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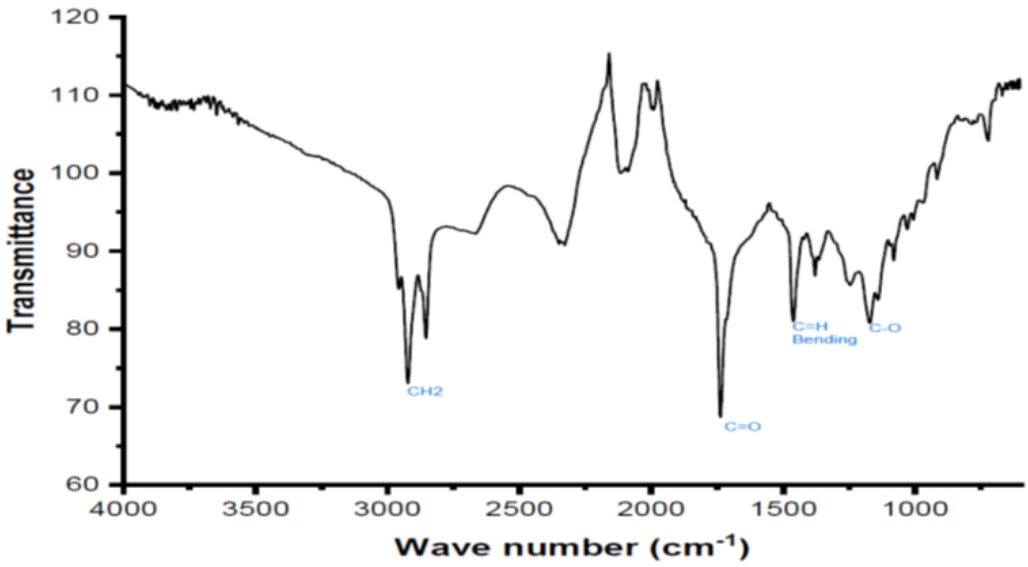
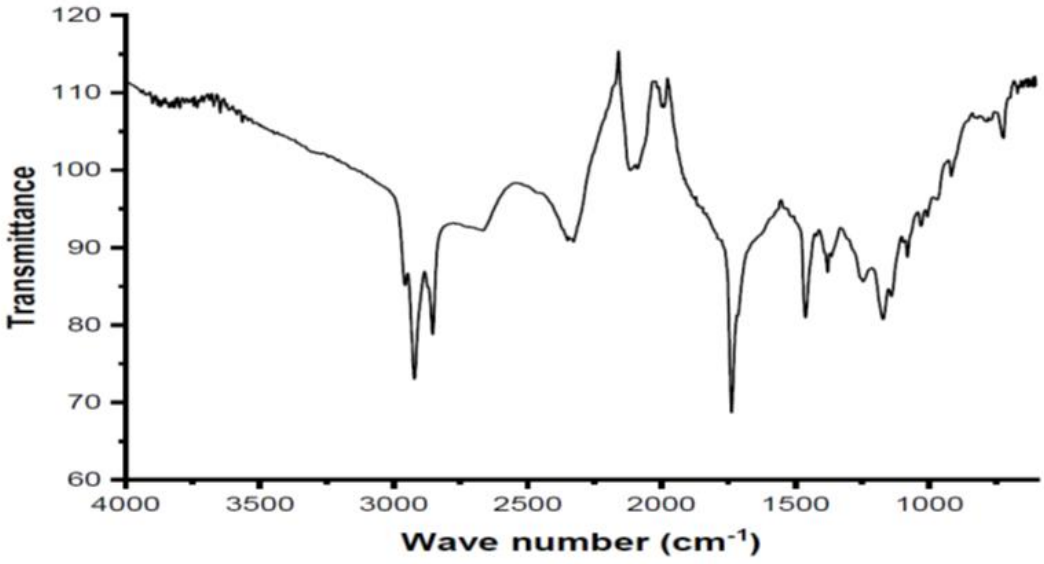
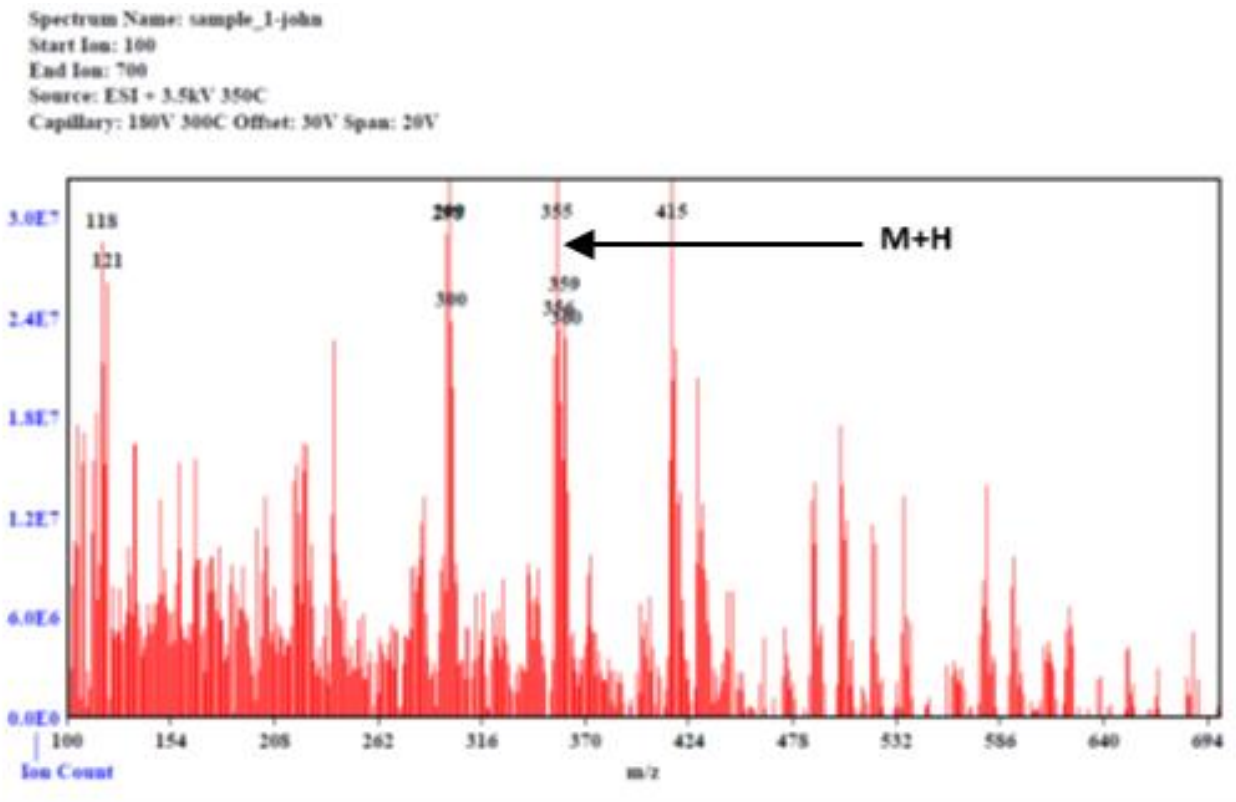


