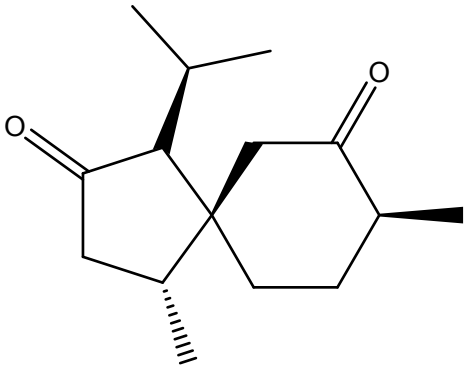
Table S1: Voucher specimen numbers of collected plant material submitted at KASH Herbarium, Centre for Biodiversity and Taxonomy, University of Kashmir, India

S. No.	Sample collection site	Vocher No.
01	Kawoosa	2438
02	Najan	2719
03	Palhalan Pattan	2720
04	Singpore Ganastan	2721
05	Yarikha Tangmarg	2722
06	Kakpora Pulwama	2723
07	Aarath Budgam	3071
08	Soibugh Budgam	3072
09	Wadwan (cultivated)	3073
10	Tuli Rajouri	3074
11	Gotapora	3075
12	IIIM Srinagar	3076
13	Mattan Anantnag	3077
14	Zabigul Beerwah	3078

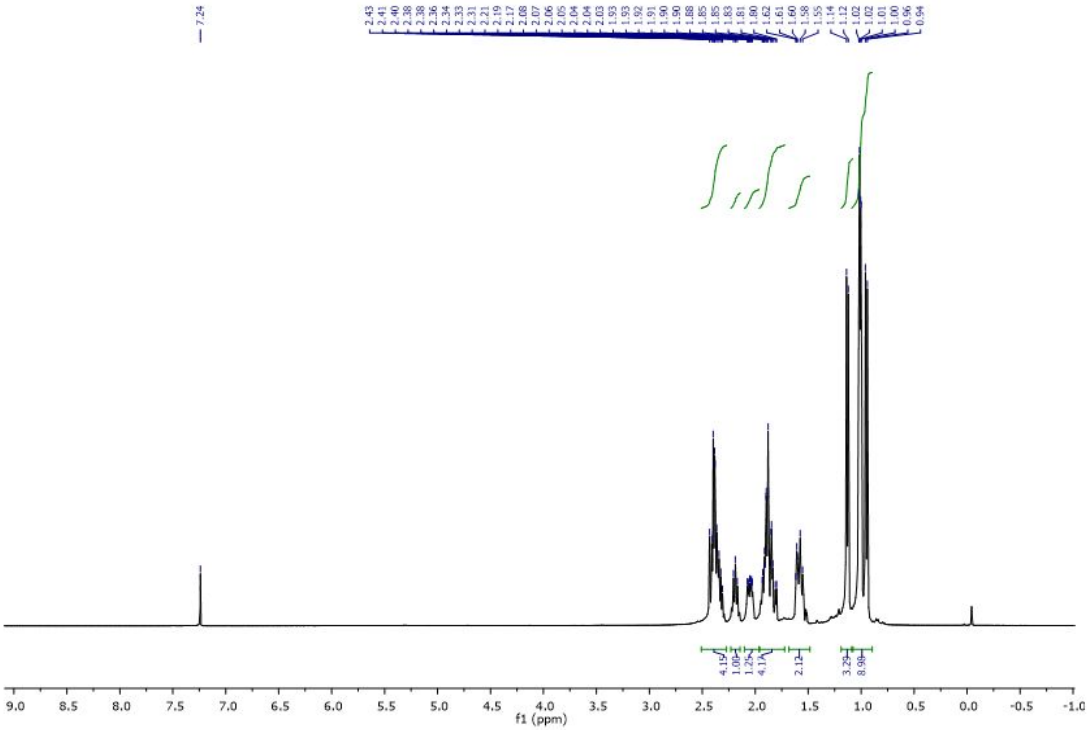
Compound 1 (ACS01): Isoacorone

IUPAC Name: (1S, 8S)-1-Isopropyl-4,8-dimethylspiro [4.5] decan-2,7-dione

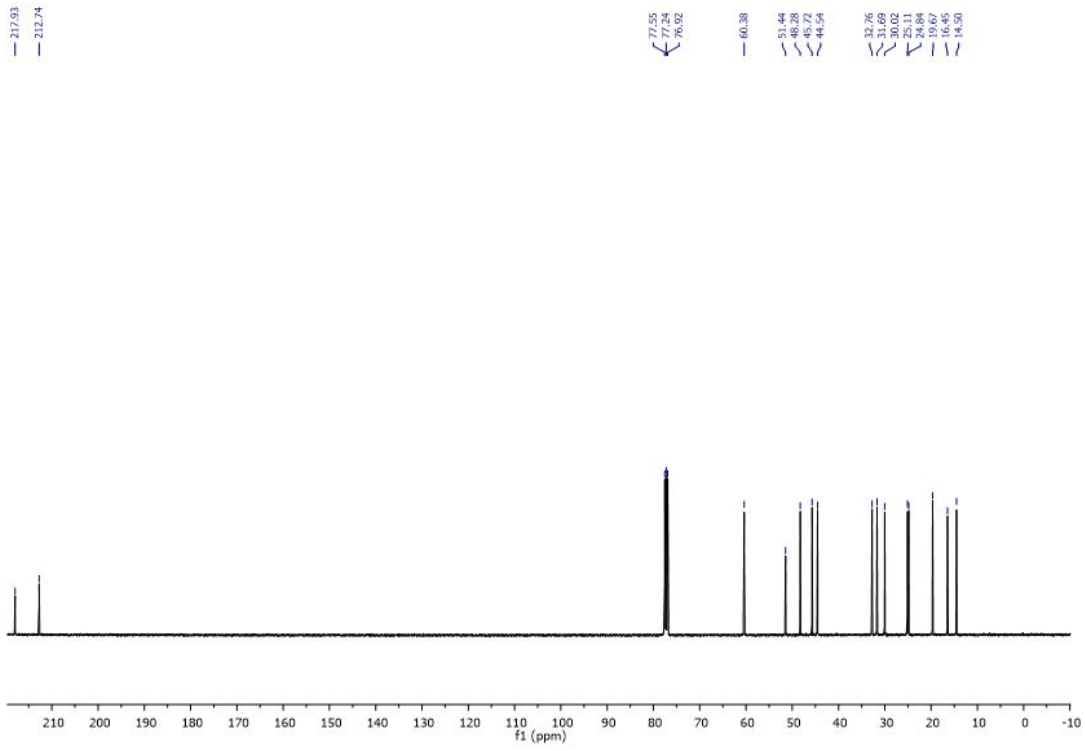


Isoacorone (ACSO1)

