Supplementary Material

Sustainable CO_2 Fixation onto Bio-Based Aromatics

Aleksa Kojčinović [1,2], Blaž Likozar [1,3,4,*] and Miha Grilc [1,2,3,*]

[1] Department of Catalysis and Chemical Reaction Engineering, National Institute of Chemistry, Hajdrihova 19, 1000 Ljubljana, Slovenia; aleksa.kojcinovic@ki.si
[2] Graduate School, University of Nova Gorica, Vipavska Cesta 13, 5000 Nova Gorica, Slovenia
[3] Pulp and Paper Institute, Bogišićeva 8, 1000 Ljubljana, Slovenia
[4] Faculty of Polymer Technology, Ozare 19, 2380 Slovenj Gradec, Slovenia
* Correspondence: blaz.likozar@ki.si (B.L.); miha.grilc@ki.si (M.G.); Tel.: +386-1-4760-281 (B.L.); Fax: +386-1-4760-300 (B.L.)

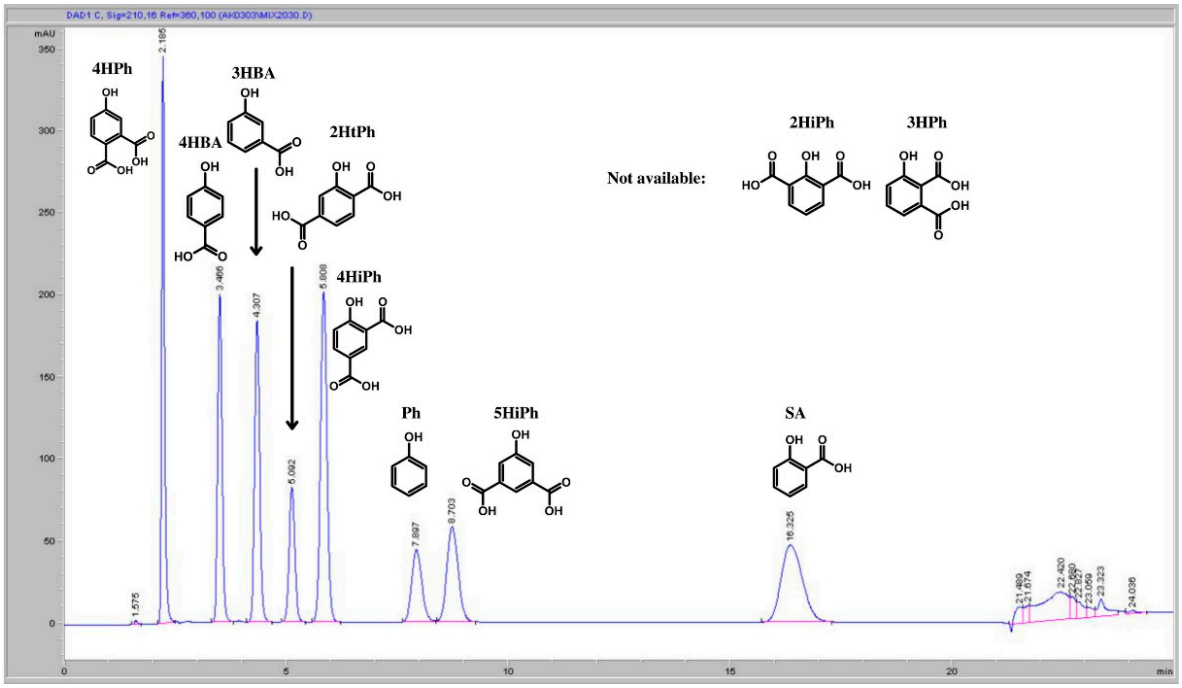

Figure S1. HPLC chromatogram showing great separation of potential mono- and dicarboxylated phenols.

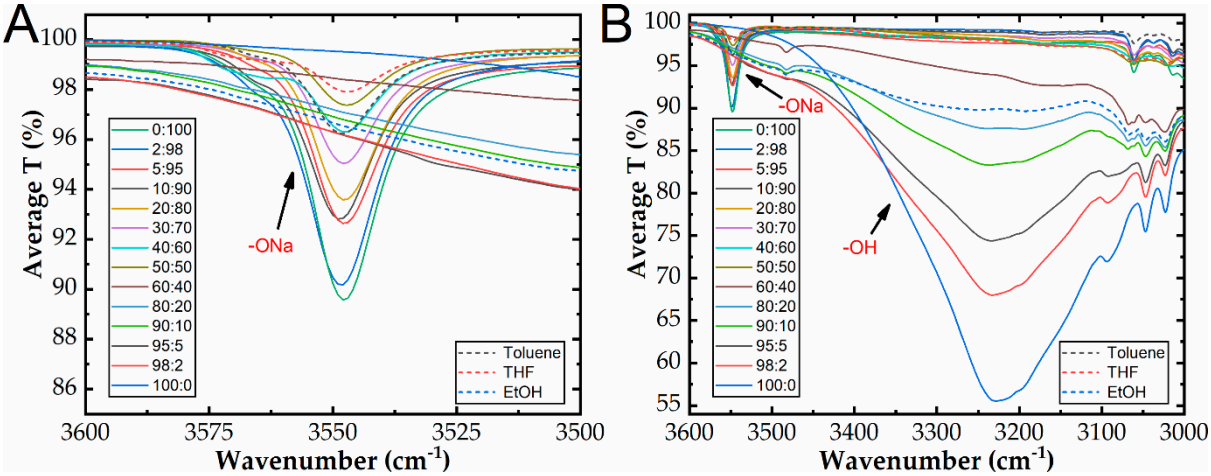

Figure S2. FTIR spectra of sodium phenoxides obtained when using three different solvents (toluene, tetrahydrofuran (THF), and ethanol (EtOH)) and compared to the calibration curve of various ratios of Ph:NaOPh, Figure S2A is showing characteristic –ONa peak, while Figure S2B also includes the –OH peak.

Table S1. Calculation of margin of error obtained with results from various methods (reflux, open beaker, and Marasse methods) of sodium phenoxide preparation.

		Results, Yields of SA	**N**	**Mean, $\bar{x}$**	**Standard Deviation, *s***	**Margin of Error**
Reflux	NaOH	41.1, 35.2, 28.9, 30.2, 34.1	5	33.9	4.8	33.9 ±4.2 (±12.4%)
	KOH	39.2, 44.1, 34.1, 38.1, 44.1	5	39.9	4.3	39.9 ±3.7 (±9.4%)
	Na_2CO_3	15.1, 13.2, 28.1, 26.5, 24.6	5	21.5	6.9	21.5 ±6.0 (±28.0%)
Open beaker	NaOH	6.5 23.1	2	14.8	11.7	14.8±16.3 (±109.9%)
	KOH	30.1 15.2	2	22.65	10.5	22.65±14.6 (±64.5%)
	Na_2CO_3	12.7 3.2	2	7.95	6.7	8.0±9.3 (±117.1%)
Marasse	K_2CO_3	27.5, 31.5, 27.7, 23.5, 27.2	5	27.5	2.8	27.5 ±2.5 (±9.0%)

Where the standard deviation s was calculated with the formula below:

$$s = \sqrt{\frac{1}{N-1}\sum_{i=1}^{N}(x-\bar{x})^2}$$