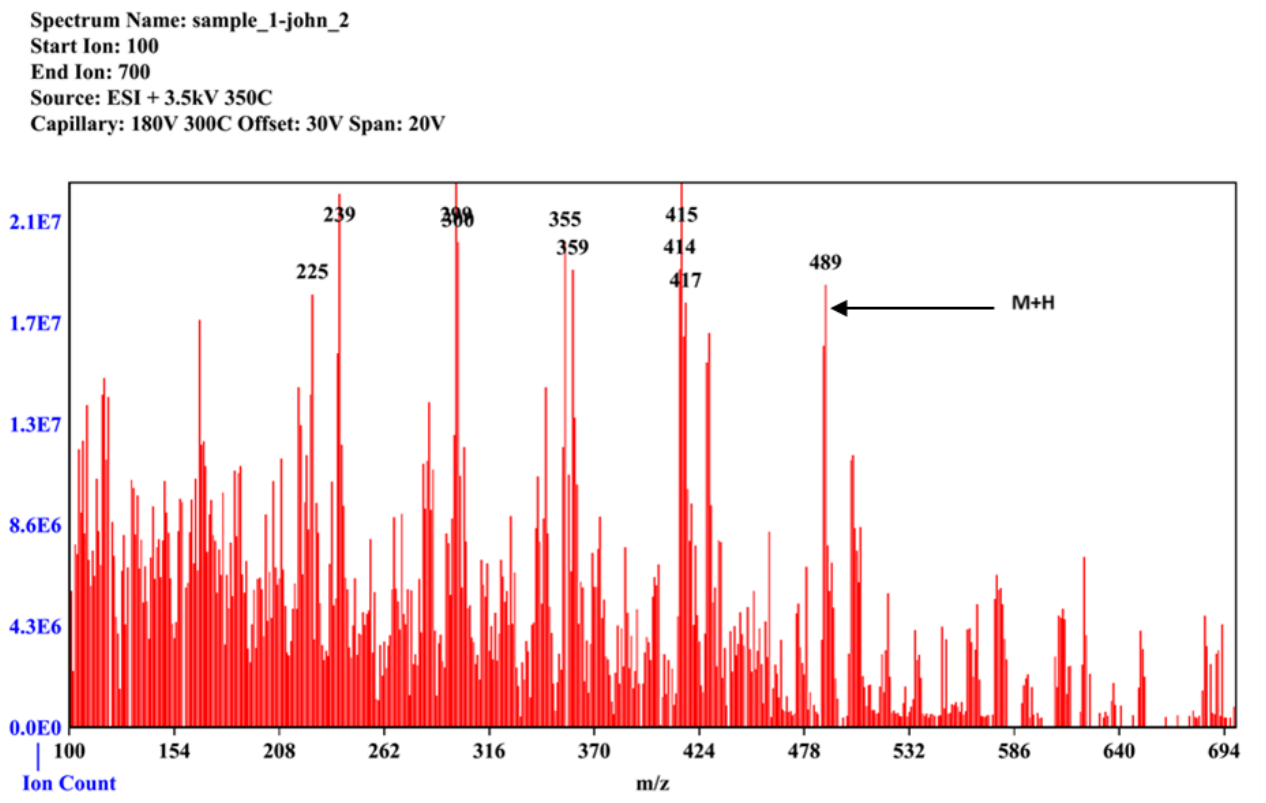
Supplementary figure 1: FTIR spectroscopy of CS1.



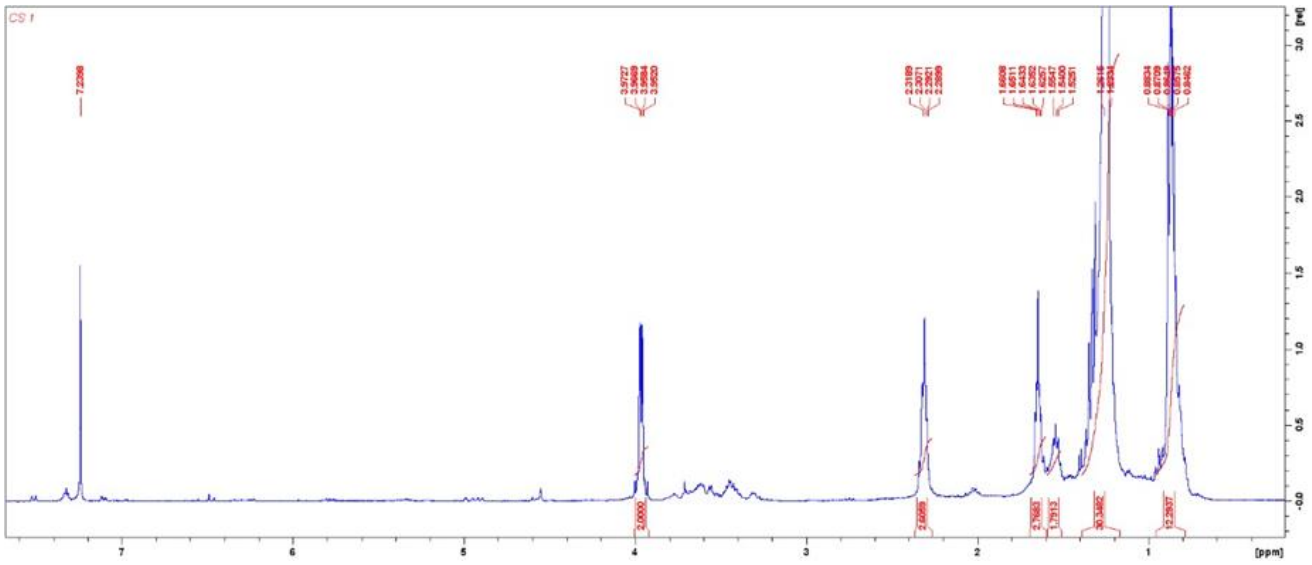
Supplementary figure 2: FTIR spectroscopy of CS2.