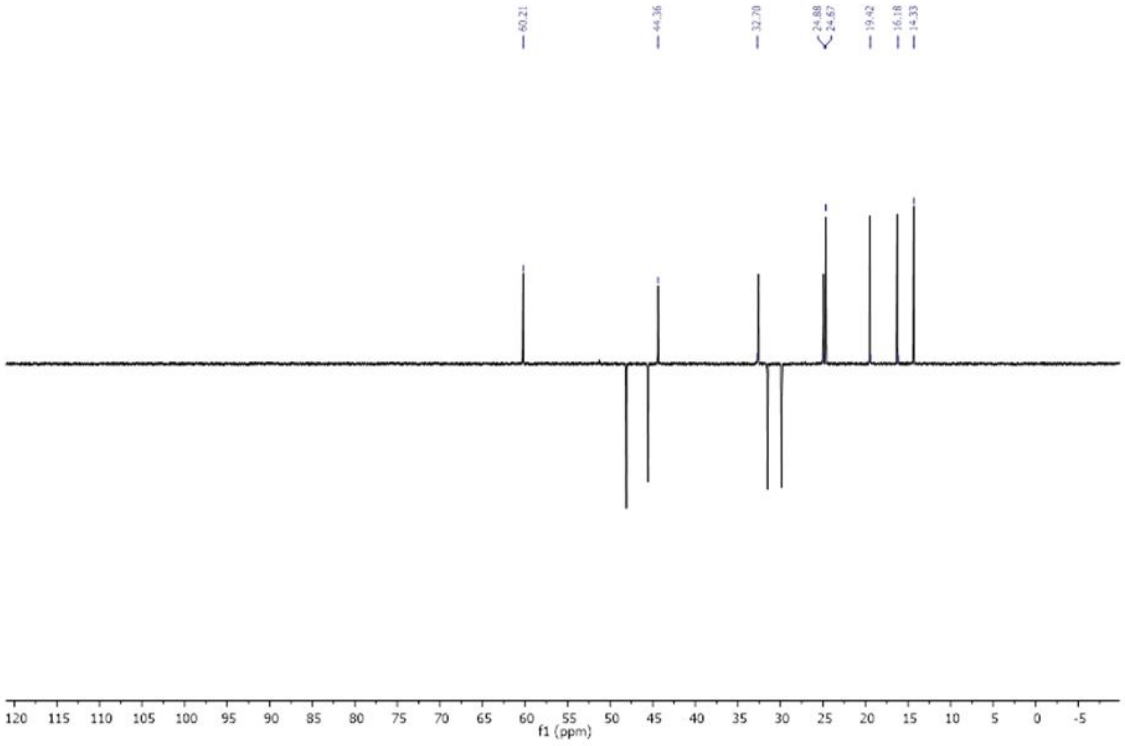
Chemical formula	**:**	$C_{15}H_{24}O_2$
Exact mass	**:**	236.18
Molecular weight	**:**	236.35 g/m
Melting point	**:**	96-97 ^{o}C
Physical state	**:**	Crystals
Specific rotation	**:**	-00.003 to -00.006
M/z	**:**	236.18 (100%), 237.18 (16.6%), 238.18 (1.6%)
Elemental analysis	**:**	C: 76.23, H: 10.24, O: 13.54



^{1}H NMR spectrum of Isoacorone



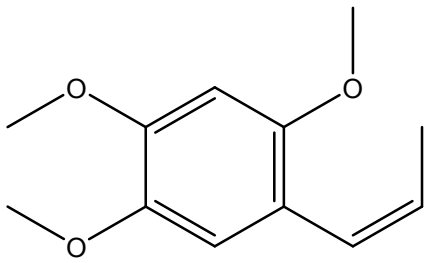
^{13}C NMR spectrum of Isoacorone



DEPT spectrum of Isoacorone

Compound 2 (ACS02): Cis-asarone (β- asarone)

IUPAC Name : 1, 2, 4 trimethoxy -5-(prop -1-en-1-yl) benzene



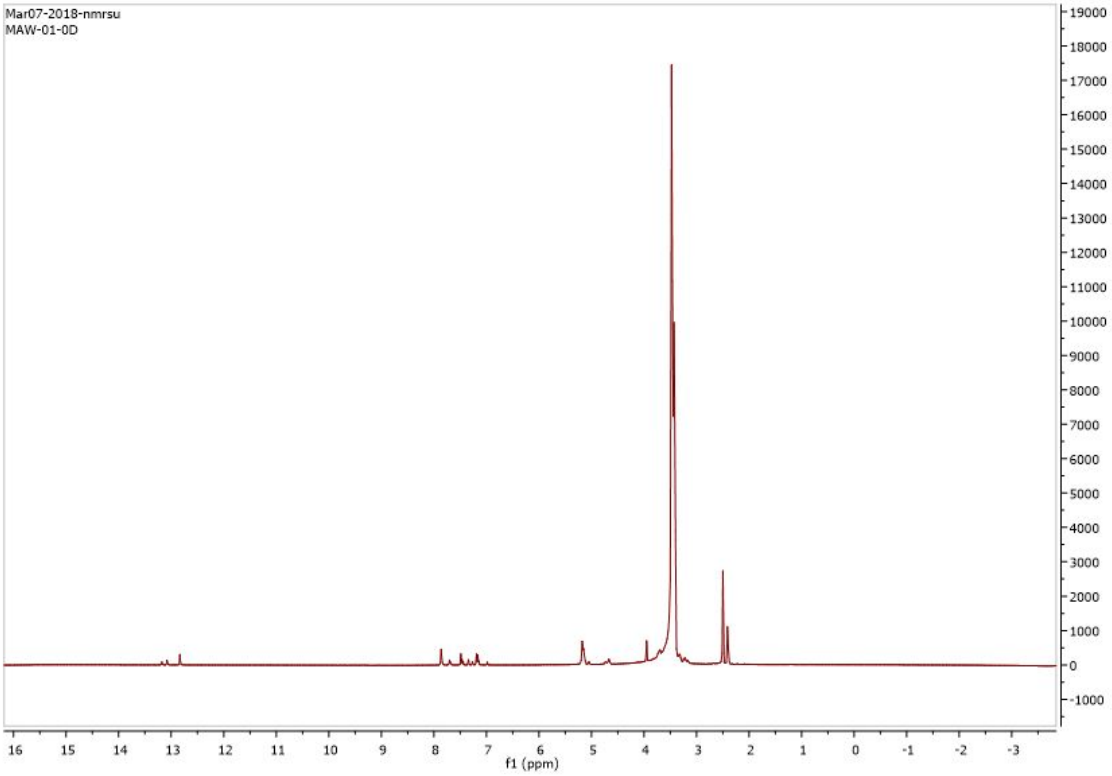
Beta-asarone (ACSO2)

