A divergent approach for synthesis of (hydroxymethyl)furfural (HMF) from spent aromatic biomass derived (chloromethyl)furfural (CMF) as a renewable feed stock

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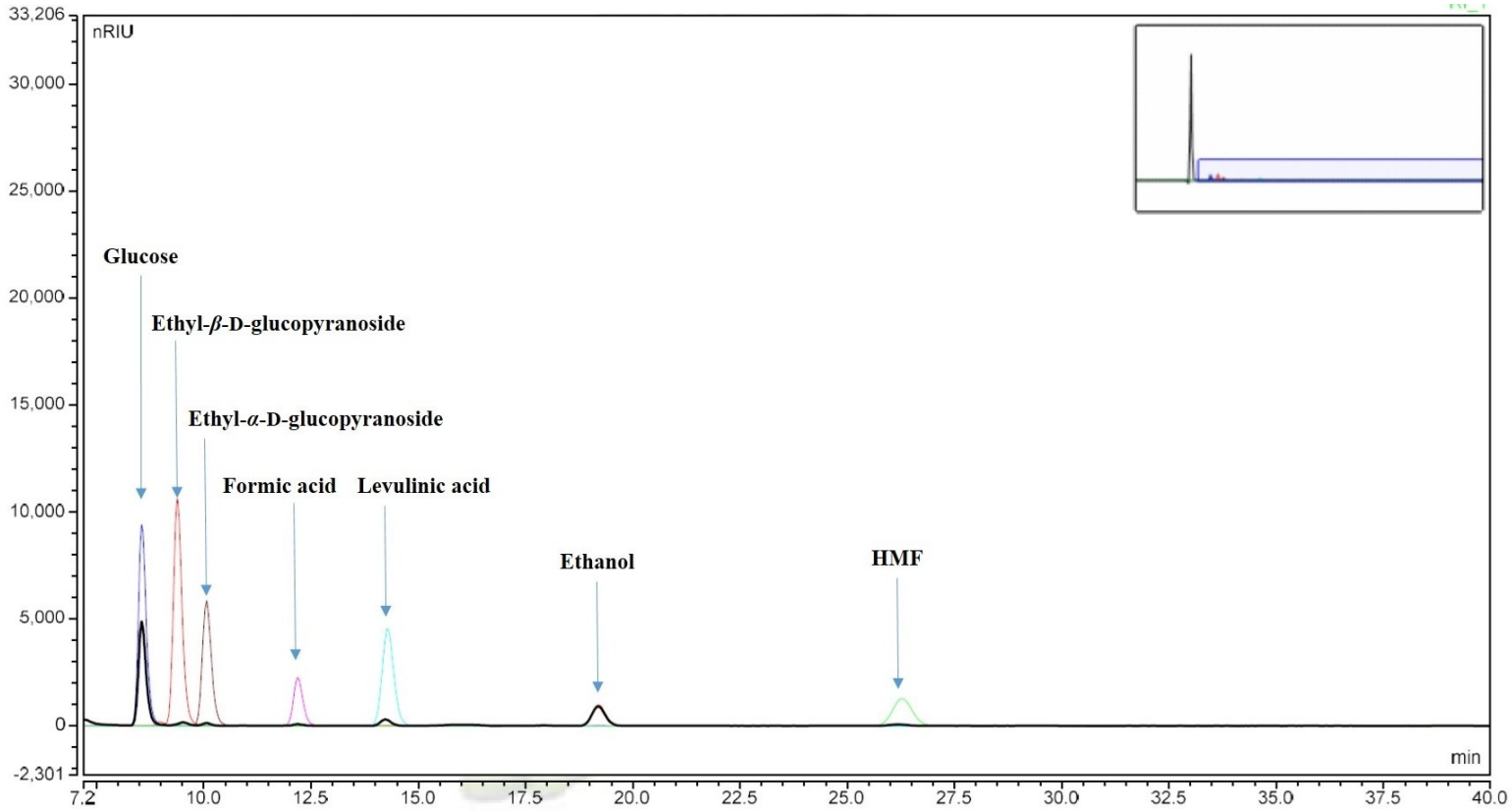


Figure S1. HPLC chromatogram of hydrolysate obtained *via* processing of pre-treated biomass with conc. HCl at 100 °C

