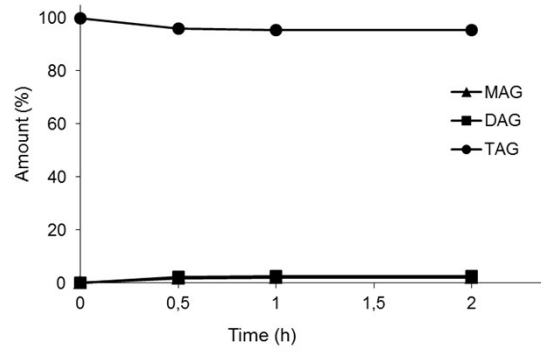


Organotin(IV) compounds with high catalytic activities and selectivities in the glycerolysis of triacylglycerides

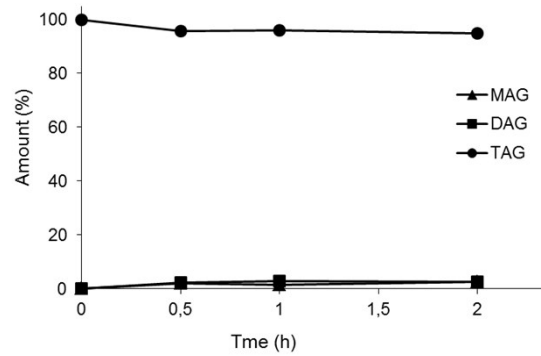
Supplementary Information

Table S1. Wavenumbers (cm^{-1}) and attributions of the main absorption on infrared regions for the Sn(IV) complexes.

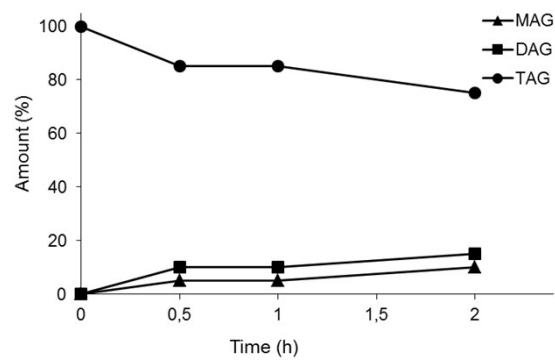
Attributions	Bands (cm^{-1})				
	BuSnCl ₃	Bu ₂ SnCl ₂	Bu ₂ SnLau ₂	BuSnO(OH)	Bu ₂ SnO
$\nu_{\text{O-H}}$	-	-	-	-	3253
$\nu_{\text{as}} \text{CH}_3$	2960	2960	2960	2960	2960
$\nu_{\text{as}} \text{CH}_2$	2930	2930	2930	2930	2930
$\nu_{\text{s}} \text{CH}_3$	2870	2870	2870	2870	2870
$\nu_{\text{s}} \text{CH}_2$	2853	2853	2853	2853	2853
$\nu \text{C=O}$	-	-	1733	-	-
$\delta_{\text{s}} \text{CH}_2$	1466	1466	1466	1466	1466
$\delta_{\text{s}} \text{CH}_3$	1377	1377	1377	1377	1377
$\nu \text{C-O}$	-	-	1069	-	-
$\nu \text{C-O}$	-	-	911	-	-
$\rho_{\text{as}} \text{CH}_2$	709	676	719	-	719
$\nu_{\text{s}} \text{O-Sn-O}$	-	-	-	560	553



