

NMR spectra

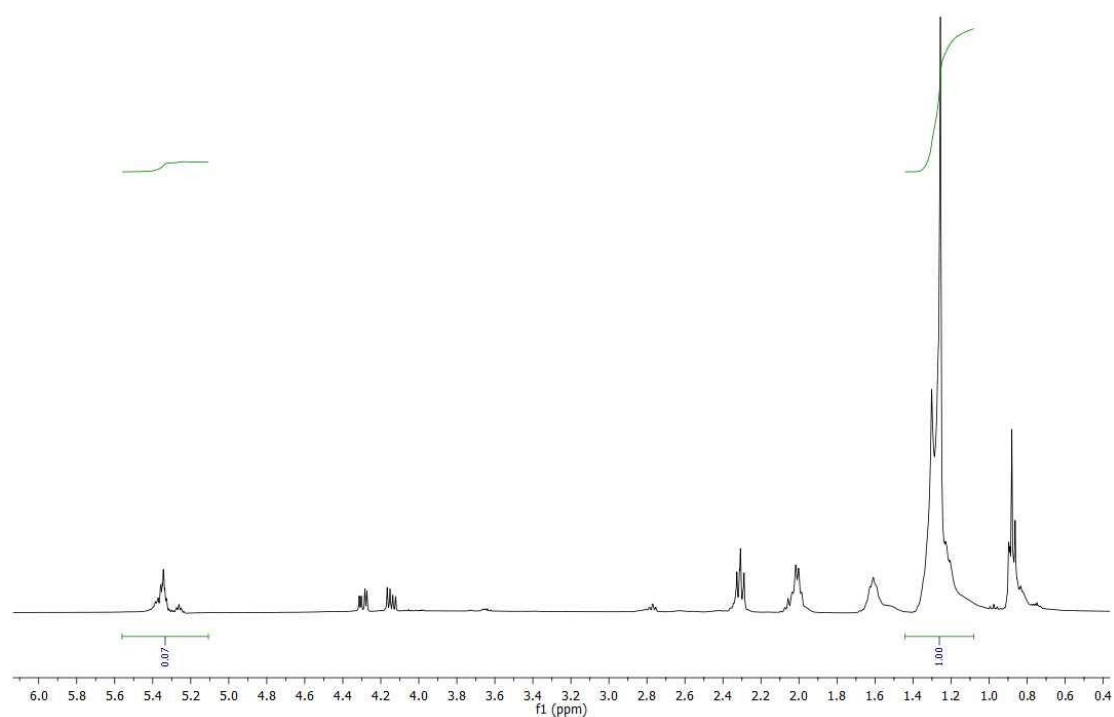


Figure S1. ^1H -NMR Keoil SK 042

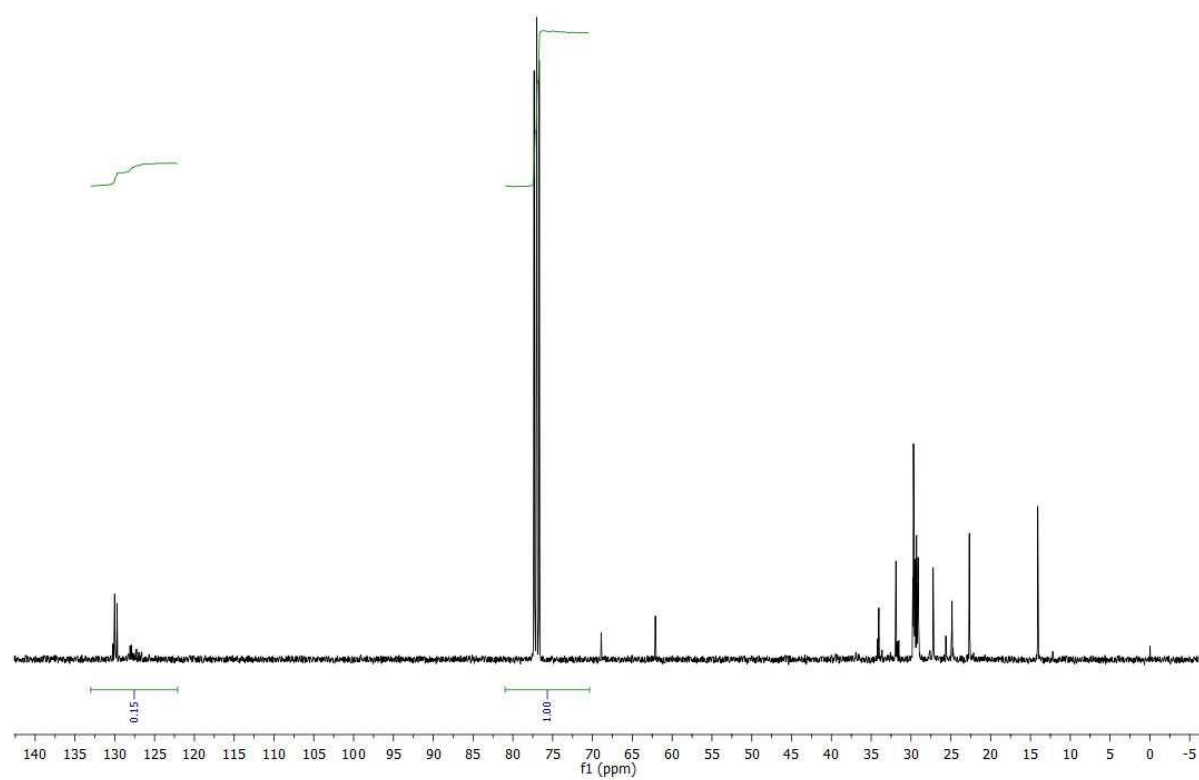


Figure S2. ^{13}C -NMR Keoil SK 042

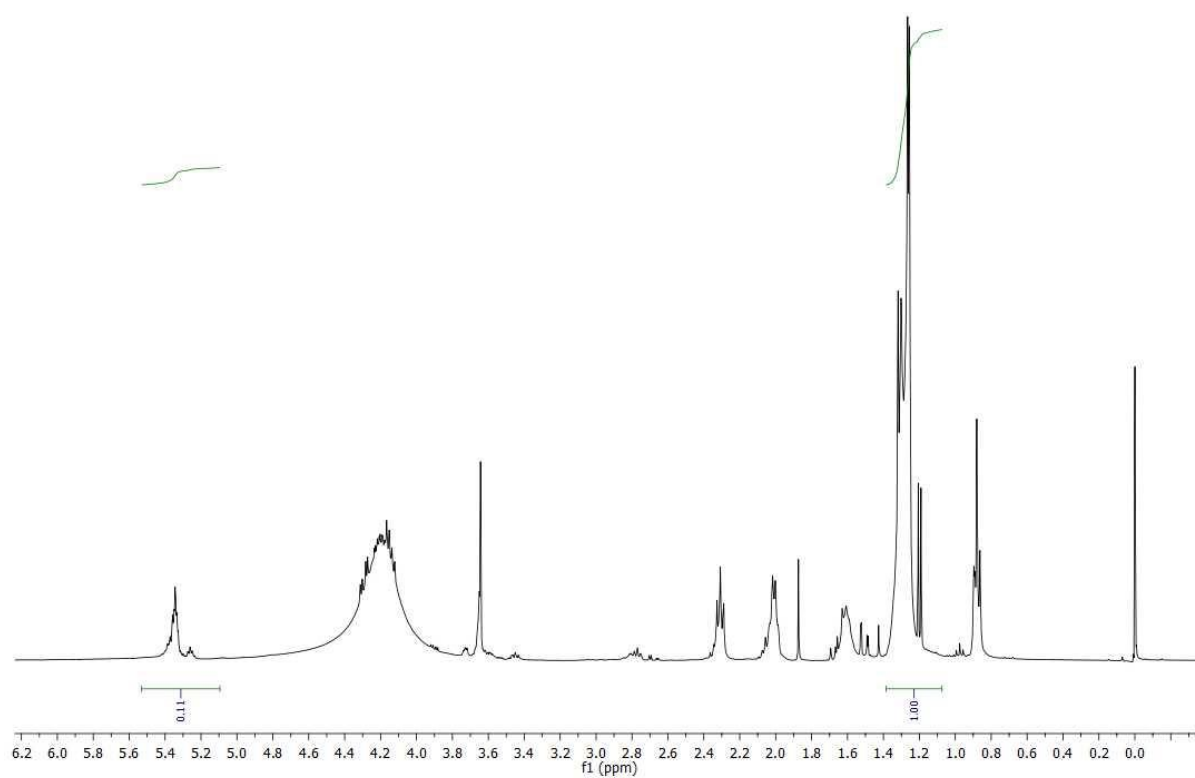


Figure S3. ^1H -NMR Riveroil TIS

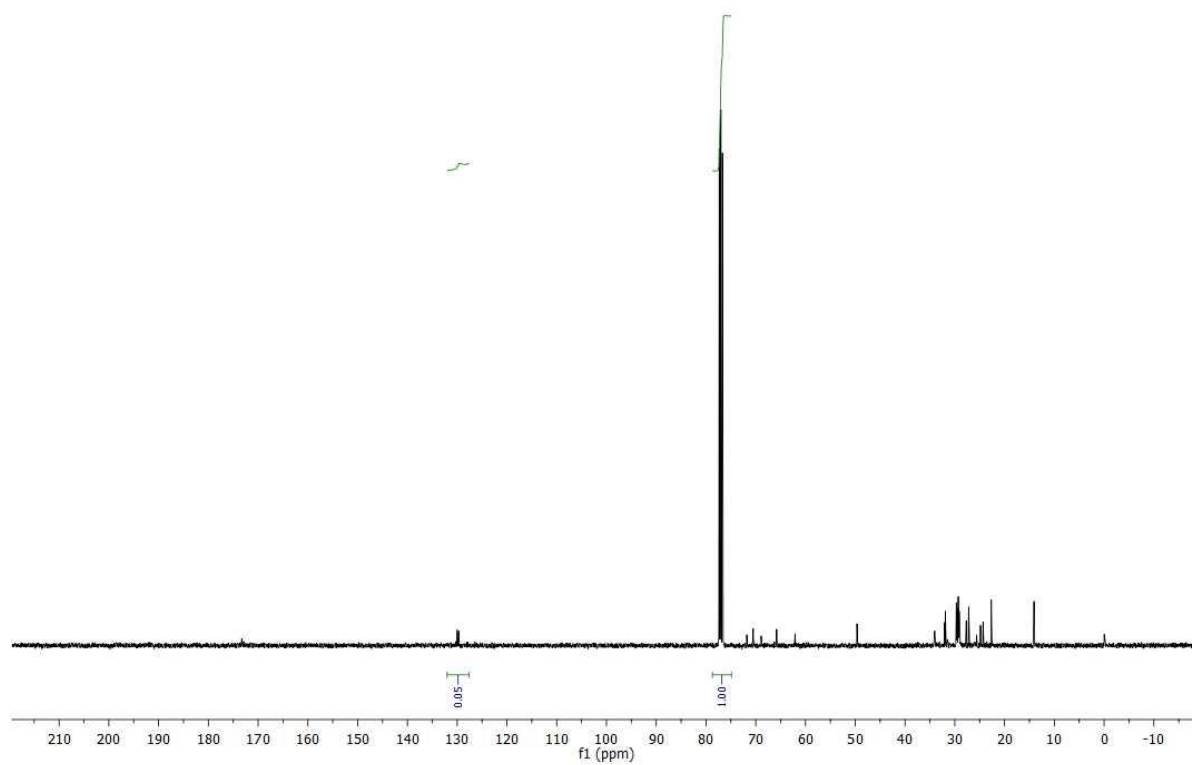


Figure S4. ^{13}C -NMR Riveroil TIS

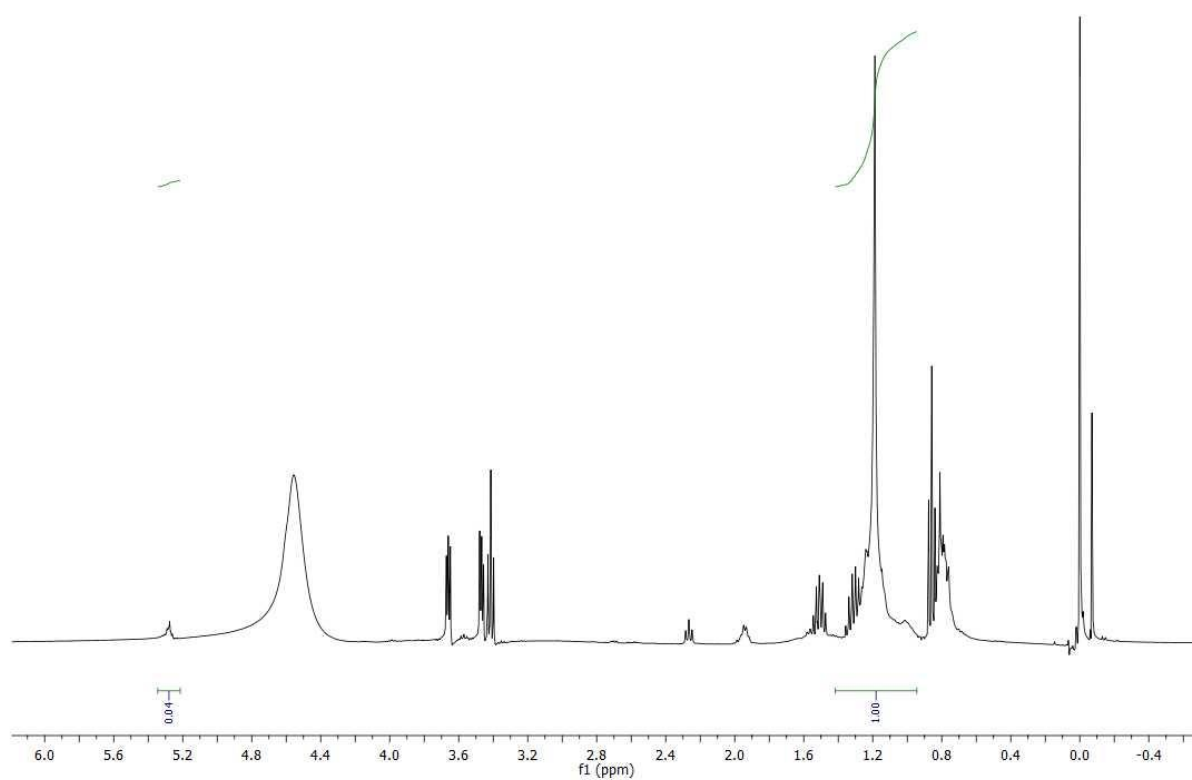