Molecular Formula : $C_{12}H_{16}O_3$

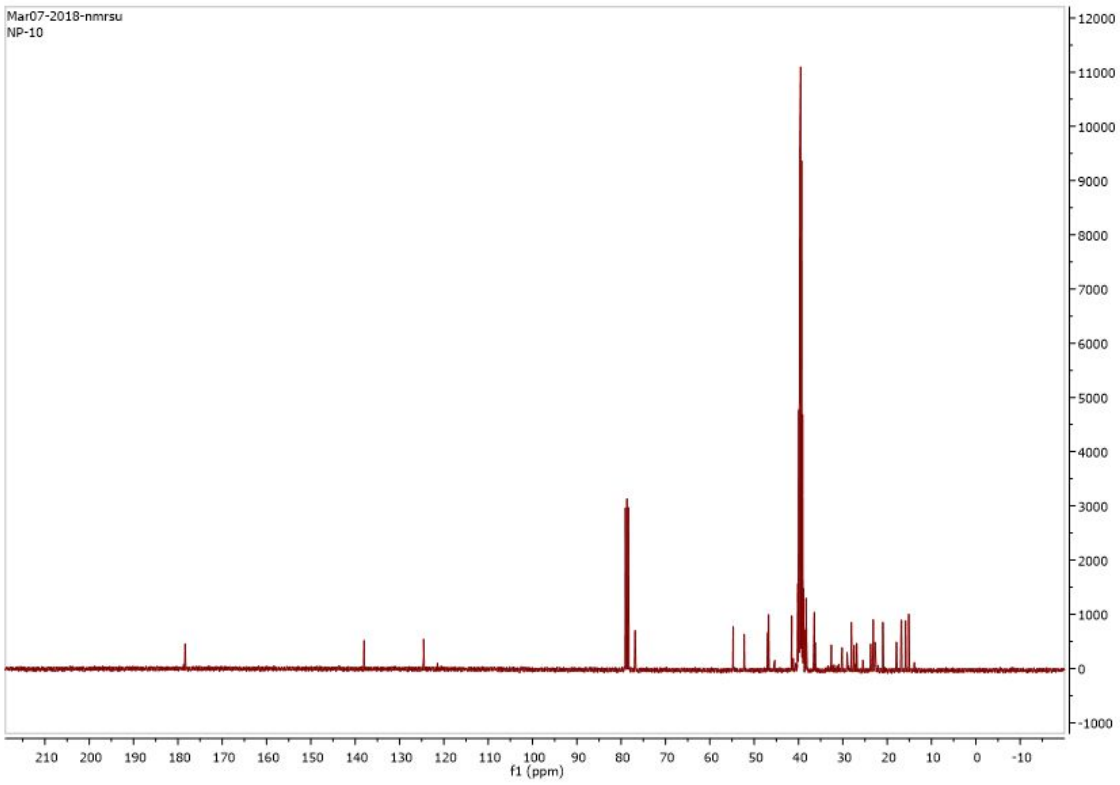
Molecular weight : 208.257 g/m

Colour : Yellowish oily liquid

Melting point : 62.00 to 63.00 °C.



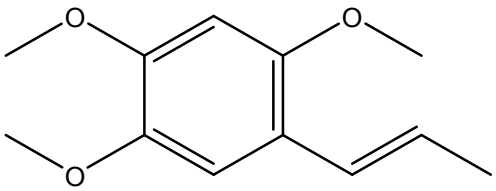
^{1}H NMR spectrum of β-Asarone



^{13}C NMR spectrum of Beta asarone

Compound 3 (ACS03): Trans-asarone (α - asarone)

IUPAC Name : Trans-1, 2, 4-trimethoxy -5(2-propenyl) benzene



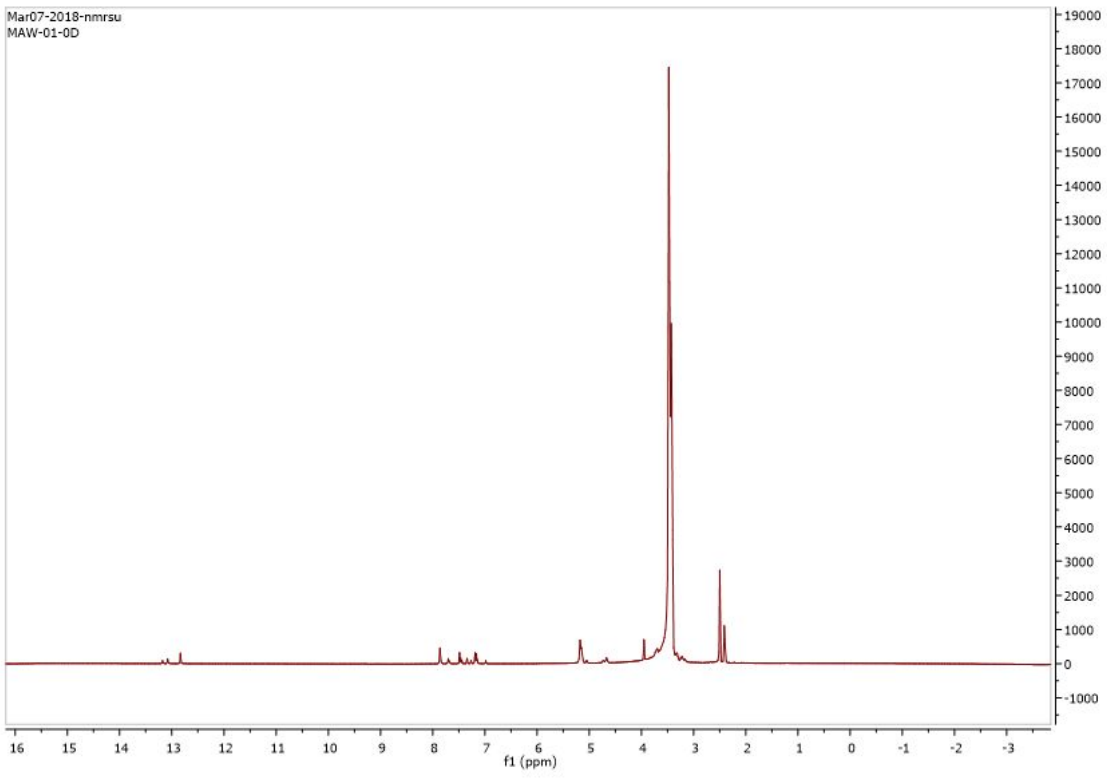
Trans-asarone (ACS03)