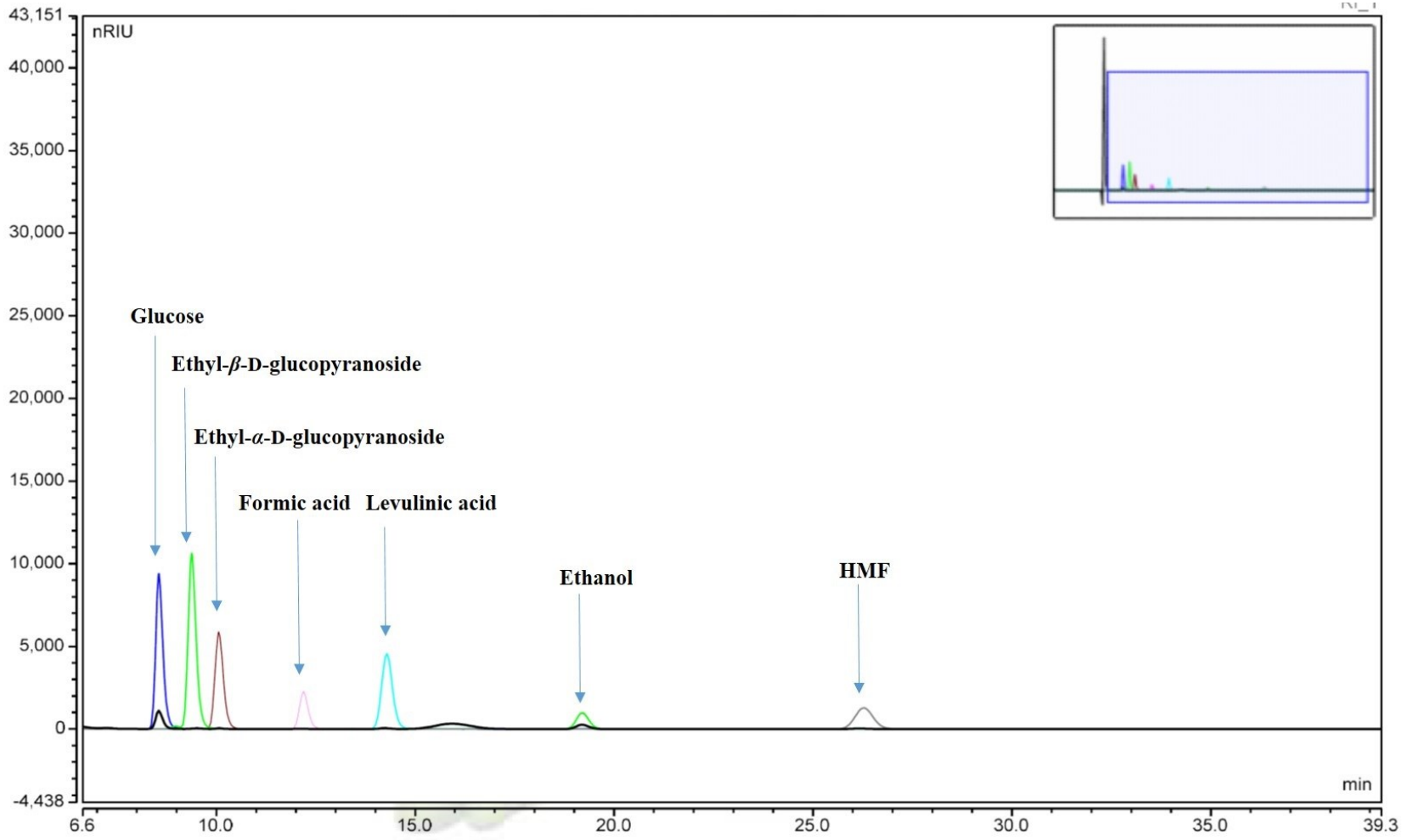


Figure S2. HPLC chromatogram of hydrolysate obtained *via* processing of pre-treated biomass with conc. HCl and NaCl at 100 °C