Figure S5. ^1H -NMR Truposist D

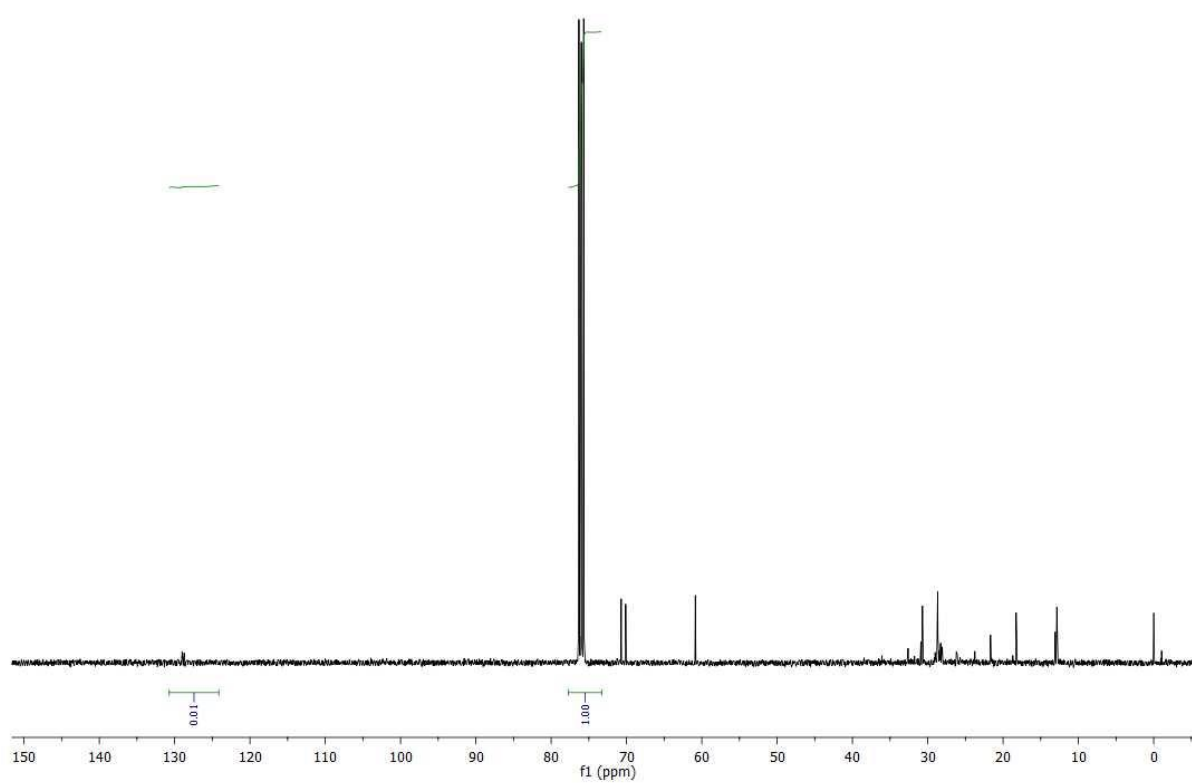


Figure S6. ^{13}C -NMR Truposist D

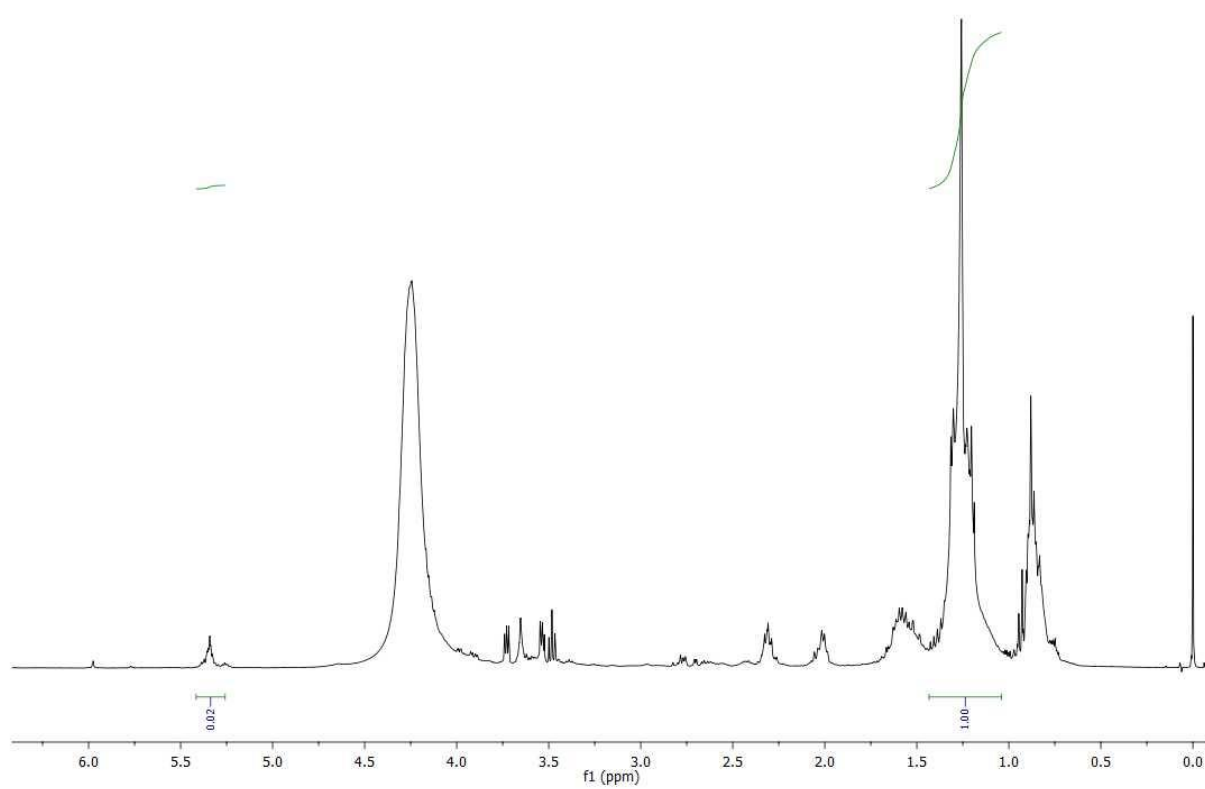


Figure S7. ^1H -NMR Lipsol MSW

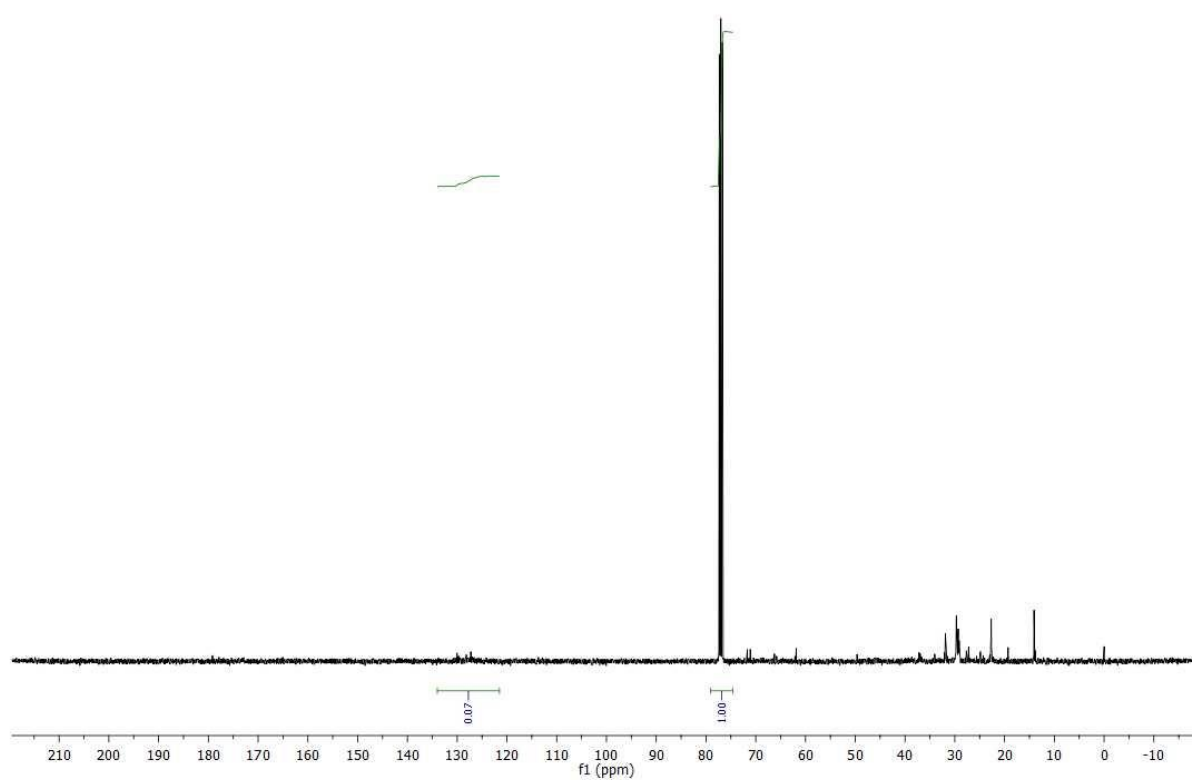


Figure S8. ^{13}C -NMR Lipsol MSW

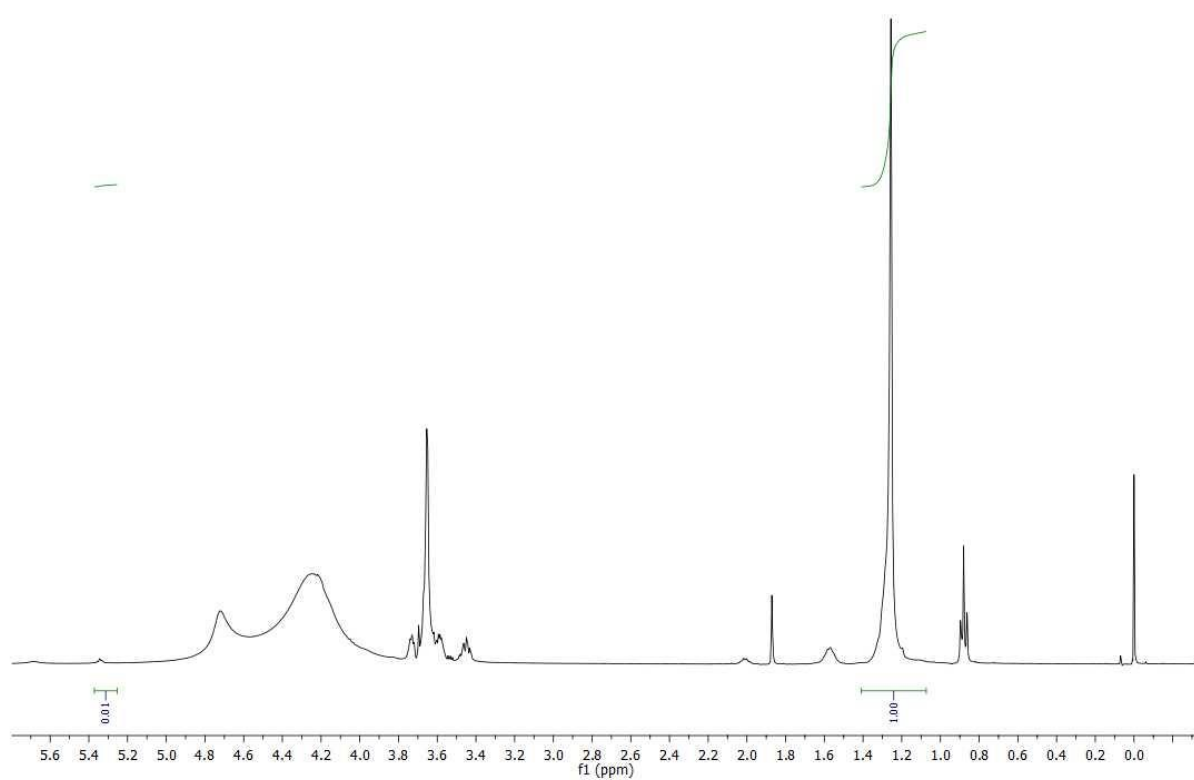


Figure S9. ^1H -NMR Riveroil LSW

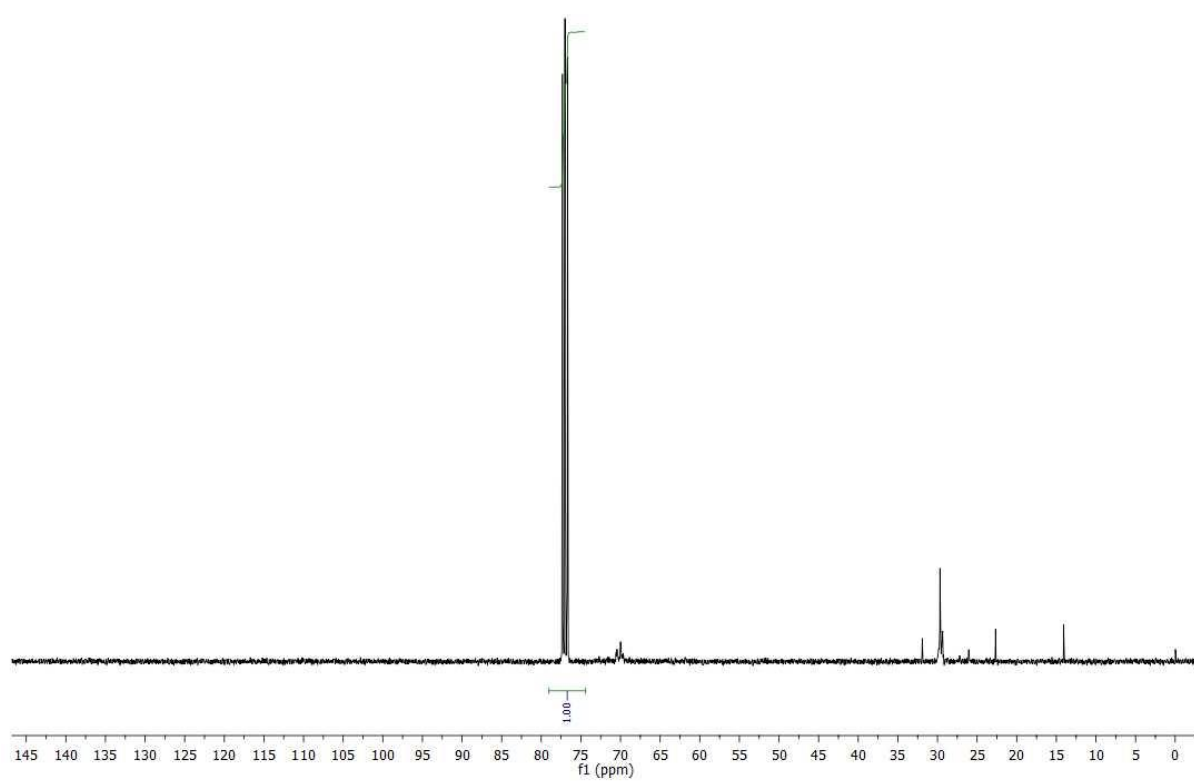