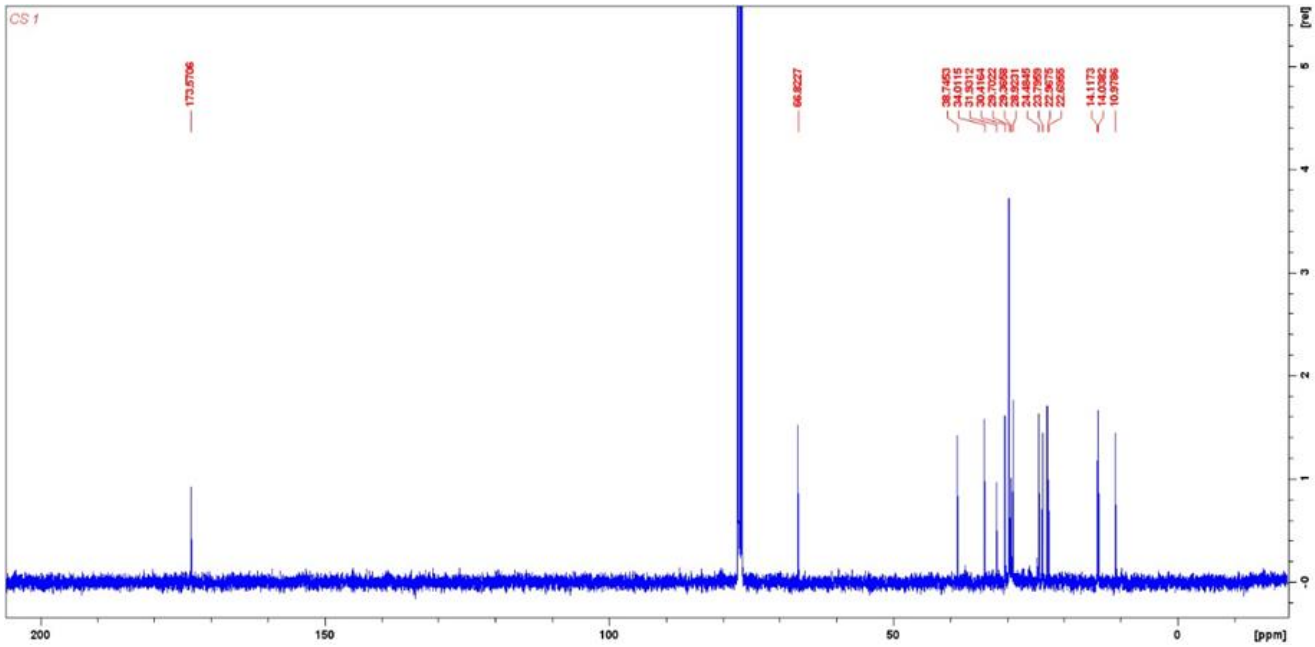
Supplementary figure 3: Mass spectrum of CS1.



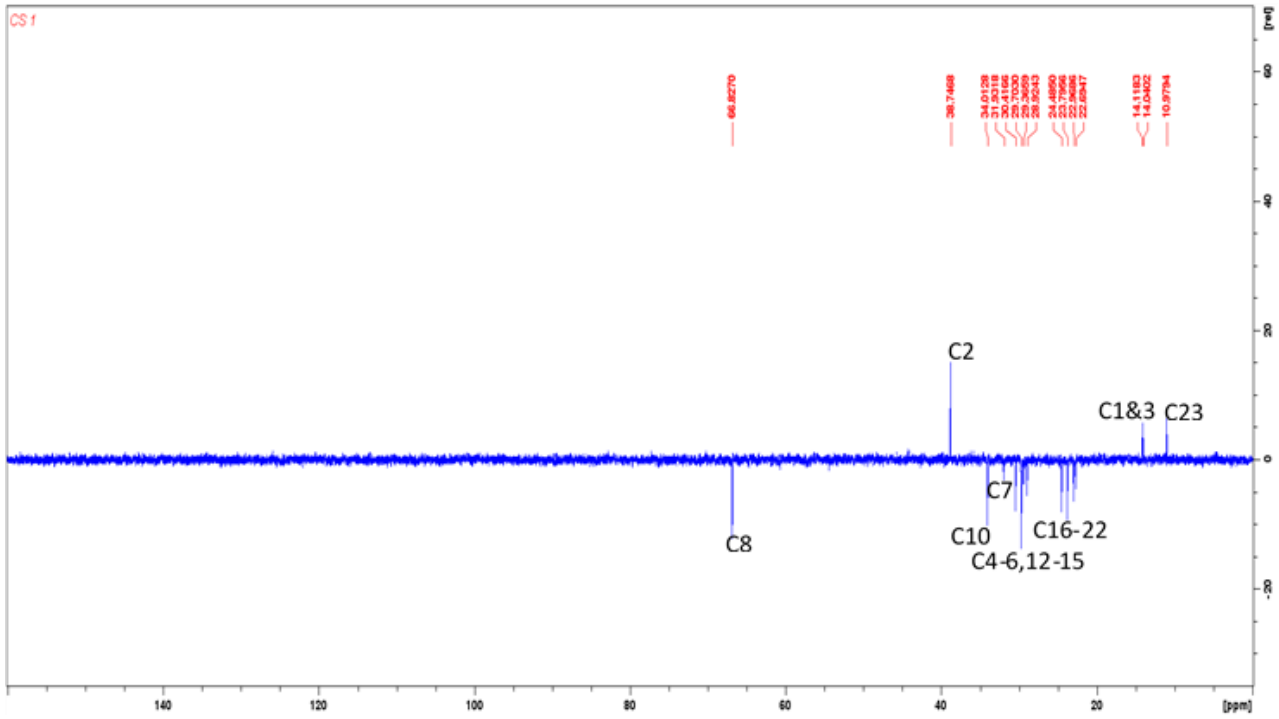
Supplementary figure 4: Mass spectrum of CS2.



