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SUPPLEMENTARY MATERIAL TO

Influence of various cosolvents on the calcium oxide-catalyzed ethanolysis of sunflower oil

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TABLE S-I. The properties of the employed cosolvents and ethanol; TEOA – triethanolamine, DEOA – diethanolamine, EG – ethylene glycol, MEK – methyl ethyl ketone, HEX – *n*-hexane, TEA – triethylamine, Glyme – ethylene glycol dimethyl ether, GLYC – glycerol, THF – tetrahydrofuran, DIOX – dioxane and ET – ethanol

Property	Cosolvent										
	TEOA	DEOA	EG	MEK	HEX	TEA	Glyme	GLYC	THF	DIOX	ET
Chemical formula	$C_6H_{15}NO_3$	$C_4H_{11}NO_2$	$C_2H_6O_2$	C_4H_8O	C_6H_{14}	$C_6H_{15}N$	$C_4H_{10}O_2$	$C_3H_8O_3$	C_4H_8O	$C_4H_8O_2$	C_2H_6O
Boiling point, °C[a]	335.0	268.0	197.6	79.6	68.0	89.7	83.5	290.0	65.0	101.1	78.5
Melting point, °C[a]	21.5	28.0	–13.0	–86.0	–95.0	–115.0	–58.0	19.0	–108.3	11.8	–114.1
ρ (25 °C) g cm^{-3}	1.12[b]	–	1.11[b]	0.799[b]	0.656[b]	0.724[b]	0.865[b]	1.257[b]	0.88[b]	1.029[b]	0.787[b]
ρ (20 °C) g cm^{-3}	1.1242[c,e]	1.0966[c,e]	1.1088[c,e]	0.8054[c]	0.6593[c]	0.7275[c]	0.8691[c]	1.261[c]	0.8892[c]	1.0337[c]	0.7893[c]
Viscosity at 25°C, mPas	652.576[b] 609[c]	109.5 (a1t 50 °C)[b]	17.645 16.1[c]	0.396[b] 0.405[c]	0.296[b] 0.300[c]	0.341[b] 0.347[c]	0.446[b]	749.3[b] 934[c]	0.465[b] 0.456[c]	1.211[b] 1.177[c]	1.057[b] 1.074[c]
Partition coefficients at 25°C (log *P*)	–1.00[b] –1.59[e] –2.3[f]	– 1.43 (20 °C)[b,e]	– 1.36[b,e]	0.29[a1,b,c,e,f]	3.90[b,e] 4.0[a1,c,f]	1.45[a1,b,c] 1.64[e]	–0.21[b]	–1.76[b]	0.46 (20 °C)[a1]	–0.27[b,e] –0.49[f]	–0.31[b,e] –0.30[a1,c]

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TABLE S-I. Continued

Refractive index at 25°C	1.4835[b]	1.4747 (19 °C)[b]	1.4306[b]	1.3764[b]	1.3723[b]	1.3980[b]	1.3781[b] 1.3770[c]	1.4730[b]	1.405[b,c]	1.4202[b]	1.3594[b]
Dipole moment	3.57[c,d] 3.48[f]	0.85[b] 2.8[c]	2.31[b] 2.36[c] 2.28[c]	2.76[b] 2.779[c] 2.78[f]	0.00[b] 0.08[f]	0.66[b,c]	1.71[b]	4.21[b] 2.56[c]	1.63[b,f] 1.75[c]	0.00[b,c] 0.45[f]	1.69[b,c]
Dielectric constant (20 °C)	29.36 (25 °C)[c,d]	25.75[c]	41.4[c]	18.56[c]	1.8865[c]	2.418[c]	7.30 (23.7 °C)[c]	46.53[c]	7.52[c] (22.2 °C)	2.2189[c]	25.3[c]
p*K*a (25 °C)	7.76[c,d,e] 7.762[g] 7.92[e]	8.88[d,e] 8.96[g] 8.97[e]	15.1[c,g] 14.22[d,e] 14.24[e]	14.7[e,g]	>50	10.75[c] 10.72[d] 10.78[e,g]	– 3.8[h]	14.15[c,d] 14.4[g]	– 2.08[g]	– 2.92[g]	15.5[c] 15.9[e,g]

[a]According to Material Safety Data Sheet. [a1]ref. 1; [b]ref. 2; ref. 3; [d]ref. 4; [c]ref. 5; [f]ref. 6; [g]ref. 7; [h]ref. 8

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