

Electronical Supplementary Information

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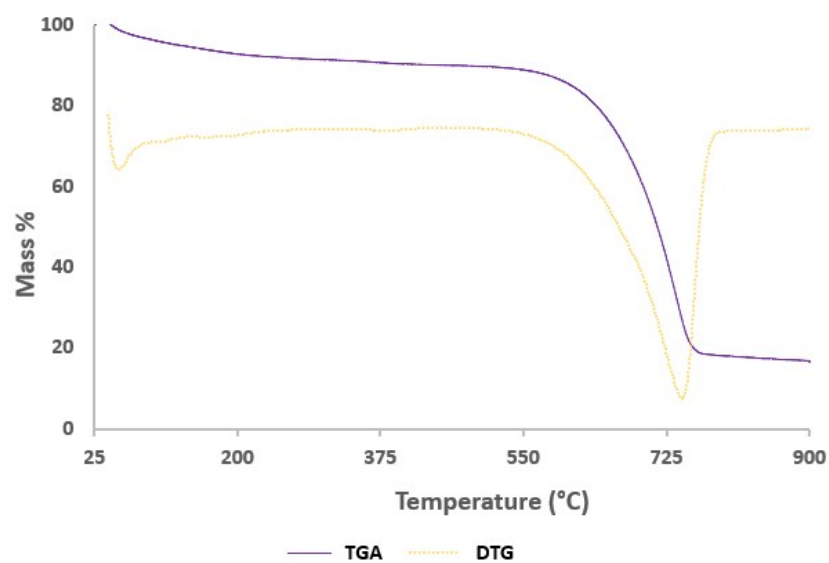


Figure 1: Thermogram of pure KNO_3

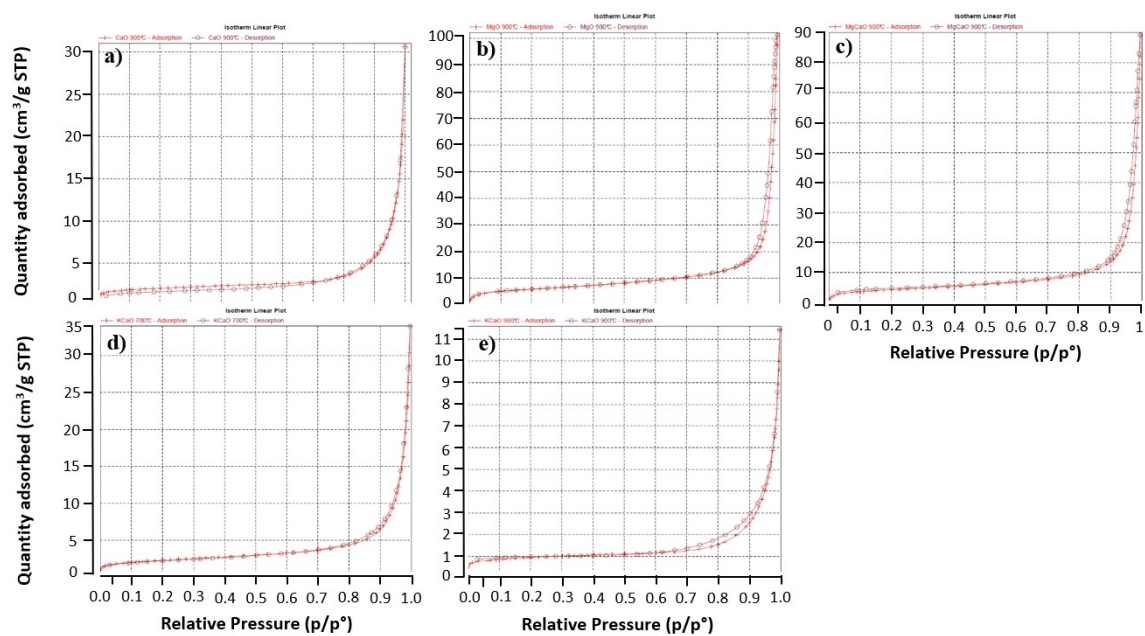


Figure 2: Adsorption-desorption isotherms of heterogeneous catalysts, (a) CaO ; (b) MgO ; (c) MgO-CaO ; (d) KNO_3/CaO 700; (e) KNO_3/CaO 900