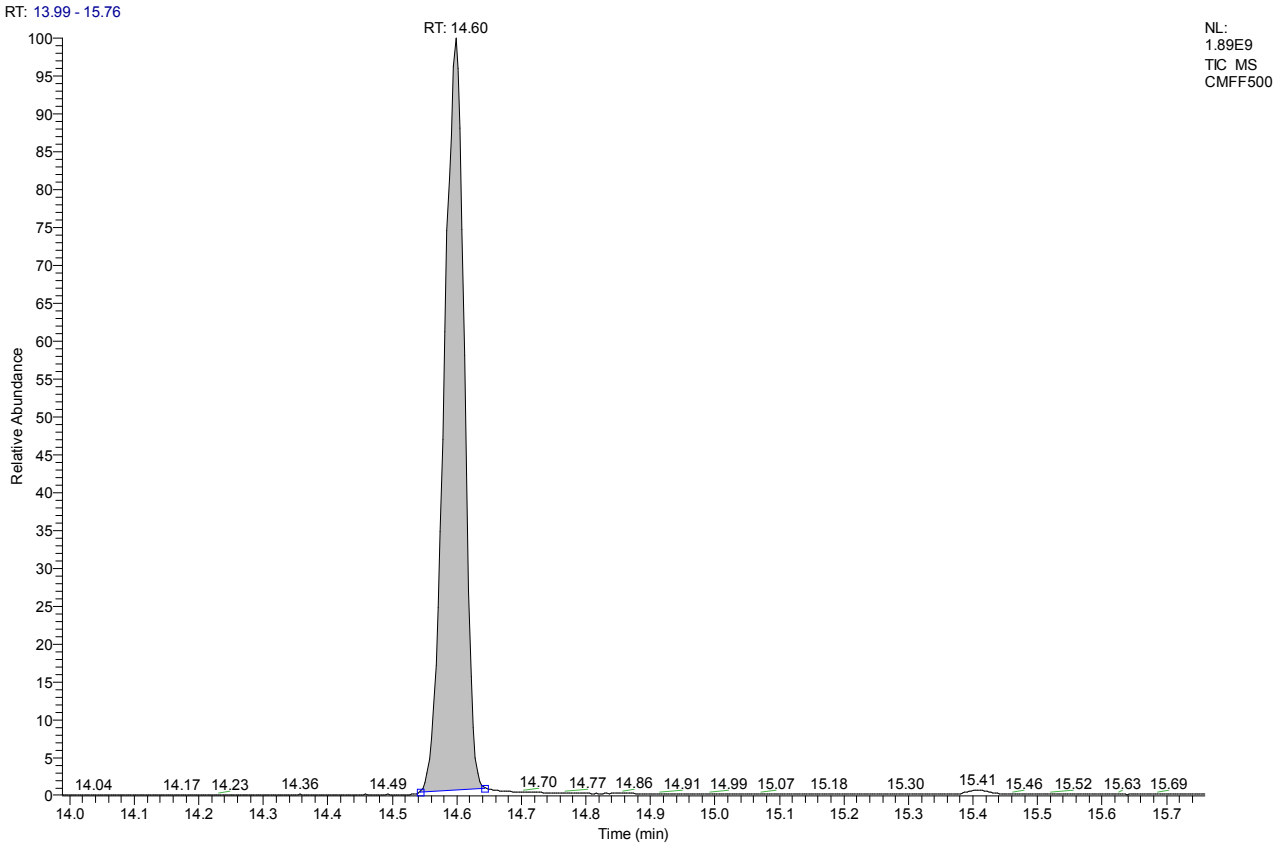


Figure S3. GC chromatogram of CMF

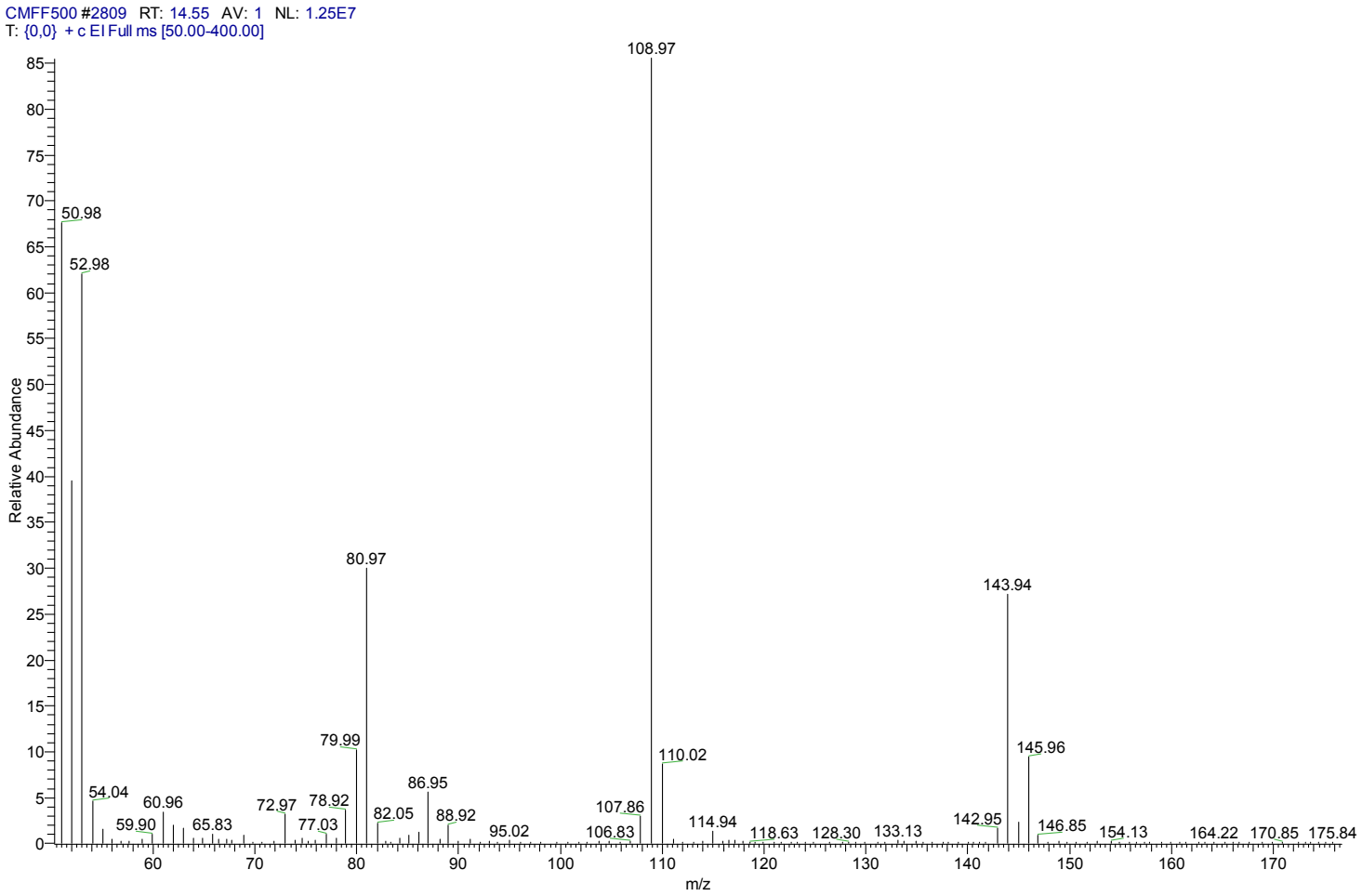