Figure S10. ^{13}C -NMR Riveroil LSW

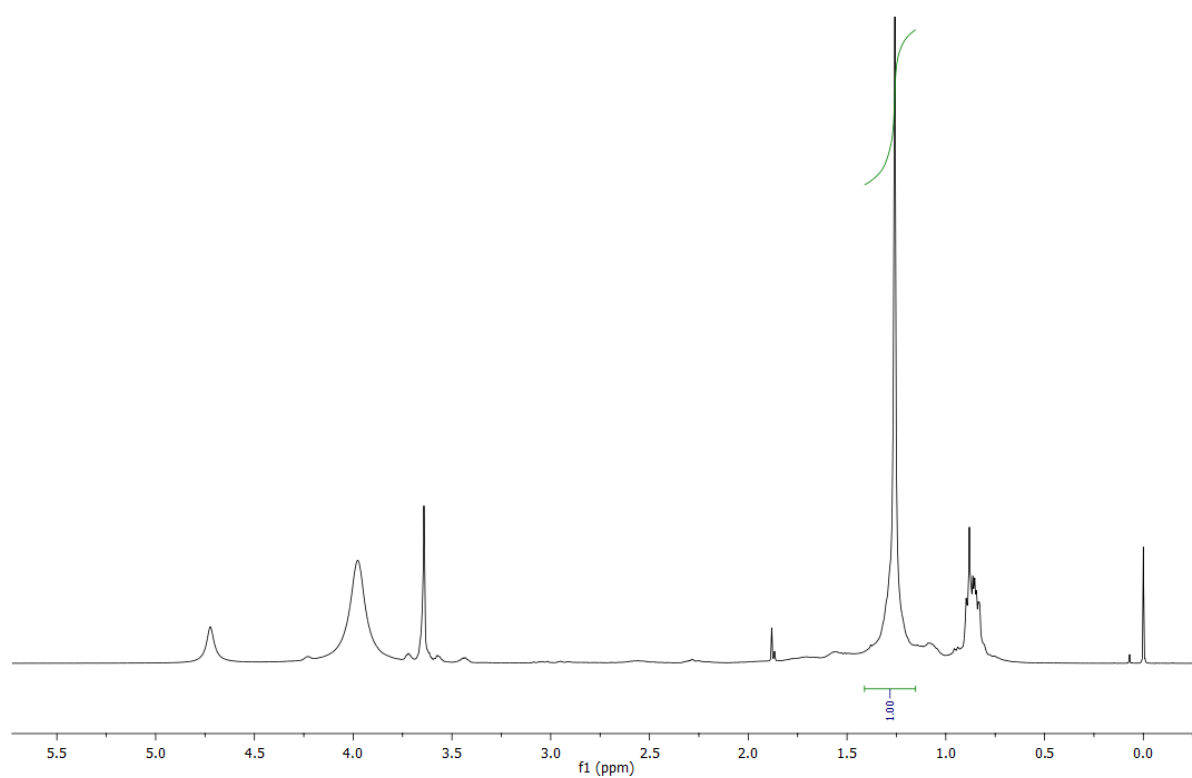


Figure S11. ^1H -NMR Riveroil GLH

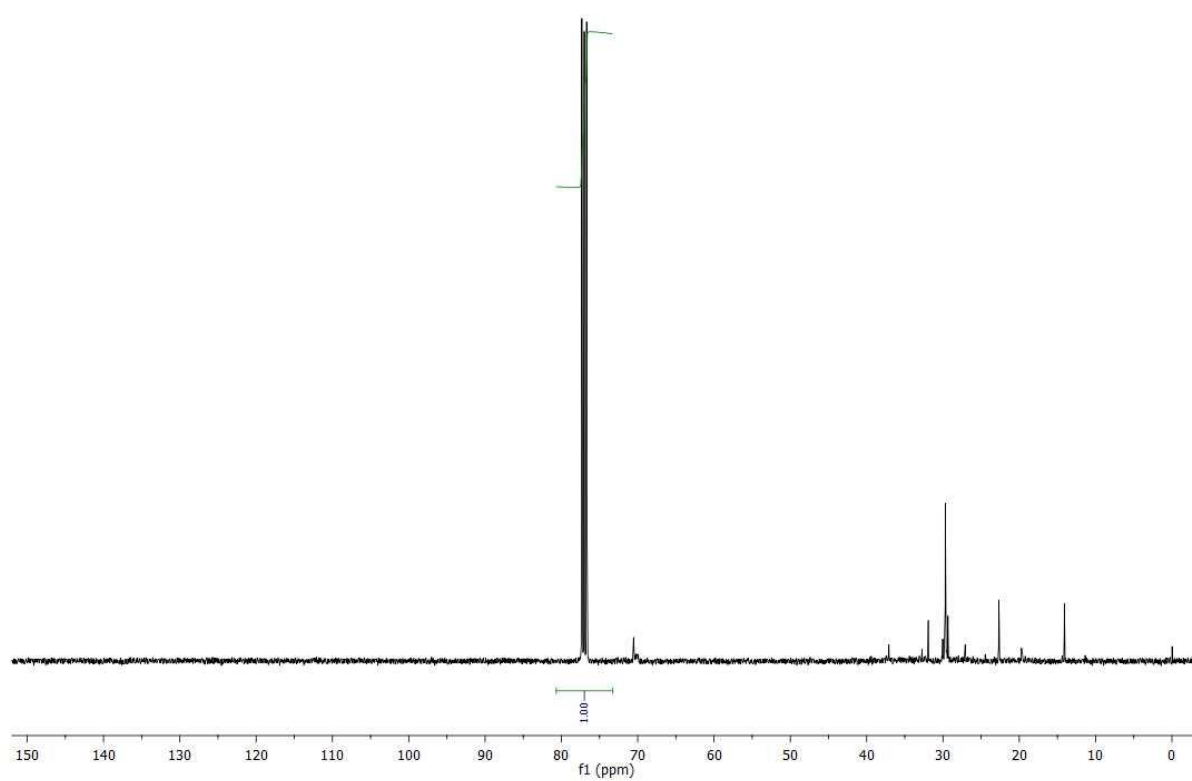


Figure S12. ^{13}C -NMR Riveroil GLH

Table S1. Complete data recorded for the antioxidant assay. The sum in the first column corresponds to the reaction period and to the time between the stopping/analysing.