A

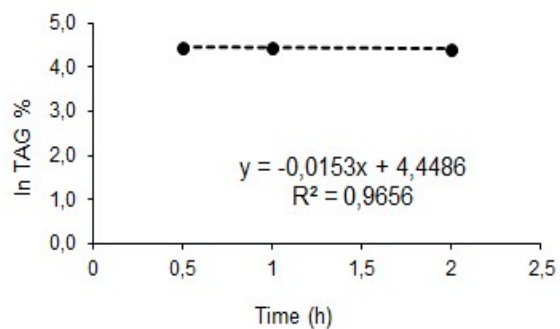


B

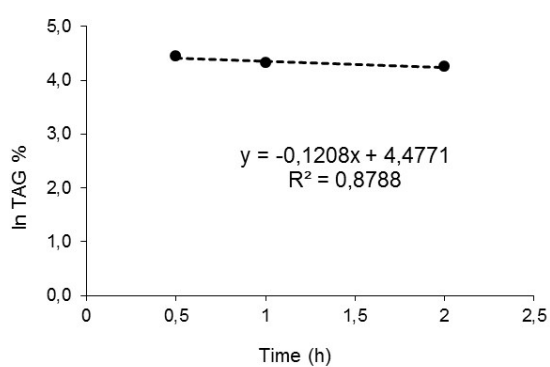


C

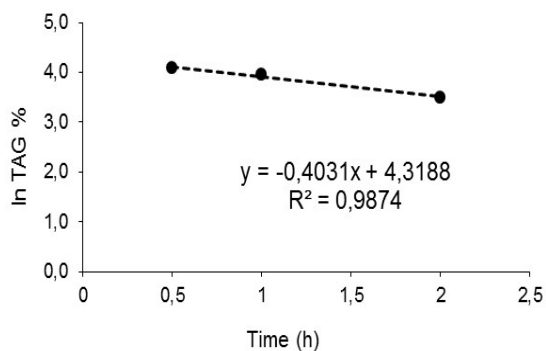
Figure S1. Glycerolysis of TAGs (soybean oil) at different temperatures without catalyst: A = 150 °C, B = 180 °C and C = 220 °C, at the ratio of TAGs/GLY of 1/6.



A=150 °C

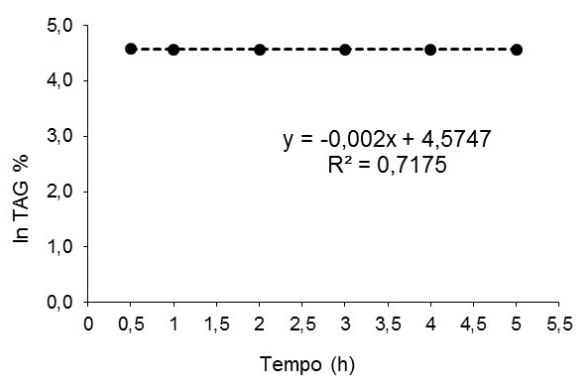


B=180 °C

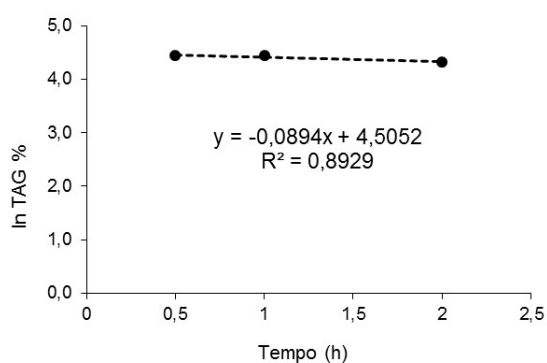


C=220 °C

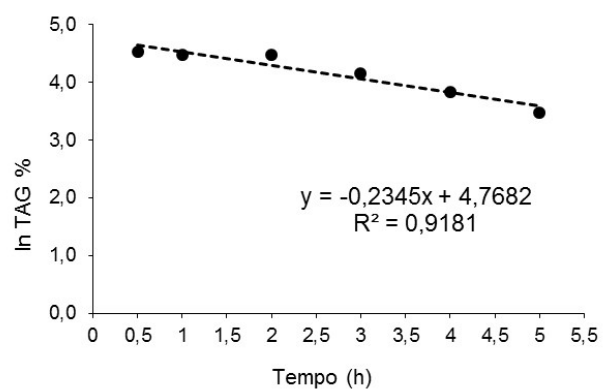
Figure S2. *ln* TAG (%) as a function of time (h) at a molar ratio of TAGs/GLY/Bu₂SnLau₂ of 1/6/0.01: A = 150 °C, B = 180 °C and C = 220 °C.