Figure S4. Mass spectrum of CMF

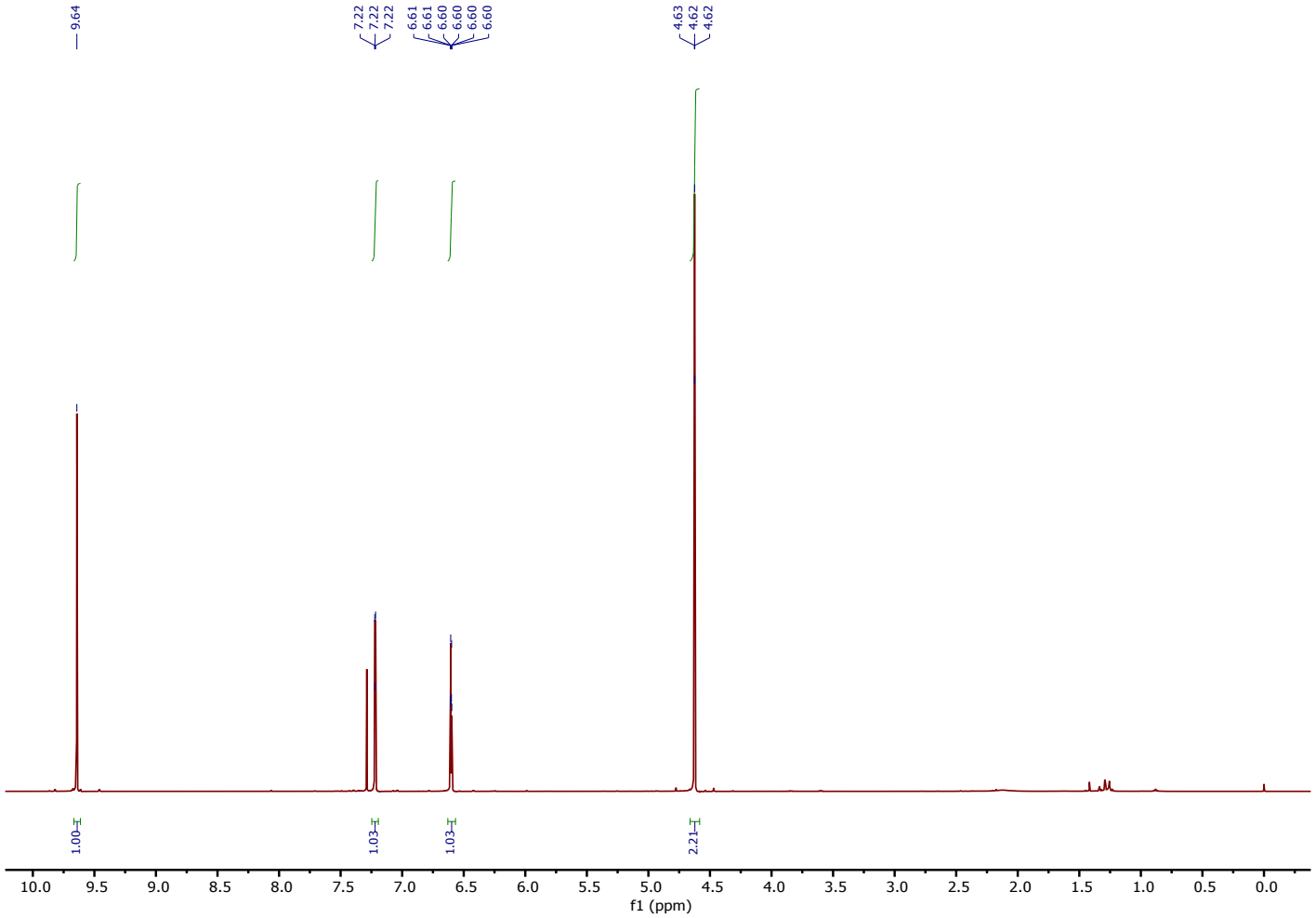


Figure S5. ^{1}H NMR spectrum of CMF

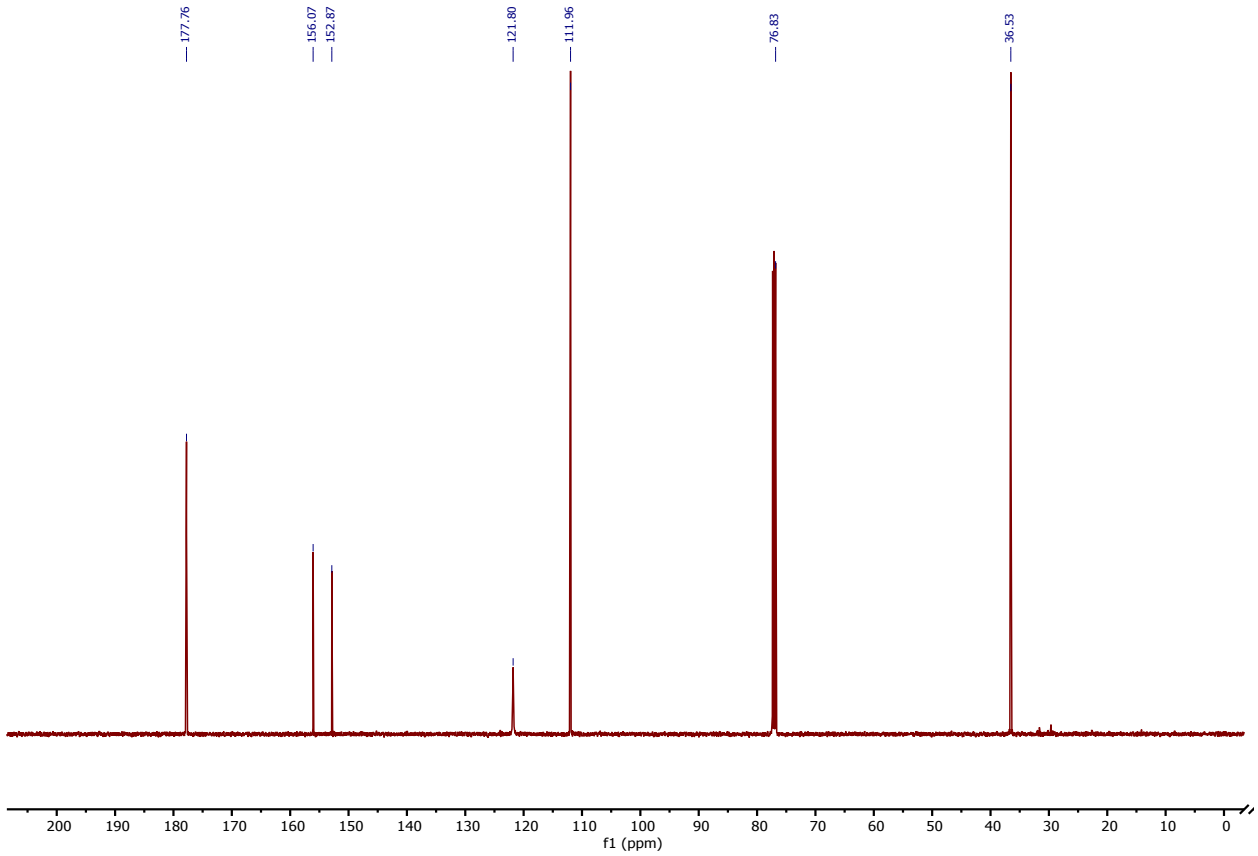