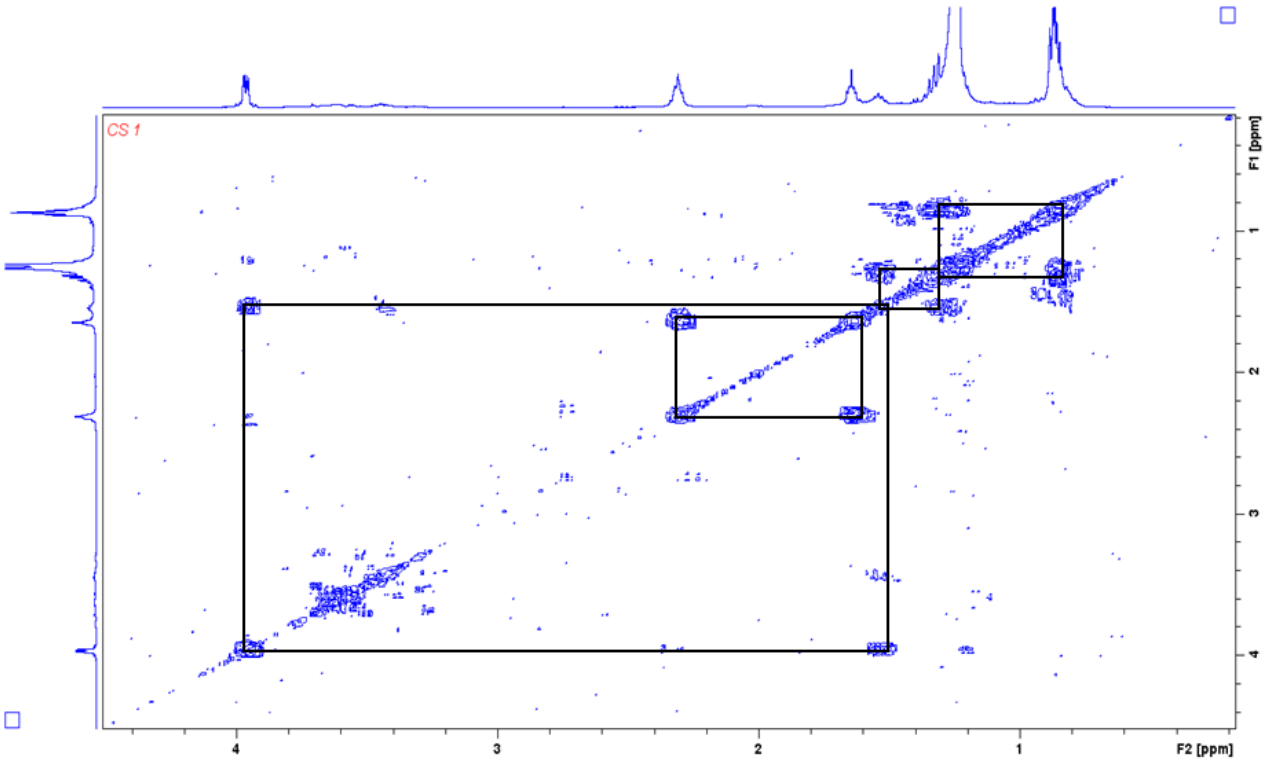
Supplementary figure 5: Proton (^{1}H) NMR spectrum of compound CS1.