Conditions of reaction		Antioxidants (special conditions)	Keoil SK 042	Riveroil TIS	Cr (VI) (mg/kg)
Time	temperature				
144h + 72h	rt	4,4'-methylenebis (2,6-di-tert-butylphenol)	X		1.1320
144h + 48h	rt	Hydroil		X	1.1300
144h + 48h	rt	Tetraethylenepentamine		X	0.8994
48h	50°C	Ascorbic acid		X	0.7679
120h	rt			X	0.7248
144h + 120h	rt	Ascorbic acid	X		0.6775
144h + 48h	rt	Ascorbic acid			0.6172
144h	rt	2,6-di-tert-butylphenol			0.6099
144h + 48h	rt	Tetraethylenepentamine	X		0.5916
48h	50°C		X		0.5799
144h	rt	Tocopherol			0.5759
120h	rt		X		0.5738
144h + 72h	rt	2,6-di-tert-butylphenol		X	0.5721
48h	50°C	Tara powder		X	0.5708
48h	50°C	TEMPO	X		0.5472
48h	50°C	TEMPO		X	0.5415
48h	50°C	Tara powder	X		0.5295
144h + 48h	rt	4,4'-thiobis(2-tert-butyl-5-methylphenol)		X	0.5294
48h	50°C	Tocopherol	X		0.5228
144h + 48h	rt	Tara powder			0.5128
144h + 48h	rt	TEMPO			0.5139
144h + 96h	rt			X	0.4636
144h + 72h	rt	4,4'-methylenebis (2,6-di-tert-butylphenol)			0.4718
144h + 48h	rt	4,4'-thiobis(2-tert-butyl-5-methylphenol)	X		0.4707
144h + 48h	rt	4,4'-thiobis(2-tert-butyl-5-methylphenol)			0.4589
144h + 48h	rt	4,4'-methylenebis (2,6-di-tert-butylphenol)		X	0.4547
144h + 72h	rt	Refined Hydroil	X		0.4105
48h	50°C	2,6-di-tert-butylphenol	X		0.4082
144h + 72h	rt	Tocopherol		X	0.3762
144h + 48h	rt	Tetraethylenepentamine			0.3177
144h + 96h	rt	(No chrome)		X	0.0783
144h + 72h	rt	Refined Hydroil			0.0739
144h + 48h	rt	Refined Hydroil (No chrome)			0.0390
144h + 96h	rt	(No chrome)	X		0.0335
144h + 48h	rt	Tara powder (No chrome)			0.0307
144h + 48h	rt	2,6-di-tert-butylphenol (No chrome)			0.0291
144h + 48h	rt	Tocopherol (No chrome)			0.0269

144h + 24h	rt	4,4'-methylenebis (2,6-di-tert-butylphenol) (No chrome)	0.0139
144h + 24h	rt	4,4'-thiobis(2-tert-butyl-5-methylphenol) (No chrome)	0.0134
144h + 24h	rt	Tetraethylenepentamine (No chrome)	0.0132
144h + 120h	rt	TEMPO (No chrome)	0.0086
144h + 120h	rt	Ascorbic acid (No chrome)	0.0061