Figure S6. ^{13}C NMR spectrum of CMF

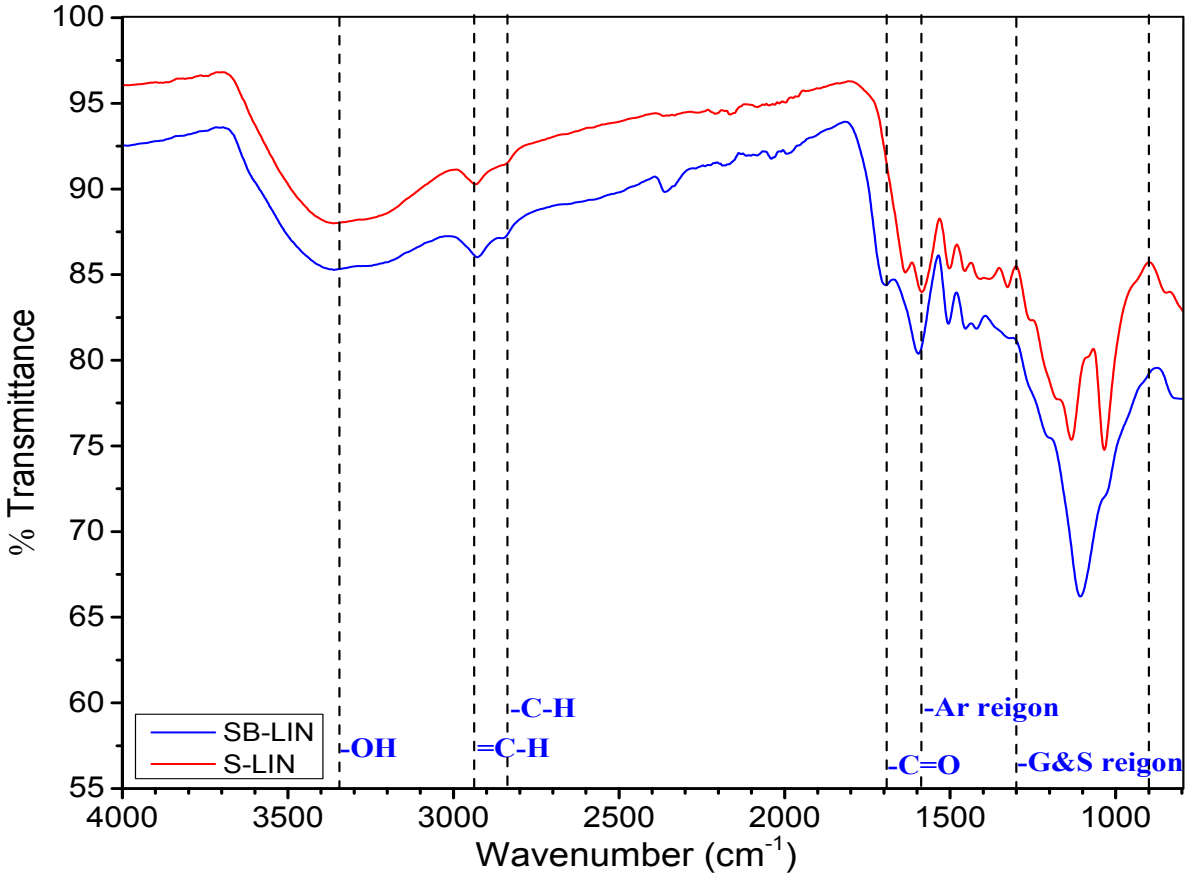


Figure S7. FT-IR of