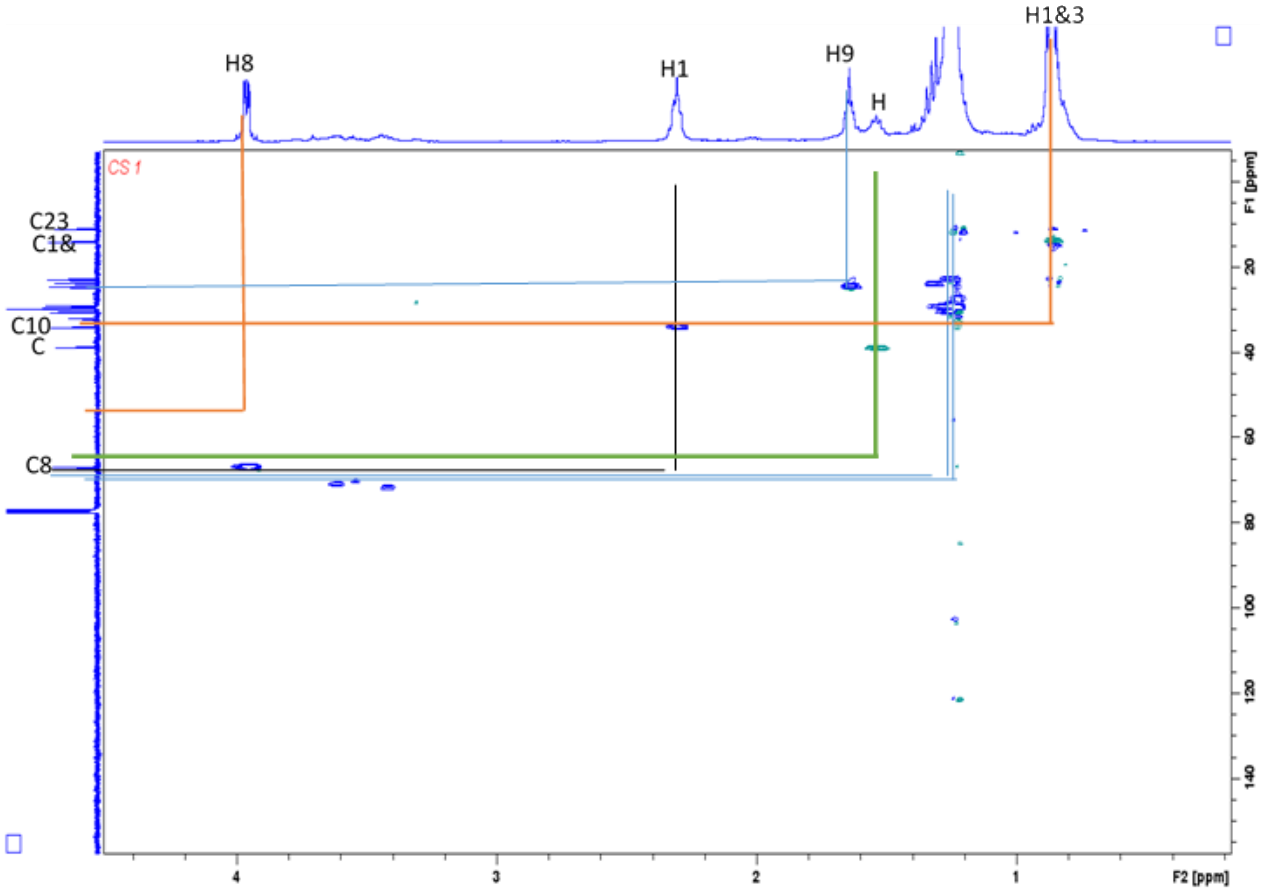
Supplementary figure 6: Carbon (^{13}C) NMR analysis of compound CS1.



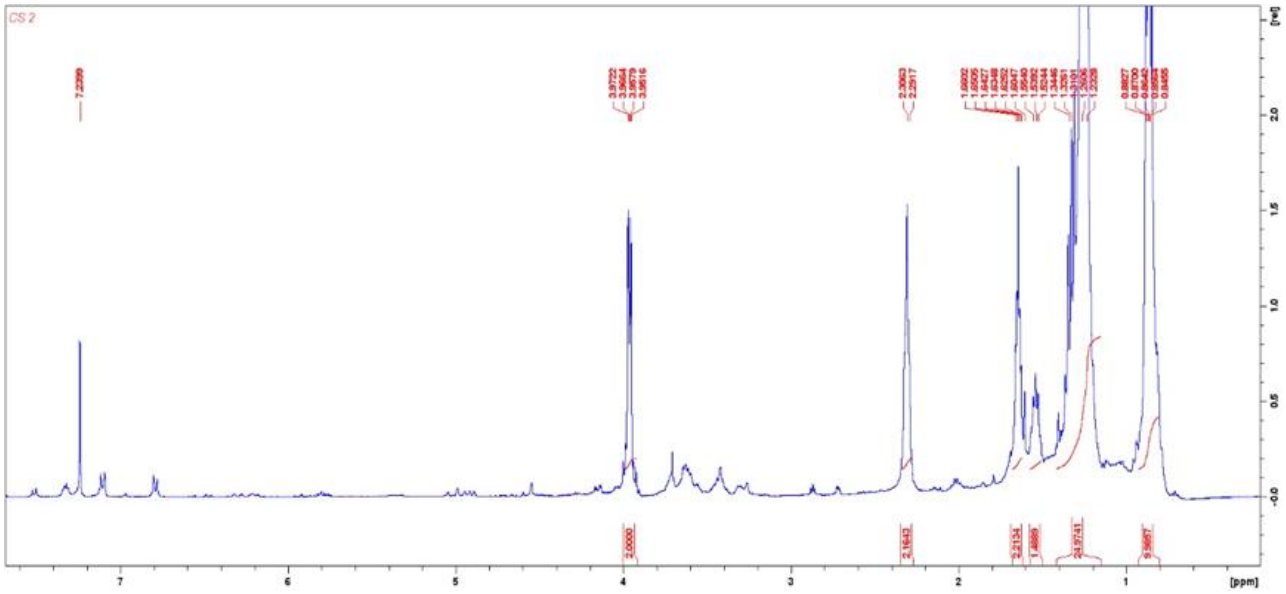
Supplementary figure 7: DEPT-135 spectrum of CS1.



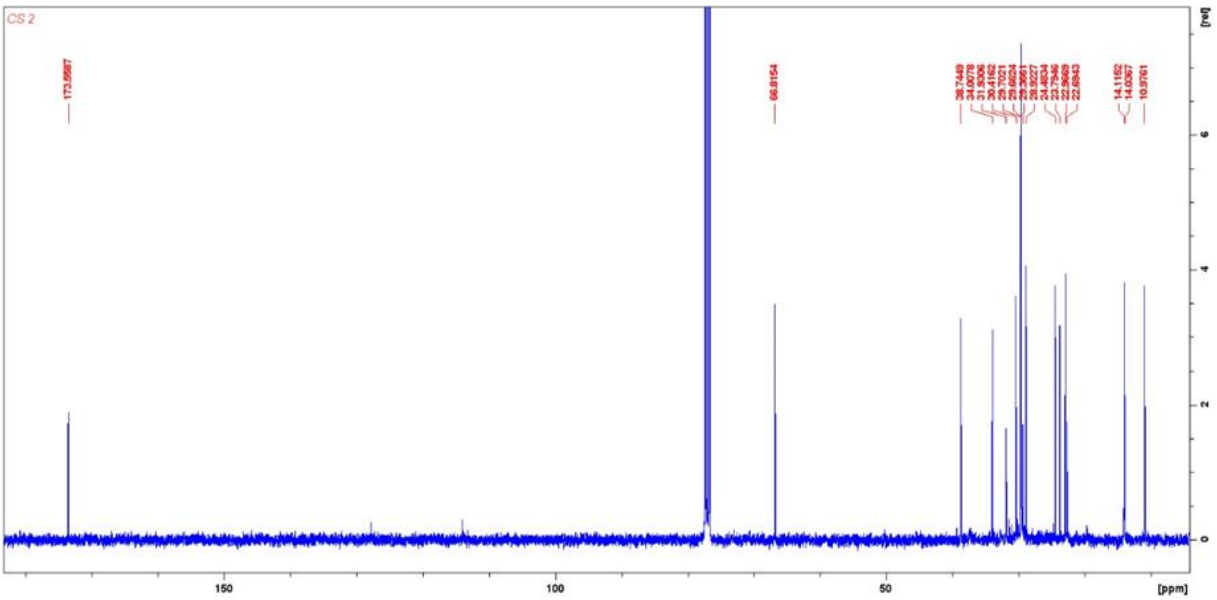
Supplementary figure 8: COSY spectrum of CS1.