A=200 °C

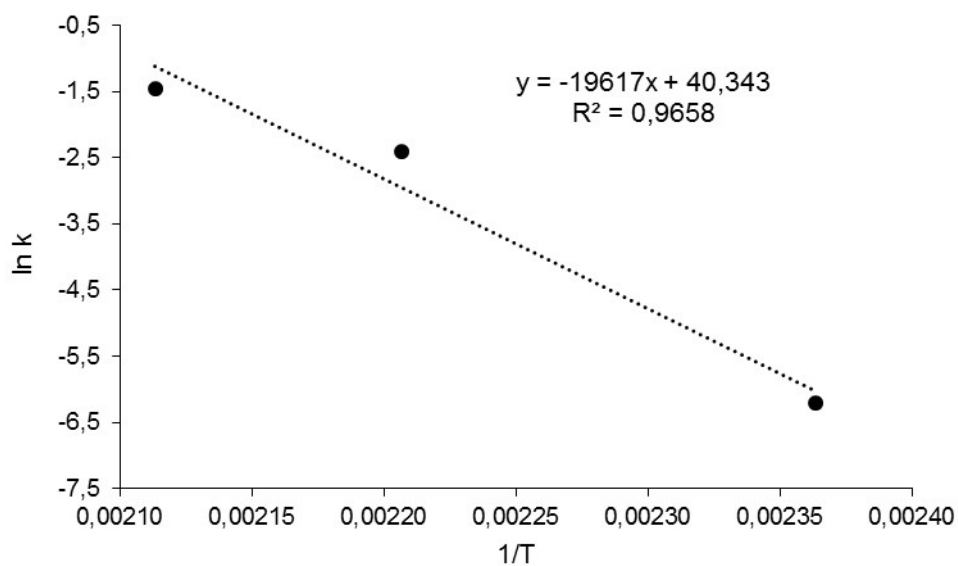


B=220 °C

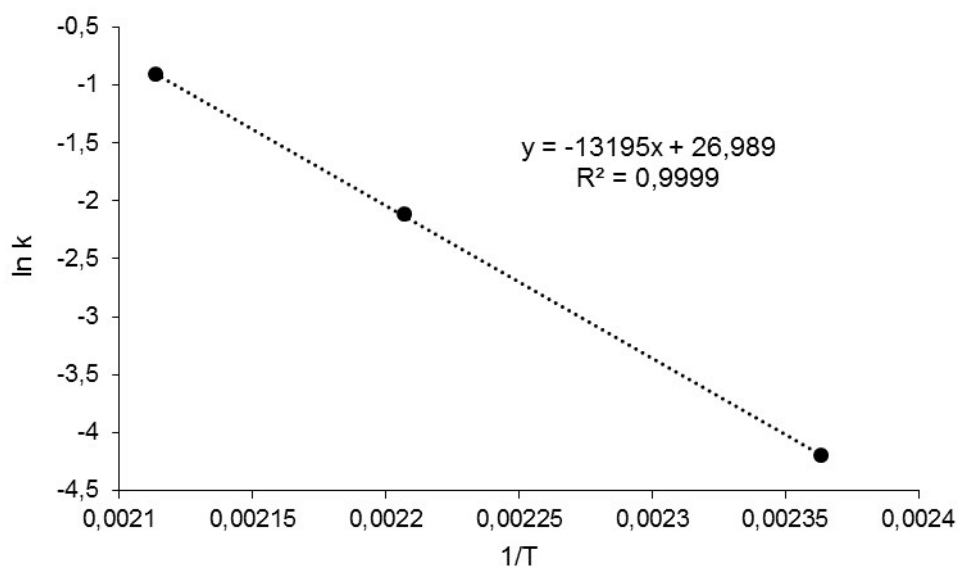


C=240 °C

Figure S3. \ln TAG (%) as a function of time (h) at a molar ratio of TAGs/GLY of 1/6: A = 200 °C, B = 220 °C and C = 240 °C. In the absence of a catalyst, the test was performed at 200, 220 and 240 °C, since at 150 and 180 °C, there were no TAG conversions (see Figure 2).



A=without catalyst



B=Bu₂Lau₂Sn

Figure S4. $\ln k$ (%) as a function of $1/T$ (K) with a catalyst present at a ratio of TAGs/GLY/Bu₂SnLau₂ of 1/6/0.01 and in the absence of catalyst at a ratio of TAGs/GLY of 1/6.