standard (S-LIN) and isolated lignin (SB-LIN)

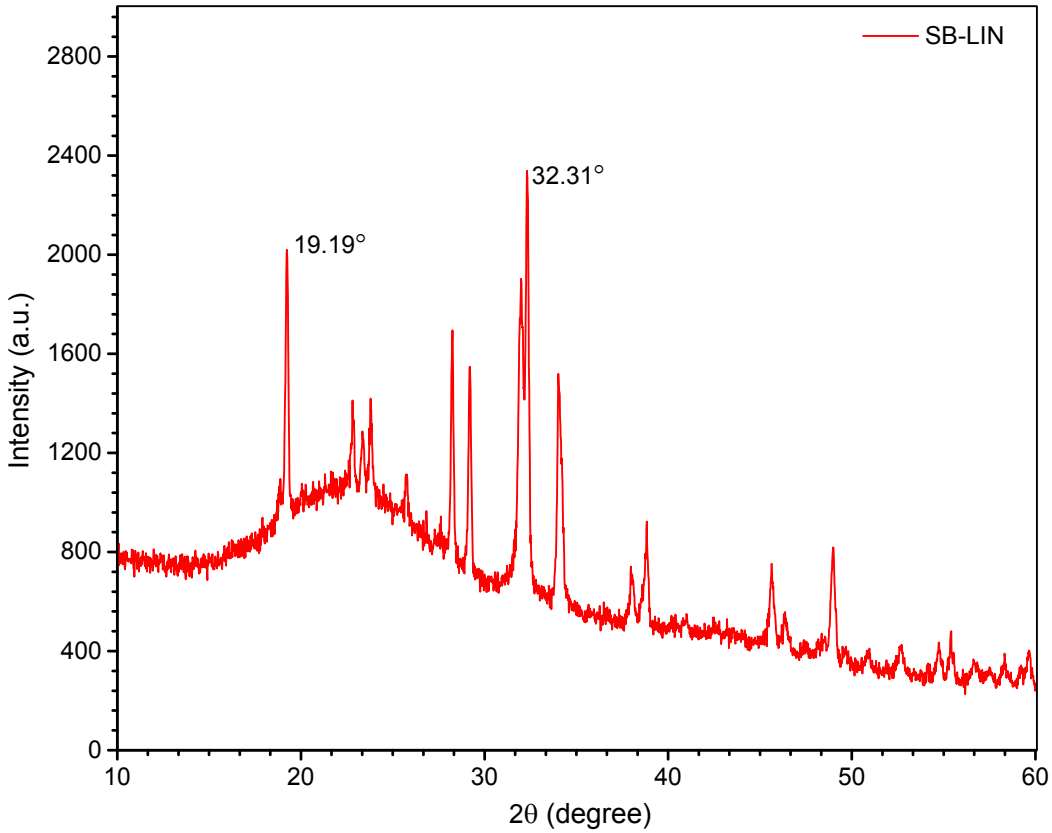
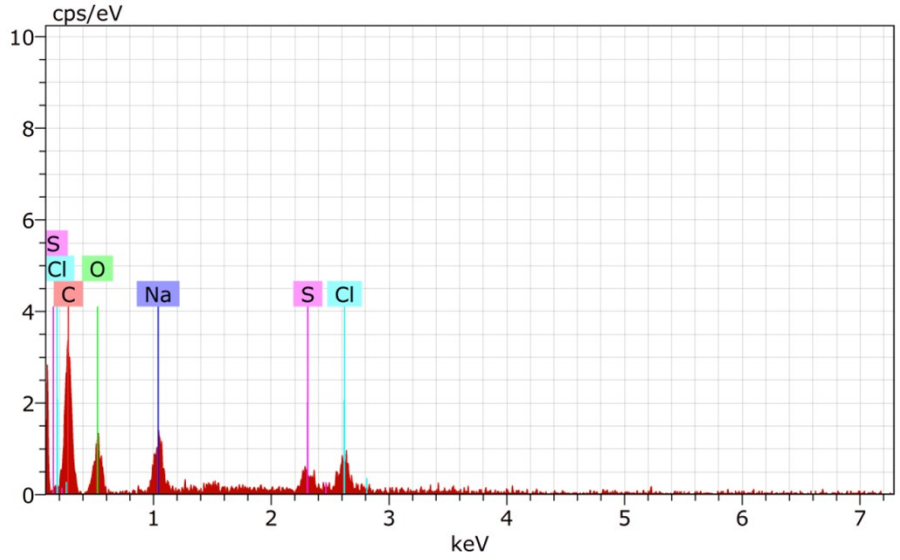