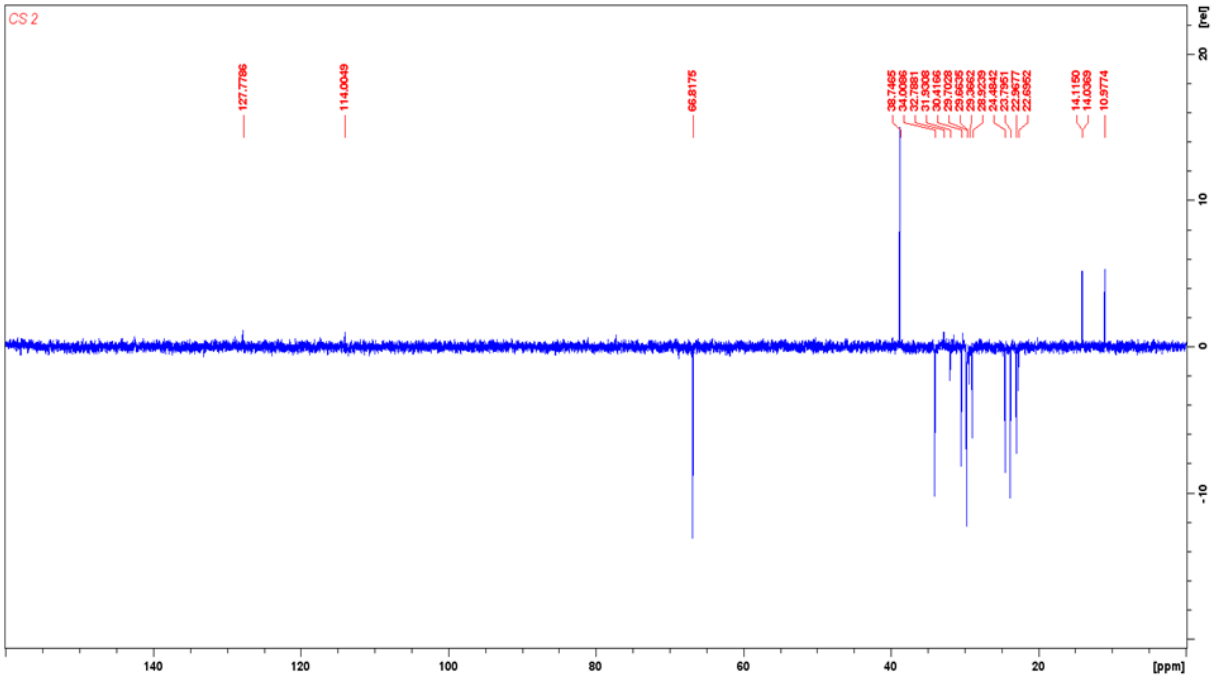
Supplementary figure 9: HSQC spectrum of CS1.



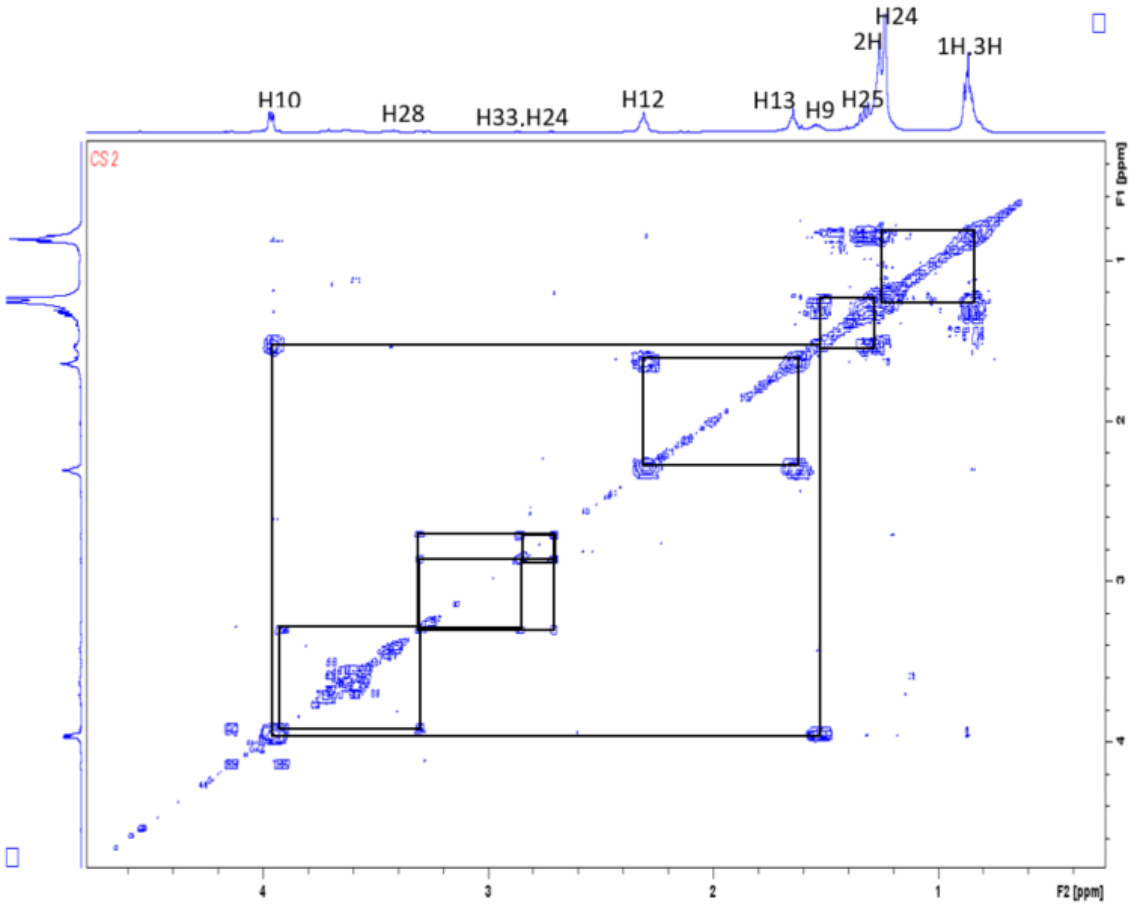
Supplementary figure 10: Proton (^{1}H) NMR spectrum of compound CS2.