Molecular Formula : $C_{12}H_{16}O_3$

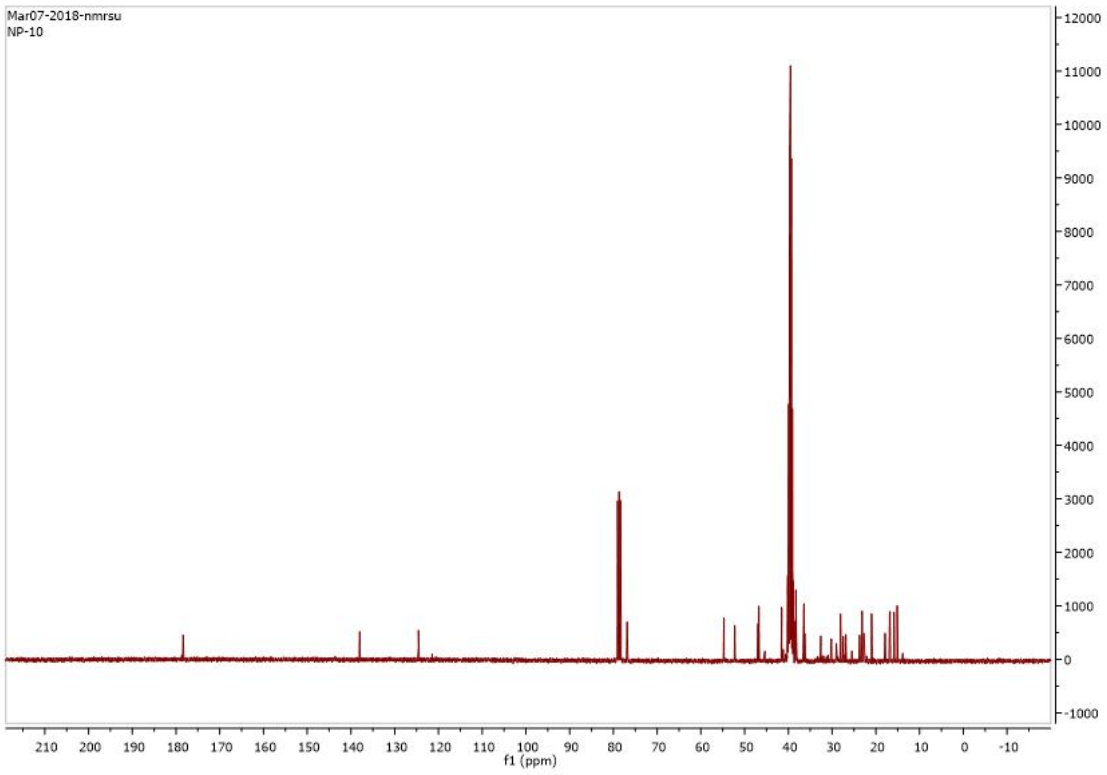
Molecular Weight : 208.25

Colour : Colourless crystalline solid

Melting point : 62 ^oC



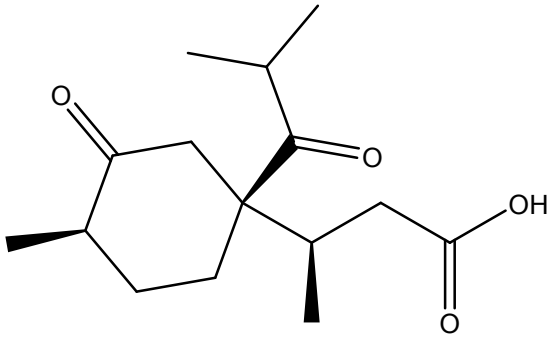
^{1}H NMR Spectrum of α- asarone



^{13}C NMR Spectrum of α- asarone

Compound 4 (ACS04): Acoric acid

IUPAC Name : (S)-3[(1S, 4R)-1-isobutryryl-4-methyl-3-oxocyclohexyl) butanoic Acid



Acoric acid (ACS04)

Molecular formula : $C_{15}H_{24}O_4$

Molecular weight : 268.353g/m

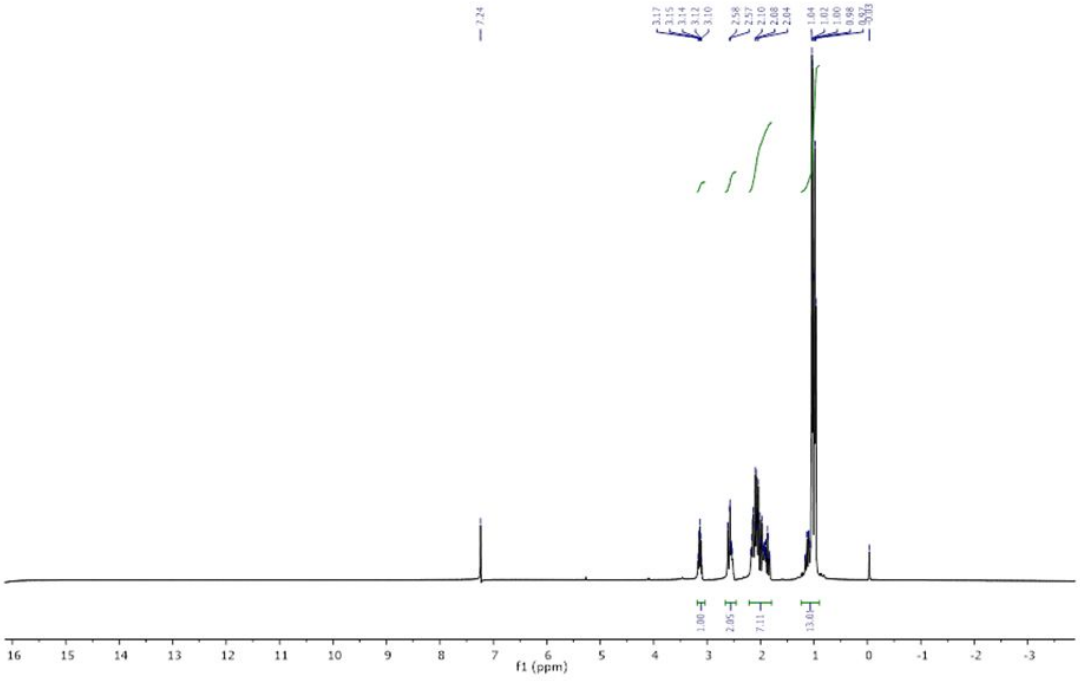
Exact Mass : 268.17g/m

M/z : 268.17(100%), 269.17(16.7%), 270.17(2.1%)

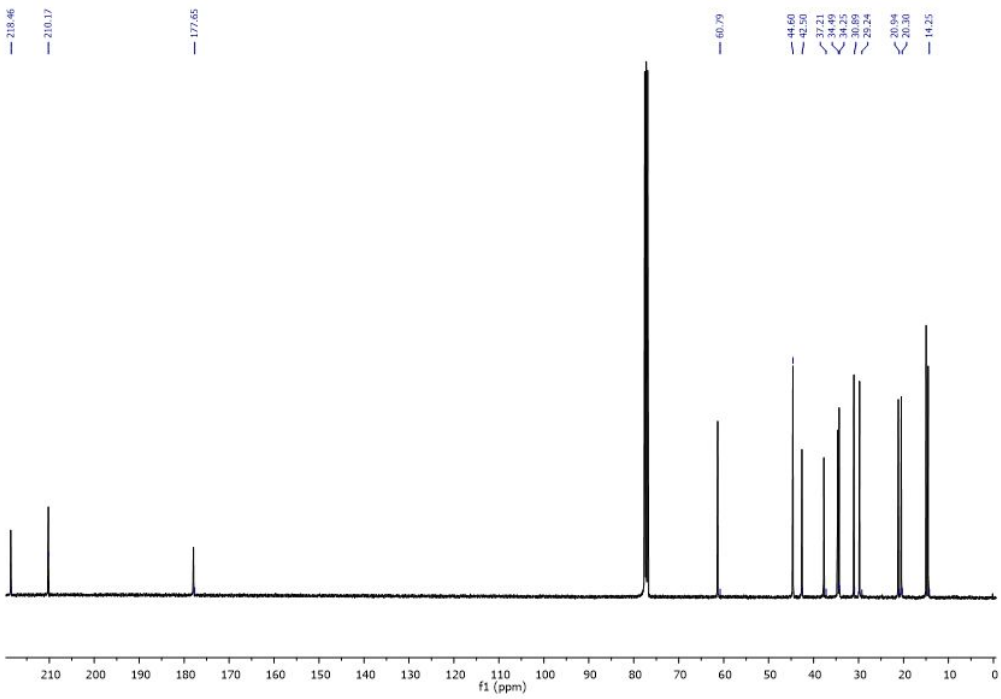
Elemental analysis : C: 67.14, H: 9.01, O: 23.85