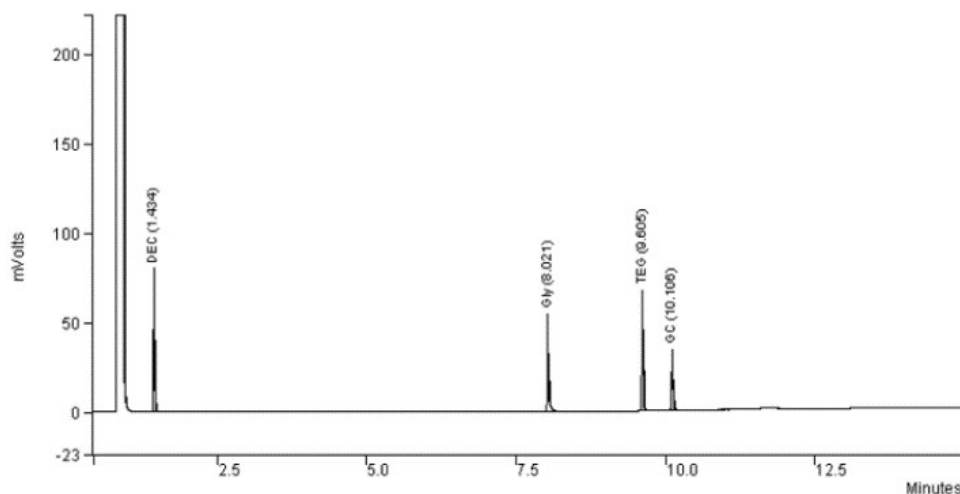


Figure 3: Chromatogram of the final reactional medium: DEC (1.43 min), Glycerol (8.02 min), Glycerol carbonate (10.11 min) and internal standard TEG (9.61 min)

Table 1: Corrected results of heterogeneous catalyst screening calculated from the mole balance of the process

Catalyst	% wt/Gly	Gly initial (mol)	Gly final (mol)	GC supernatant (mol)	GC pellet (mol)	Yield GC corrected (%)	Selectivity in GC corrected (%)
MgO/CaO	5	0.108	0.0529	0.0551 Total = 0.0555	0.0042	52	100
	10	0.109	0.0218	0.0801 Total = 0.0886	0.0085	81	100
KNO₃/CaO 700 °C	5	0.109	0.0083	0.0967 Total = 0.1054	0.0087	97	98.5
	10	0.109	0.0073	0.0551 Total = 0.0970	0.0195	89	95.4

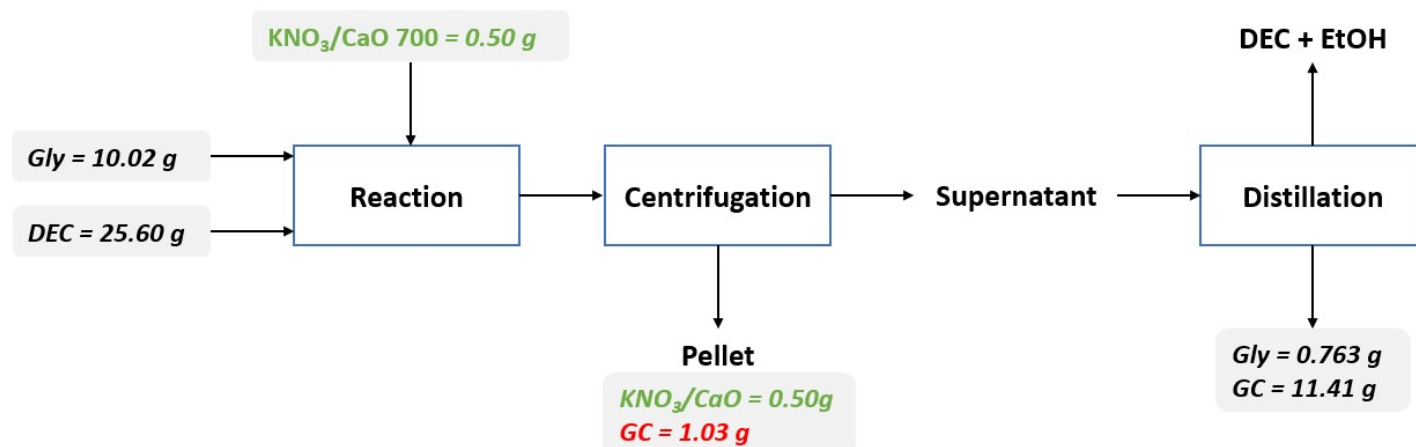


Figure 4: Mass balance for the KNO₃/CaO 700 5% wt/Gly reaction