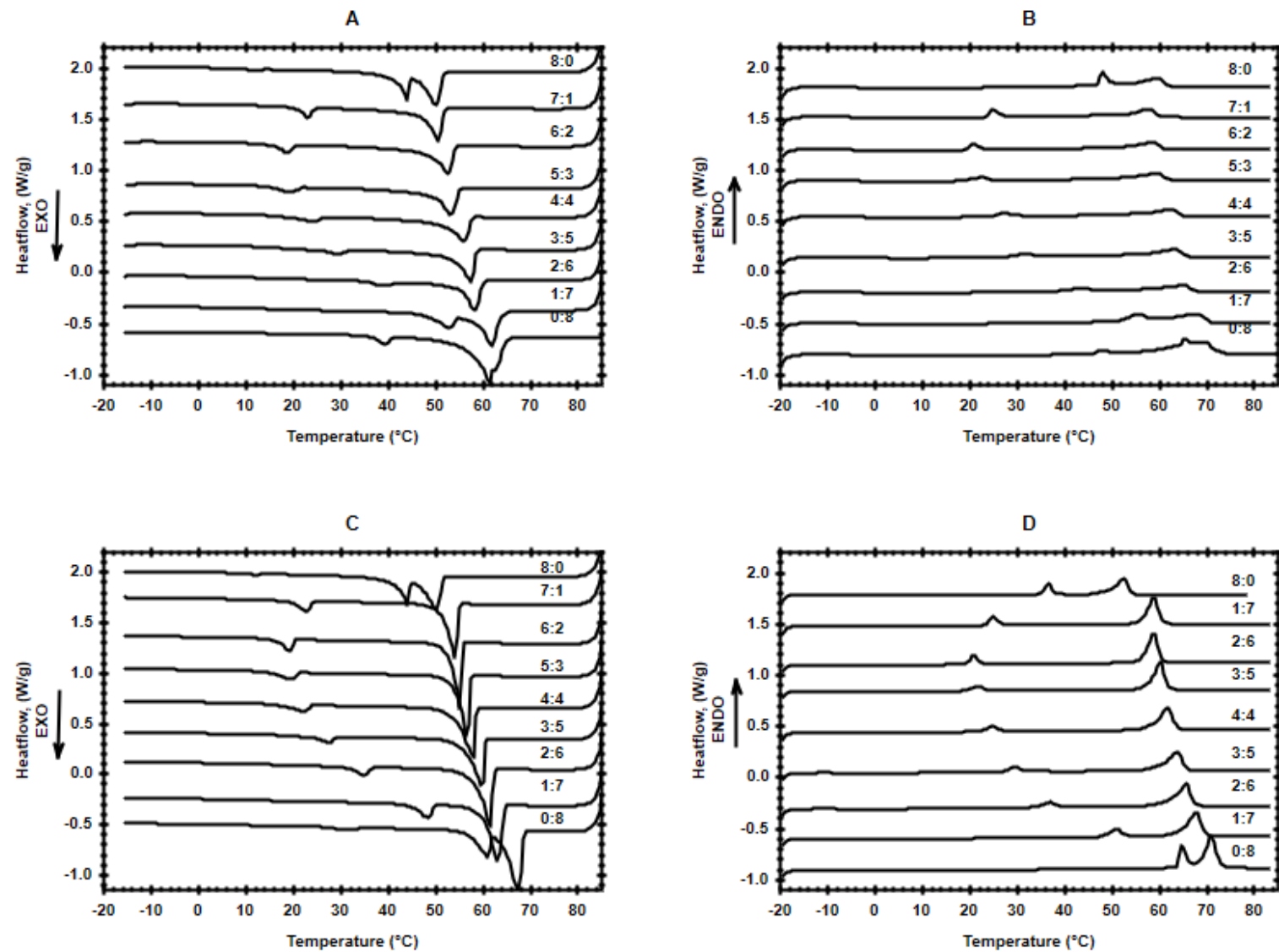


Figure 3SM. Cooling (A and C) and heating (B and D) thermograms at different proportions of the C18:C22 binary mixtures in vegetable oil (A and B) and mineral oil (C and D).