Melting point : 166 ^oC - 168 ^oC

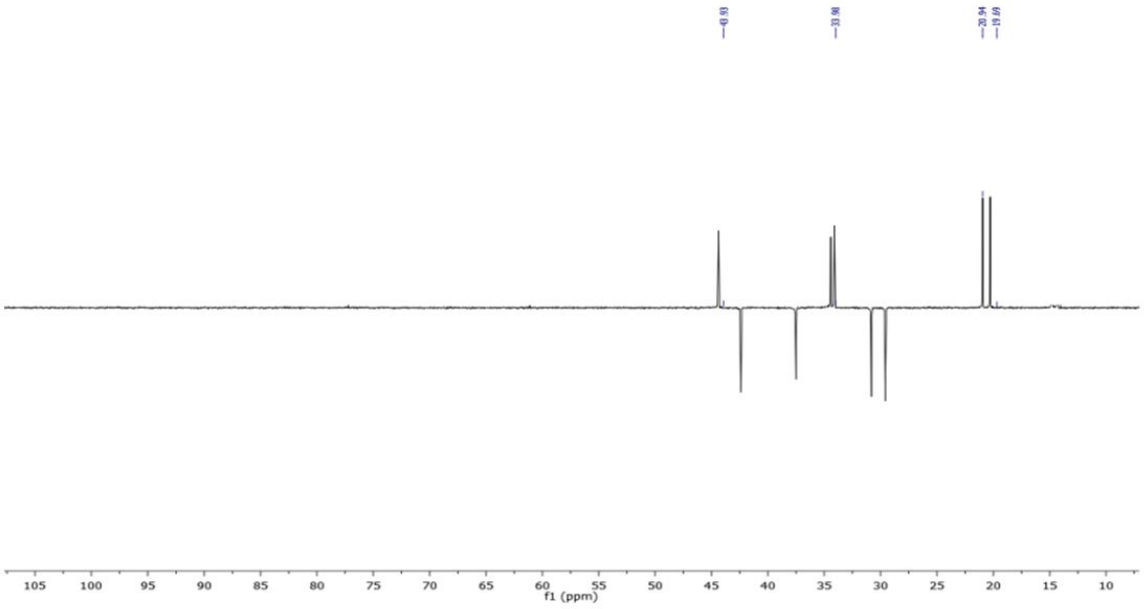
Physical state : crystalline



^{1}H NMR Spectrum of Acoric acid



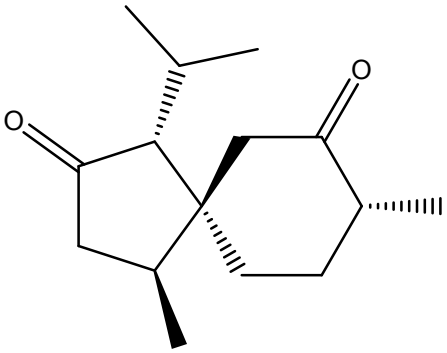
^{13} C NMR Spectrum of Acoric acid



DEPT Spectrum of Acoric acid

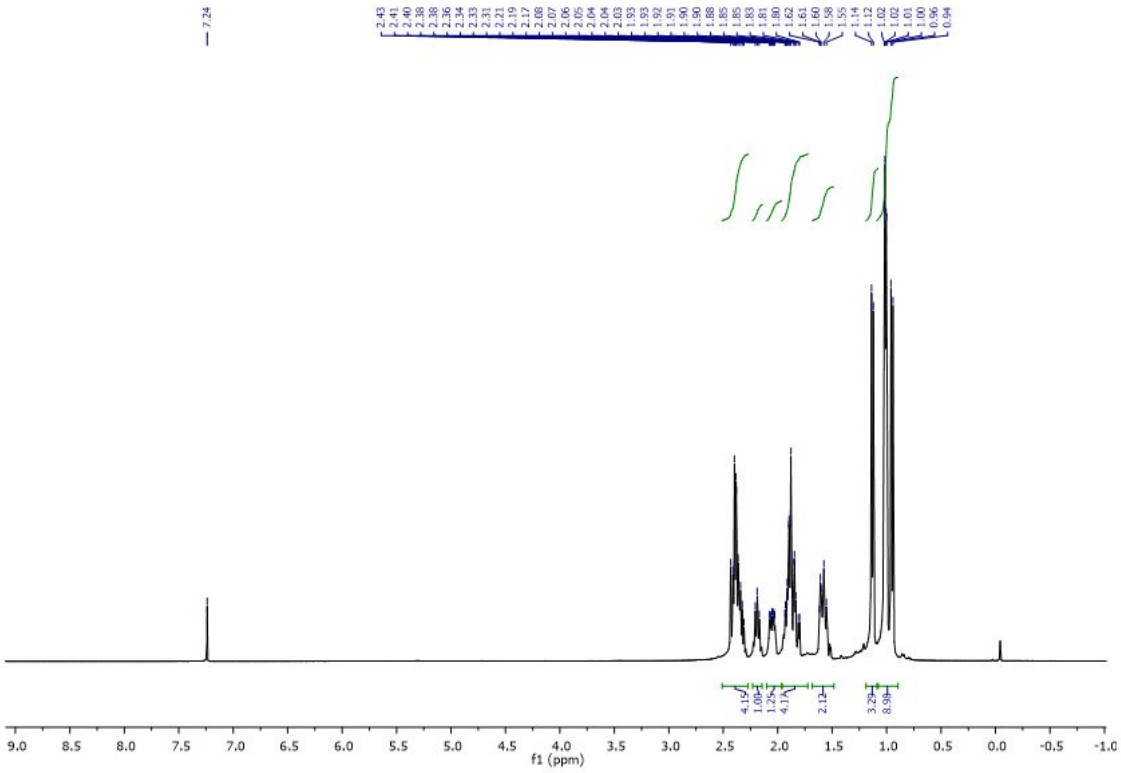
Compound 5 (ACS05): Acorone

IUPAC Name: 1-Isopropyl-4, 8- dimethylspiro [4.5] decan-2, 7-dione

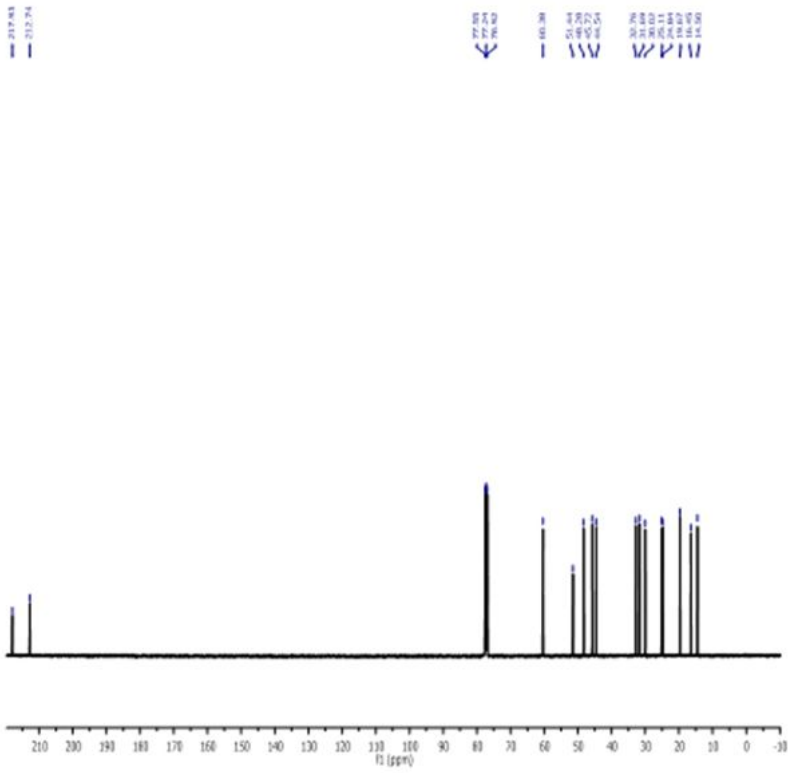


Acorone (ACS05)