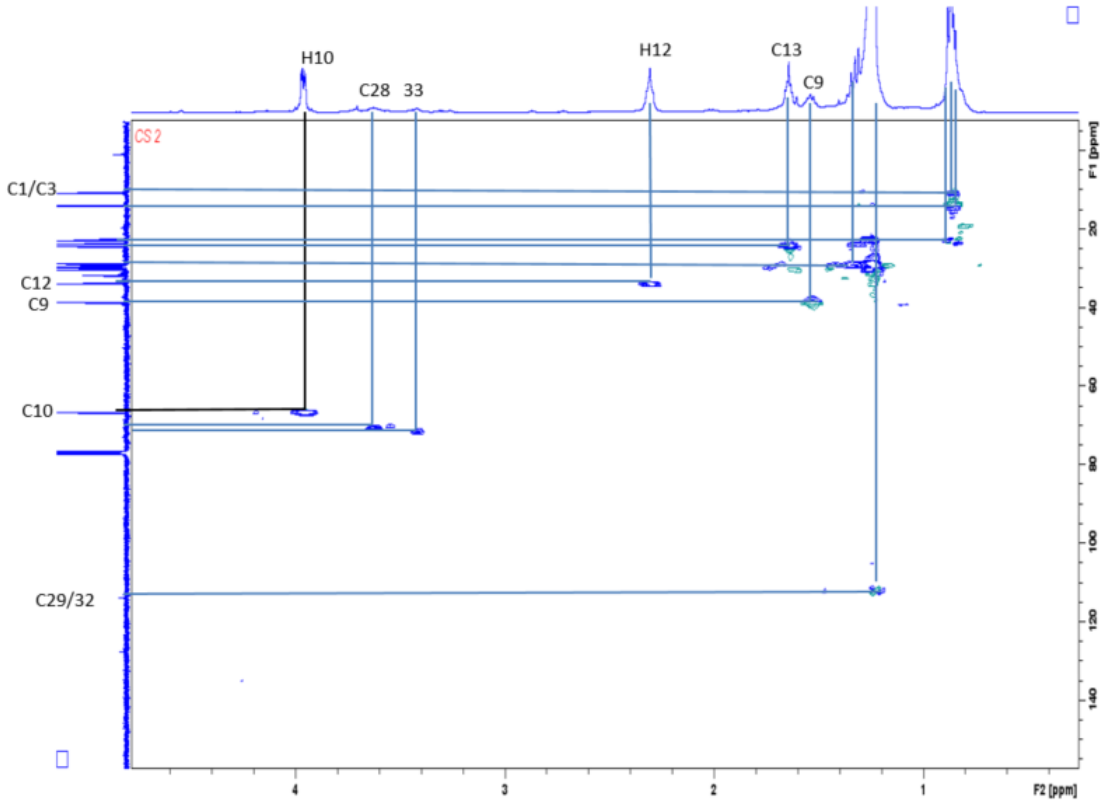
Supplementary figure 11: Carbon (^{13}C) NMR spectrum of compound CS2.



Supplementary figure 12: DEPT-135 spectrum of CS2.

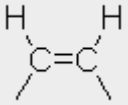


Supplementary figure 13: COSY spectrum of CS2.



Supplementary figure 14: HSQC spectrum of CS2.

Supplementary table 1: FTIR analysis of compounds CS1 and CS2

Absorption wavelength (cm^{-1})	Literature wavelength (cm^{-1})	Intensity	Functional group	Compound type
725.0	715-725	m-w		Alkanes and alkyls
1220.0	1160-1210	s-vs	C-O	Aliphatic esters O=C-O-C
				With two bands, one stronger than the other
1465.0	1450-1470	s	C-H (bending)	Alkyls
1748.0	1750-1735	vs	C=O	Carbonyl (ester C=O stretch)
				Membrane lipid, fatty acid
2927.0	2850-3000	s	C-H stretch	Alkyls

Intensity key: vw = very weak, w = weak, m = medium, s = strong, vs = very strong

Supplementary table 2: Proton (^{1}H) NMR analysis of compound CS1

Carbon no.	$\delta^{1}H$ (ppm)	$\delta^{1}H$ C (ppm) literature	Functional group	Compound type
1	1.30	0.8-1.6	$-CH_2-CH_2-$	Aliphatic alkane
2	1.70		CH_2-CH_2-	Aliphatic alkane
3	1.50	0.8-1.6	CH_3-CH_2-	Aliphatic alkane
4	0.90	0.8-1.6	CH_2-CH_2-	Aliphatic alkane
8	3.90	3.5-4.8	$-OCH_2$	Alkyl of ester
10	2.30	2.0-3.0	$O=C-CH_2$	Proton/Alkyl adjacent to carbonyl