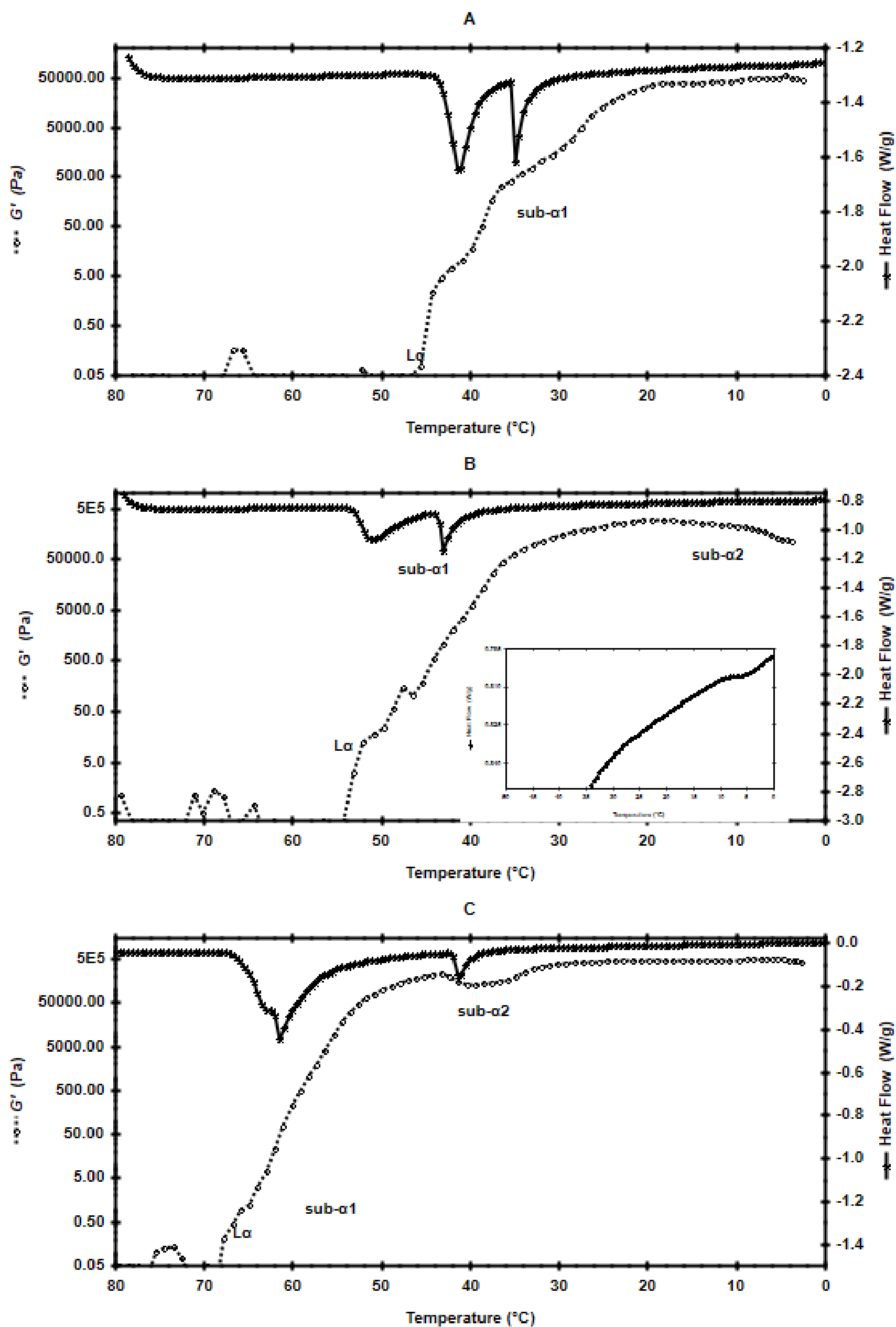


Figure 4SM. G' behavior and corresponding cooling thermogram of the 1.0 molar fraction solution of C16 (A), C18 (B), and C22 (C) in vegetable oil. The corresponding phase transitions of the monoglyceride are indicated. The insert shows a magnification to observe better the sub- $\alpha2$ transition in C18.