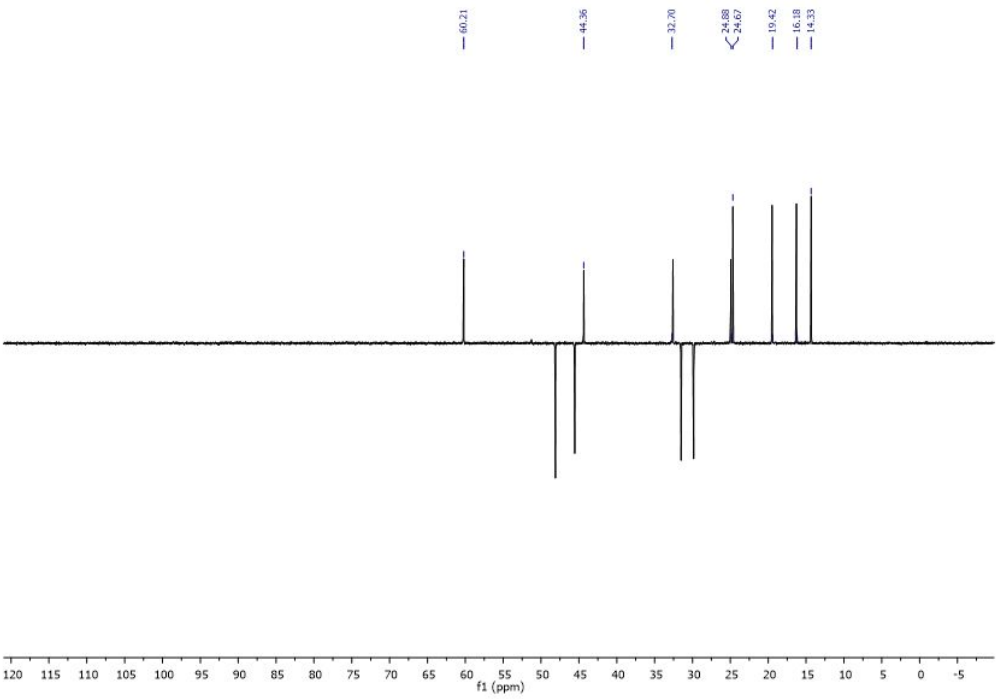
Chemical formula	**:**	$C_{15}H_{24}O_2$
Molecular weight	**:**	236 g/m
Melting point	**:**	100-101 ^oC
Physical state	**:**	**C**rystalline
Specific rotation	**:**	+00.006 to 0.008



^{1}H NMR Spectrum of Acorone



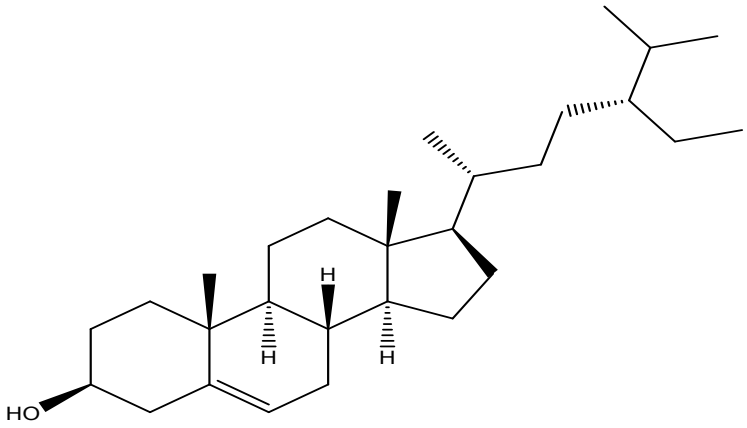
^{13}C NMR spectral data of compound Acorone



DEPT Spectral data of Acorone

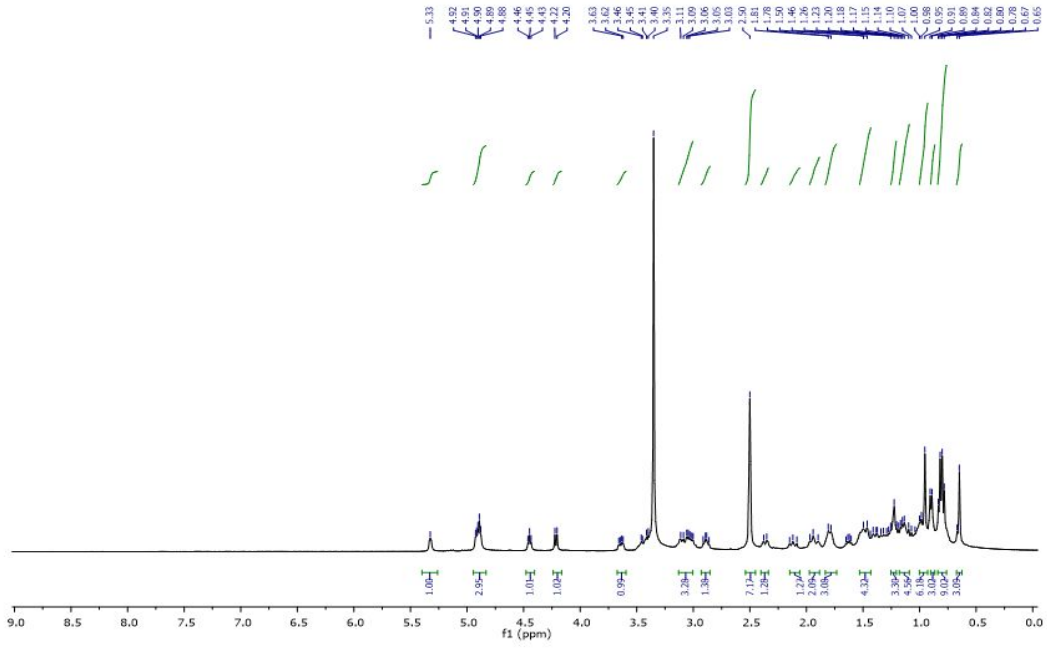
Compound 6 (ACS6): Beta sitosterol glycoside

IUPAC Name : 2-((17-(5, 6-dimethylheptan-2-yl)-10, 13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-tetradecahydro-1H-cyclopenta[a] phenanthren-3- yl) oxy) -6- (hydroxymethyl) tetrahydro-2H-pyran-3, 4, 5-triol