Supplementary table 3: Carbon (^{13}C) NMR analysis of compound CS1

Carbon no.	δ13C (ppm)	δ13C (ppm) literature	Functional group	Compound type
1	10.97	10-40	CH_3	Aliphatic hydrocarbon
2	14.03-14.11	10-40	CH_2	Aliphatic hydrocarbon
3	22-25	10-40	CH_3	Aliphatic hydrocarbon
4	30	10-40	CH_2	Aliphatic hydrocarbon
5	32	10-40	CH_2	Aliphatic hydrocarbon
6	35	10-40	CH_2	Aliphatic hydrocarbon
7	36	10-40	CH_2	Aliphatic hydrocarbon
8	40	37.0–60.0	CH_2	Methine (CH) group in alkyl fragments; CH and CH_2 alkyl groups of naphthenic fragments, adjacent to CH group
9	68	62-69	CH_2O	Glyceryl ester
10	79	–	C-C=O	Carbon next to the carbonyl of ester
11	173.57	180–163	C=O	Ester, carboxylic acid

Supplementary table 4: Proton (^{1}H) NMR analysis of compound CS2

Carbon no.	δ^1H (ppm)	δ^1H C (ppm) literature	Functional group	Compound type
1	1.21	0.8–1.6	$-CH_3$	Aliphatic alkane
2	4.20	3.5–4.8	$-OCH_2$	Alkyl of ester
3	–	–	C=O	C=O of ester (no proton)
4	2.88	2.0–3.0	CH	Proton next to C=O
5	7.66	–	=CH	Cyclic alkene
6	7.29	4.0–7.3	HC=CH	Alkene
7	6.64	4.0–7.3	HC=CH	Alkene
8	5.80	–	=C-CH	Proton next to alkene
9	2.68	2.0–3.0	-CH	Proton next to C=O/alkene
10	1.25	0.8–1.6	$-CH_2$	Aliphatic alkane
11	1.25	0.8–1.6	$-CH_2$	Aliphatic alkane
12	1.25	0.8–1.6	$-CH_2-CH_2$	Aliphatic alkane
13	1.26	0.8–1.6	$-CH_2-CH_2$	Aliphatic alkane
14	1.26	0.8–1.6	$-CH_2-CH_2$	Aliphatic alkane
15	1.25	0.8–1.6	$-CH_2-CH_2$	Aliphatic alkane
16	1.25	0.8–1.6	$-CH_2-CH_2$	Aliphatic alkane
17	1.19	0.8–1.6	$-CH_2-CH$	Aliphatic alkane
18	1.50	1.2–1.7	$CH_2-CH-CH_2$	Cyclic alkane
19	1.63,1.38	1.2–1.7	$CH-CH_2-CH_2$	Cyclic alkane
20	1.63,1.38	1.2–1.7	CH_2-CH_2-CH	Cyclic alkane
21	1.24	1.2–1.7	$CH-CH_2$	Cyclic alkane
22	1.45,1.20	1.2–1.7	$CH-CH_2-CH$	Cyclic alkane
23	1.54	1.2–1.7	$CH_2-CH-CH_3$	Cyclic alkane
24	0.86	–	$-CH-CH_3$	Alkyl attached to a non-aromatic cyclic ring
25	1.63,1.38	1.2–1.7	$CH_2-CH-CH_2$	Cyclic alkane
26	1.63,1.38	1.2–1.7	$CH-CH_2-CH_2$	Cyclic alkane
27	1.24	1.2–1.7	$CH-CH_2$	Cyclic alkane
28	1.45,1.20	1.2–1.7	$CH-CH_2-CH$	Cyclic alkane

Supplementary table 5: Carbon (^{13}C) NMR analysis of compound CS2

Carbon no.	δ13C (ppm)	δ13C (ppm) literature	Functional group	Compound type
1	10.98	10–40	$-CH_3$	Aliphatic hydrocarbon
2	14.04	10–40	-CH-	Aliphatic hydrocarbon
3	14.11	10–40	$-CH_3$	Aliphatic hydrocarbon
4	22.69	10–40	$-CH_2$	Aliphatic hydrocarbon
5	22.96	10–40	$-CH_2$	Aliphatic hydrocarbon
6	23.79	10–40	$-CH_2$	Aliphatic hydrocarbon
7	24.48	10–40	$-CH_2$	Aliphatic hydrocarbon
8	66.81	62–69	$-OCH_2-$	Ester
9	173.57	180–163	-OCO-	Ester
10			$-CH_3COO-$	CH_3 attached to the carbon of ester
11	28.92	10–40	CH_2	Aliphatic hydrocarbon
12	29.36	10–40	CH_2	Aliphatic hydrocarbon
13	29.66	10–40	CH_2	Aliphatic hydrocarbon
14	29.70	10–40	CH_2	Aliphatic hydrocarbon
15	30.41	10–40	CH_2	Aliphatic hydrocarbon
16	31.93	10–40	CH_2	Aliphatic hydrocarbon
17	34.00	10–40	CH_2	Aliphatic hydrocarbon
18	38.74	10–40	CH_2	Aliphatic hydrocarbon
19		10–40	CH_2	Aliphatic hydrocarbon
20		10–40	CH_2	Aliphatic hydrocarbon
21		10–40	CH_2	Aliphatic hydrocarbon
22		10–40	CH_2	Aliphatic hydrocarbon
23		10–40	$-CH_2$	Aliphatic hydrocarbon
24		10–40	-CH-	Cyclic alkane
25		10–40	$-CH_2$	Cyclic alkane
26		10–40	$-CH_2$	Cyclic alkane
27		10–40	$-CH_2$	Cyclic alkane
28		20–50	-CH-	Cyclic alkane
29		20–50	-CH-	Cyclic alkane
30	114.03	80–150	=CH	Cyclic alkene
31	127.58	80–150	=CH	Cyclic alkene
32	127.58	80–150	=CH	Cyclic alkene
33	127.58	80–150	=CH	Cyclic alkene