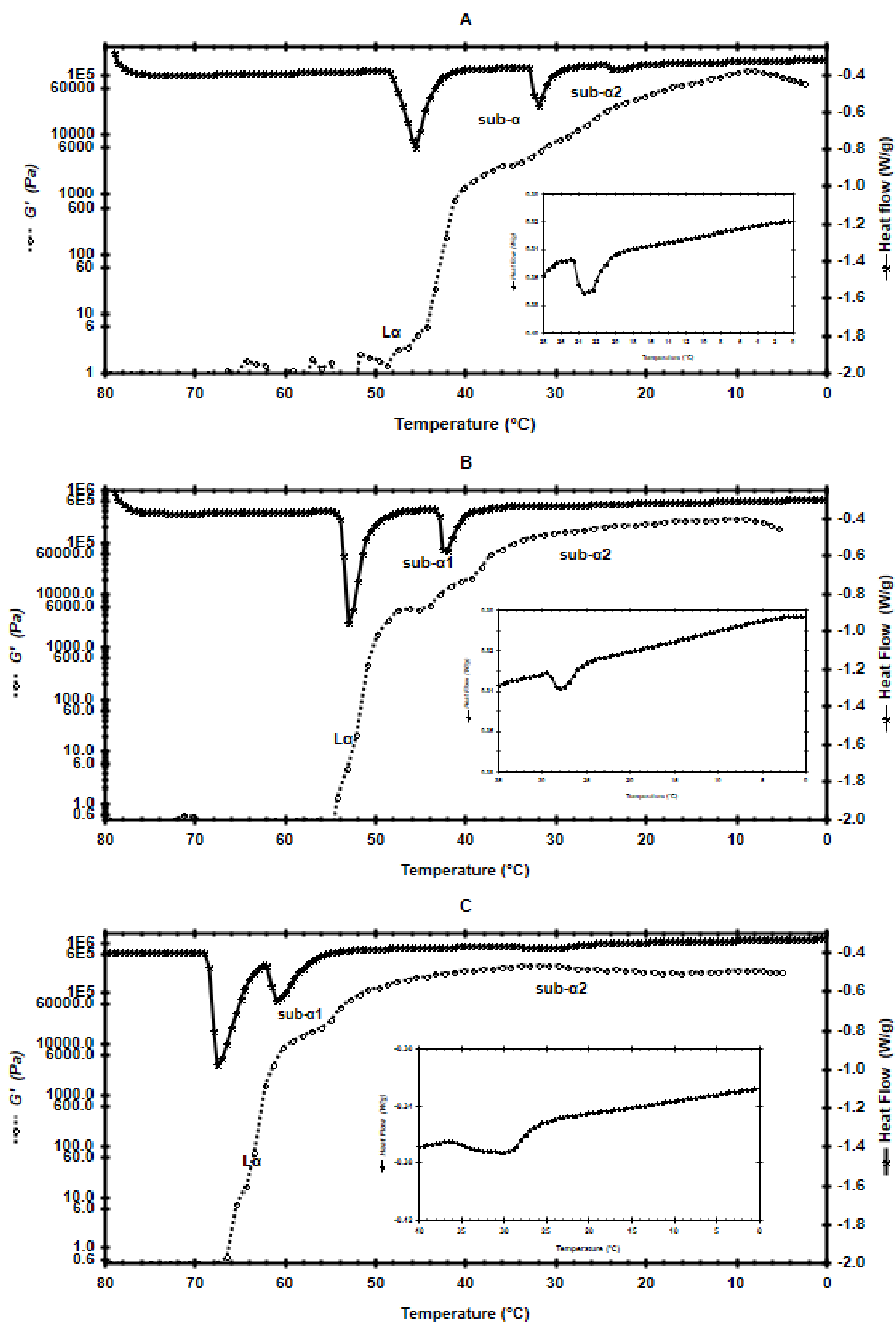


Figure 5SM. G' behavior and corresponding cooling thermogram of the 1.0 molar fraction solution of C16 (A), C18 (B), and C22 (C) in mineral oil. The corresponding phase transitions of the monoglyceride are indicated. The insert shows a magnification to observe better the $sub-\alpha_2$ transition in C16, C18, and C22.

Table 1SM. G' values at 5°C ($G'_{5^{\circ}\text{C}} \times 10^3$ in Pascals) and associated standard deviation (within brackets) for the oleogels developed in the vegetable or mineral oil by the binary mixtures at different molar fraction composition.

		Molar fraction composition of the C18:C14 binary mixture					
		1.0 C18 0.0 C14	0.875 C18 0.125 C14	0.5 C18 0.5 C14	0.25 C18 ^a 0.75 C14	0.125 C18 0.875 C14	0.0 C18 1.0 C14
Vegetable oil		86.37 ^b (1.85)	255.48 ^c (0.69)	267.49 ^d (1.94)	1507.59 ^e (4.09)	1182.74 ^f (1.83)	53.16 ^g (0.47)
Mineral oil		49.14 ^b (0.10)	24.33 ^c (0.20)	9.93 ^d (0.08)	595.31 ^e (1.57)	58.44 ^f (0.70)	67.99 ^g (0.83)
		Molar fraction composition of the C18:C16 binary mixture					
		1.0 C18 0.0 C16	0.875 C18 0.125 C16	0.5 C18 0.5 C16	0.375 C18 ^a 0.625 C16	0.125 C18 0.875 C16	0.0 C18 1.0 C16
Vegetable oil		86.37 ^b (1.85)	67.08 ^c (0.32)	52.36 ^d (0.57)	329.27 ^e (3.31)	45.98 ^f (0.73)	71.79 ^g (0.98)
Mineral oil		49.14 ^b (0.10)	15.60 ^c (0.24)	16.21 ^c (0.07)	56.11 ^d (1.39)	75.90 ^e (1.40)	37.80 ^f (0.22)
		Molar fraction composition of the C18:C22 binary mixture					
		1.0 C18 0.0 C22	0.875 C18 0.125 C22	0.75 C18 ^a 0.25 C22	0.5 C18 0.5 C22	0.125 C18 0.875 C22	0.0 C18 1.0 C22
Vegetable oil		86.37 ^b (1.85)	55.87 ^c (0.11)	687.96 ^d (5.91)	24.46 ^e (0.09)	87.12 ^f (0.59)	128.40 ^g (1.23)
Mineral oil		49.14 ^b (0.10)	82.18 ^c (0.56)	154.03 ^d (8.11)	34.92 ^e (0.13)	42.34 ^f (0.29)	22.69 ^g (0.49)

^a MG composition of the oleogel at the eutectic point determined from the corresponding phase diagram.

^{b-g} For the same type of oil, $G'_{5^{\circ}\text{C}}$ values with different superscript indicates a significant effect of the MG composition on the $G'_{5^{\circ}\text{C}}$ of the corresponding binary MG mixture ($P < 0.01$).