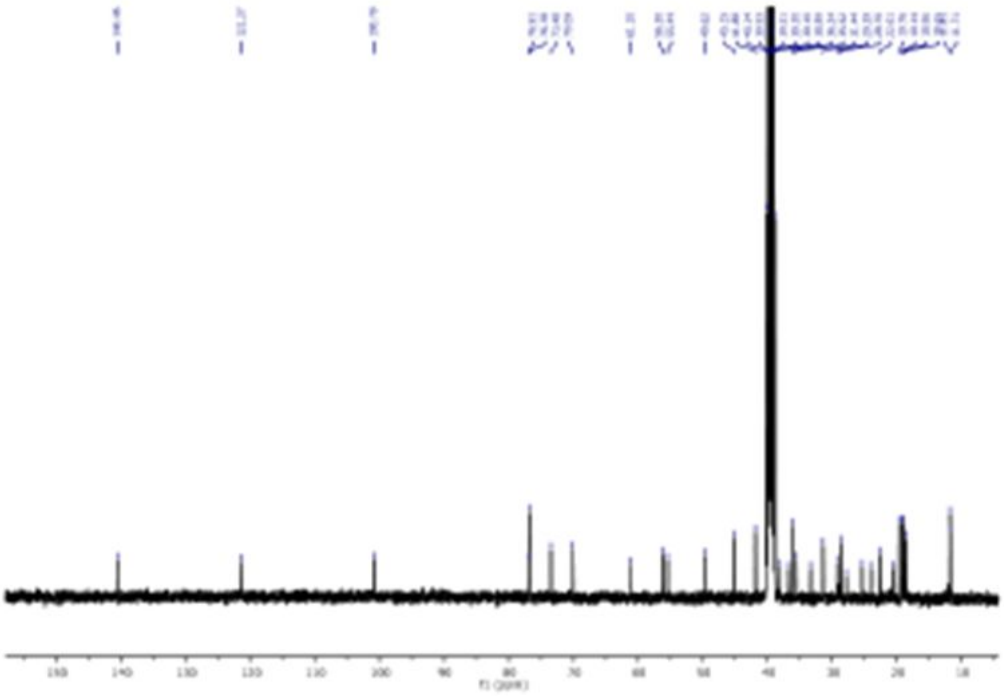


Beta sitosterol (ACS06)

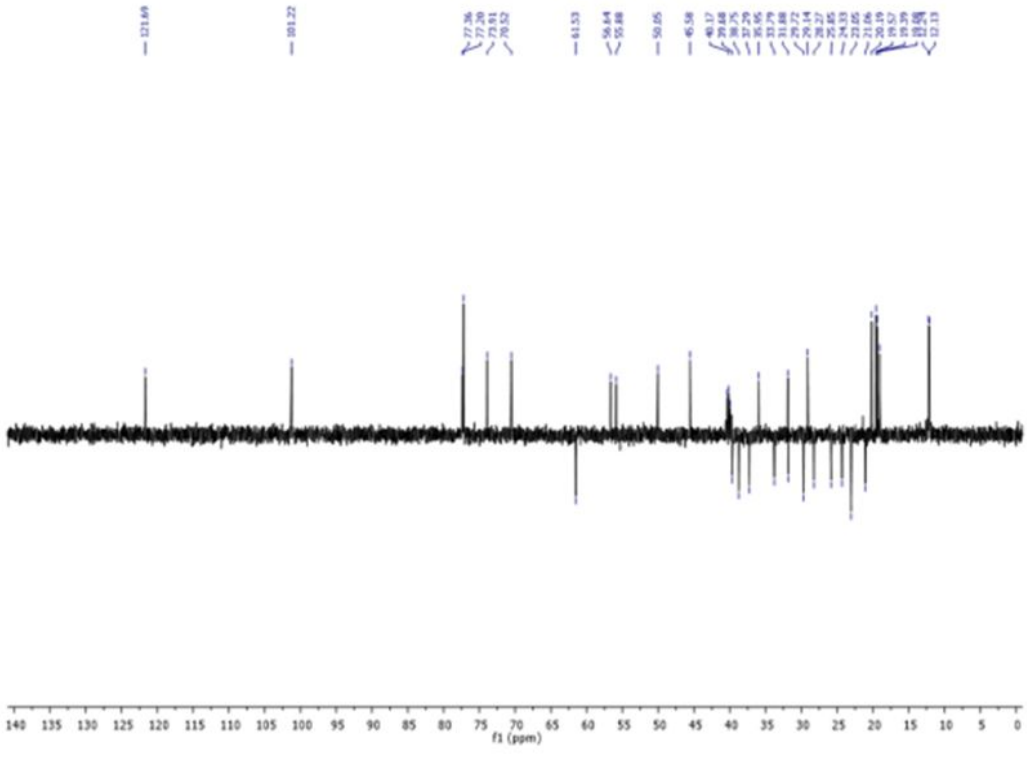
Chemical formula	:	$C_{34}H_{58}O_6$
Molecular weight	:	562.82g/m
Exact Mass	:	562.42
Physical state	:	**S**olid white powder
M/z	:	562.42(100%), 563.43(37.7%), 564.43(8.1%), 565.43(1.2%)
Elemental analysis	:	C: 72.56, H: 10.39, O: 17.06



^{1}H NMR Spectrum of compound β-Sitosterol glycoside



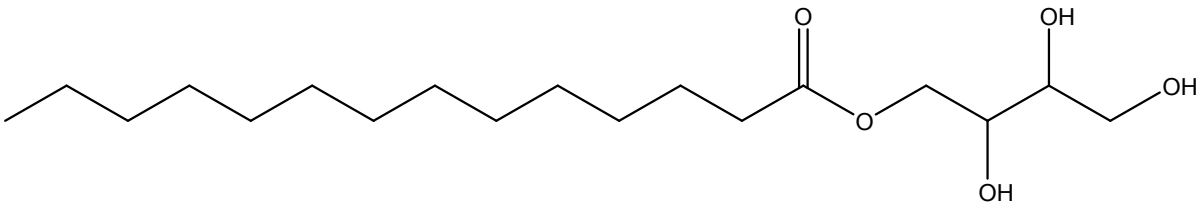
^{13} C NMR Spectrum of compound β-Sitosterol glycoside



DEPT Spectrum of β-Sitosterol glycoside

Compound 7 (ACS07): 2, 3, 4-Trihydoxybutyl tetradecanoate

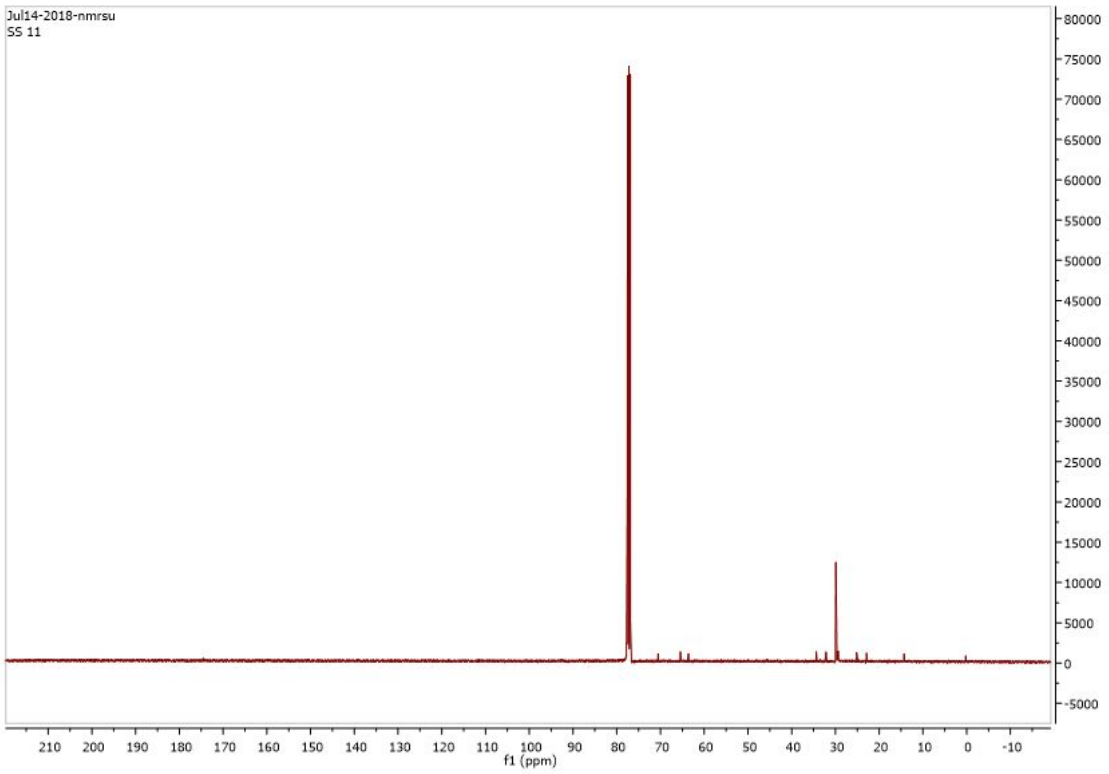
IUPAC Name : 2, 3, 4-Trihydoxybutyl tetradecanoate