Figure S8. XRD analysis of isolated lignin

Application Note



Spectrum: test 6397

Element	Series	unn. C [wt.%]	norm. C [wt.%]	Atom. C [at.%]	Error (3 Sigma) [wt.%]
Carbon	K-series	36.08	61.46	71.33	24.24
Oxygen	K-series	14.78	25.18	21.94	13.62
Sodium	K-series	3.78	6.45	3.91	1.14
Chlorine	K-series	2.67	4.55	1.79	0.63
Sulfur	K-series	1.39	2.37	1.03	0.43
	Total:	58.70	100.00	100.00	

Figure S9. Elemental composition of isolated lignin by EDS analysis lignin

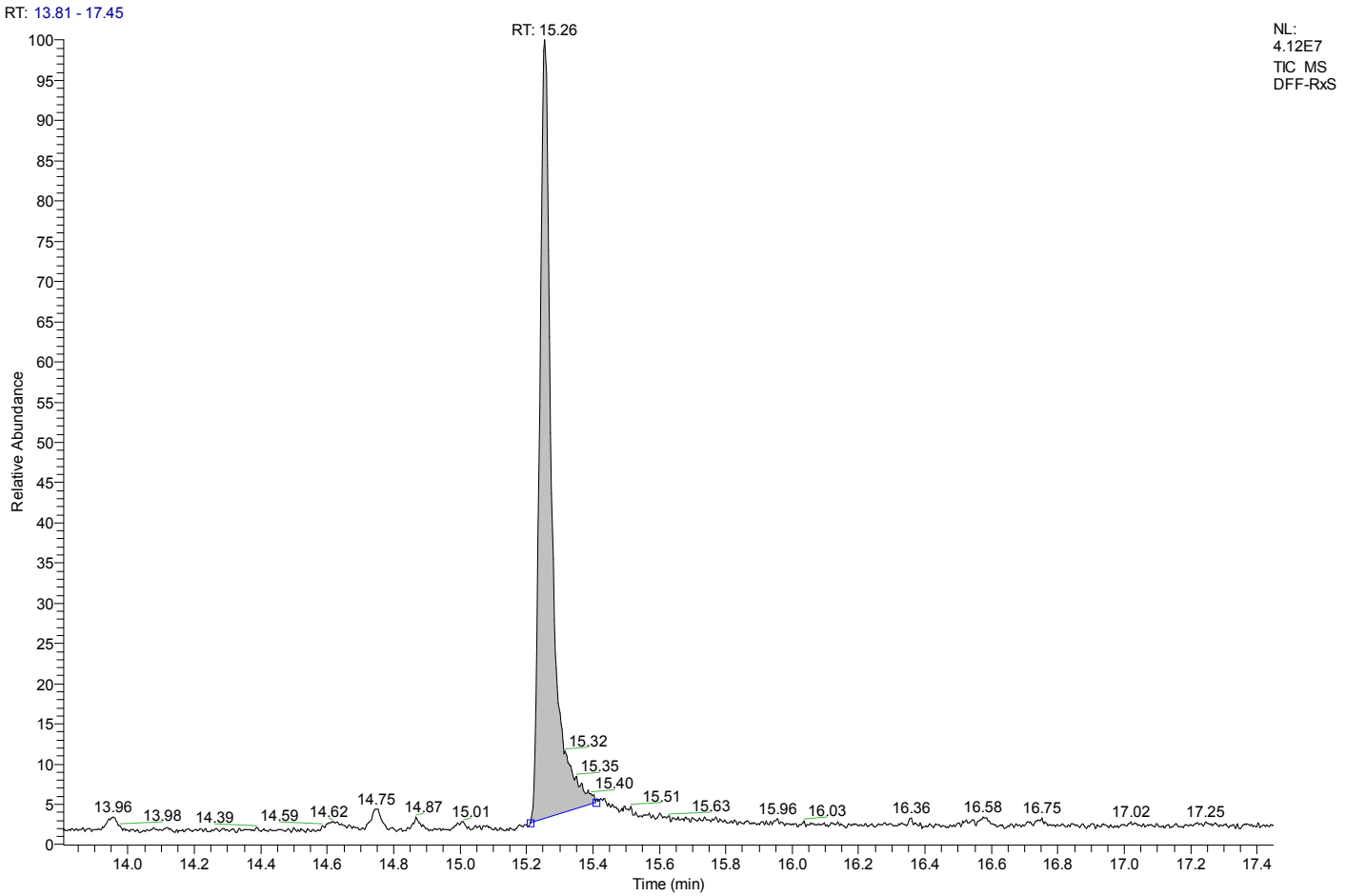


Figure S10. GC chromatogram of HMF

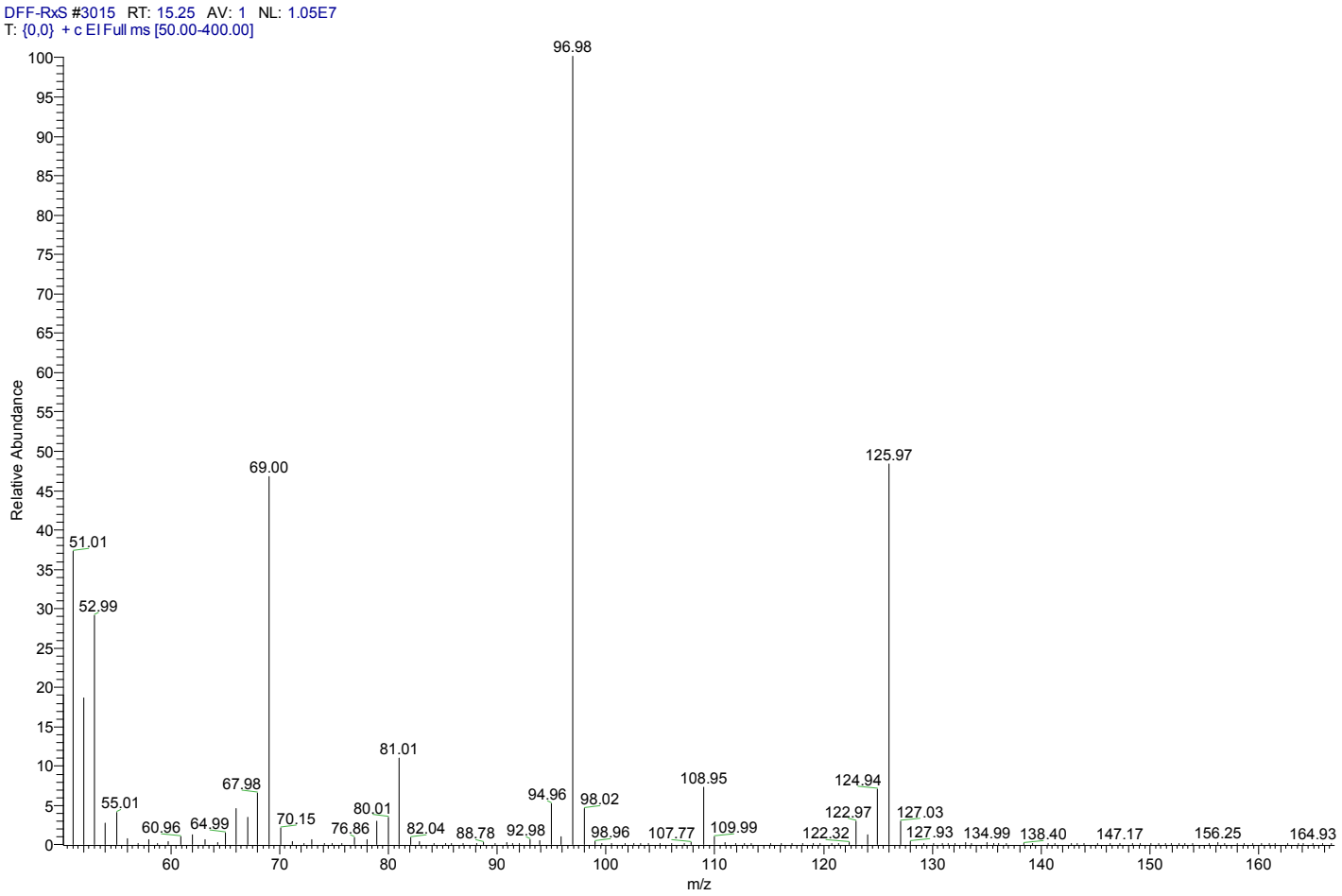


Figure S11. Mass spectrum of HMF