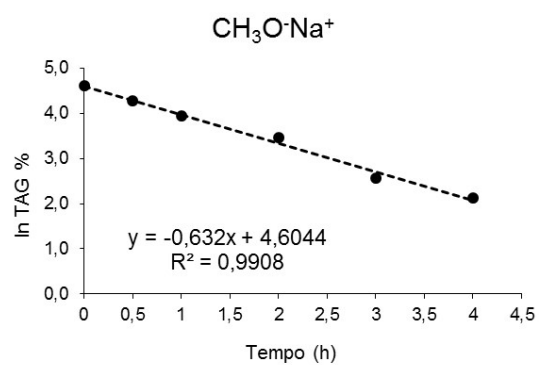
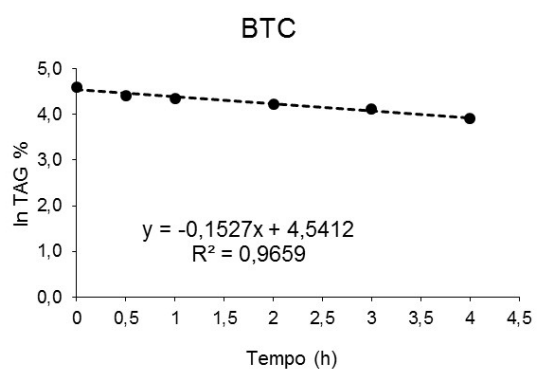
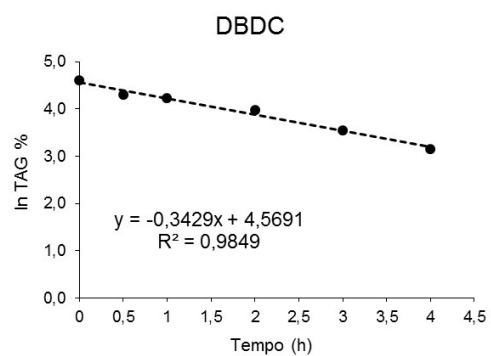
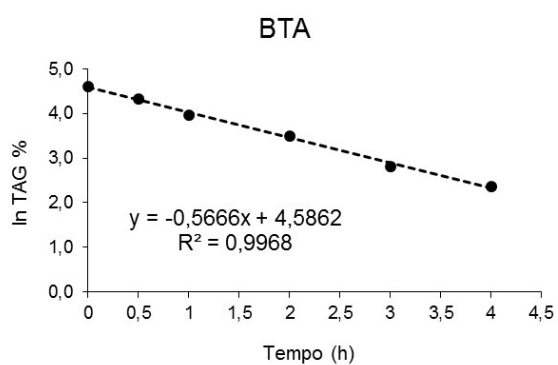
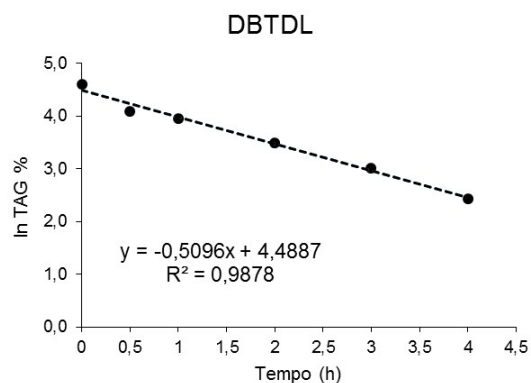
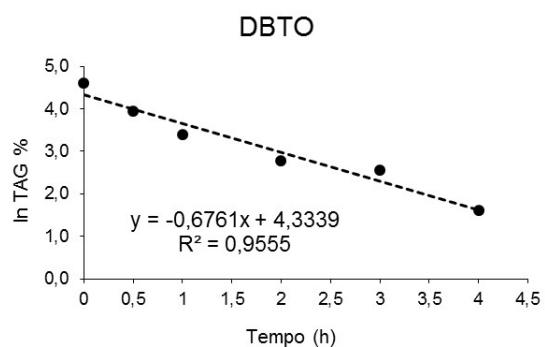


Figure S5. *ln* TAG (%) as a function of time (h) at 220 °C at a molar ratio of TAGs/GLY/ CAT of 1/6/0.01 using Bu₂SnO (A), BuSnO(OH) (B), Bu₂Lau₂Sn (C), Bu₂SnCl₂ (D), BuSnCl₃ (E) and CH₃O⁻Na⁺ (F).