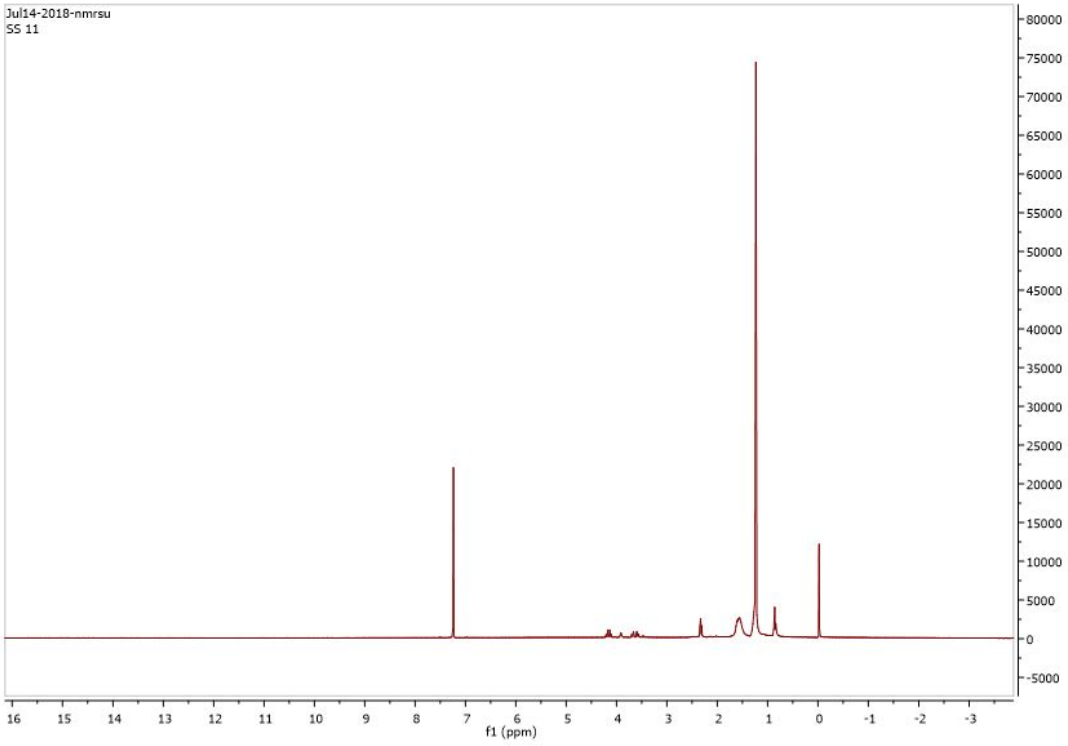
2, 3, 4-Trihydoxybutyl tetradecanoate (ACS07)

Chemical formula : $C_{18}H_{36}O_5$

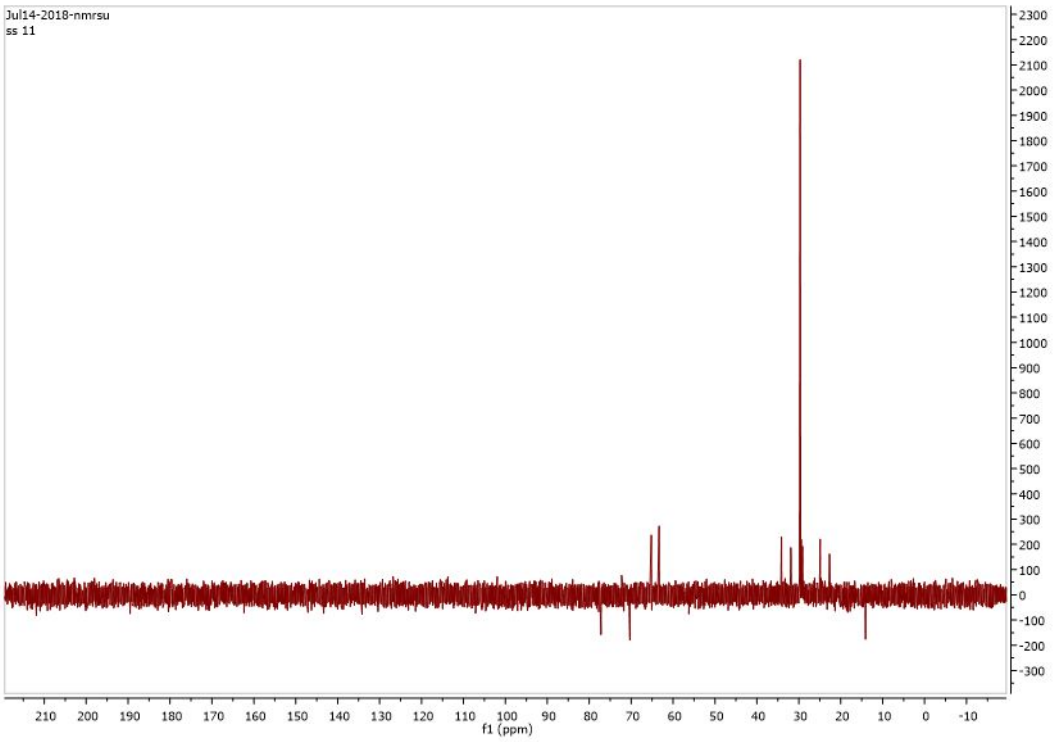
Molecular weight : 332.47 g/m



^{1}H NMR Spectrum of compound 2, 3, 4-Trihydoxybutyl tetradecanoate



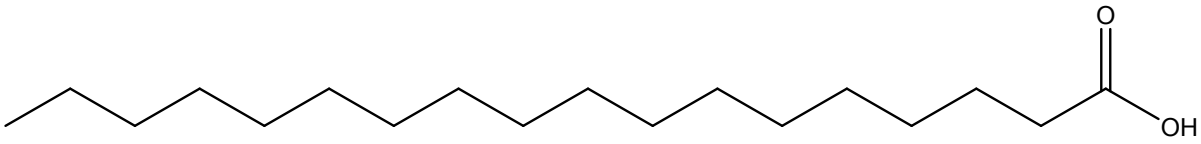
^{13} C NMR Spectrum of compound 2, 3, 4-Trihydoxybutyl tetradecanoate



DEPT Spectrum of compound 2, 3, 4-Trihydoxybutyl tetradecanoate

Compound 8 (ACS08): Stearic acid

IUPAC Name : Octadenaoic acid



Stearic acid (ACS08)

Chemical formula : $C_{18}H_{36}O_2$, $CH_3(CH_2)_{16}COOH$

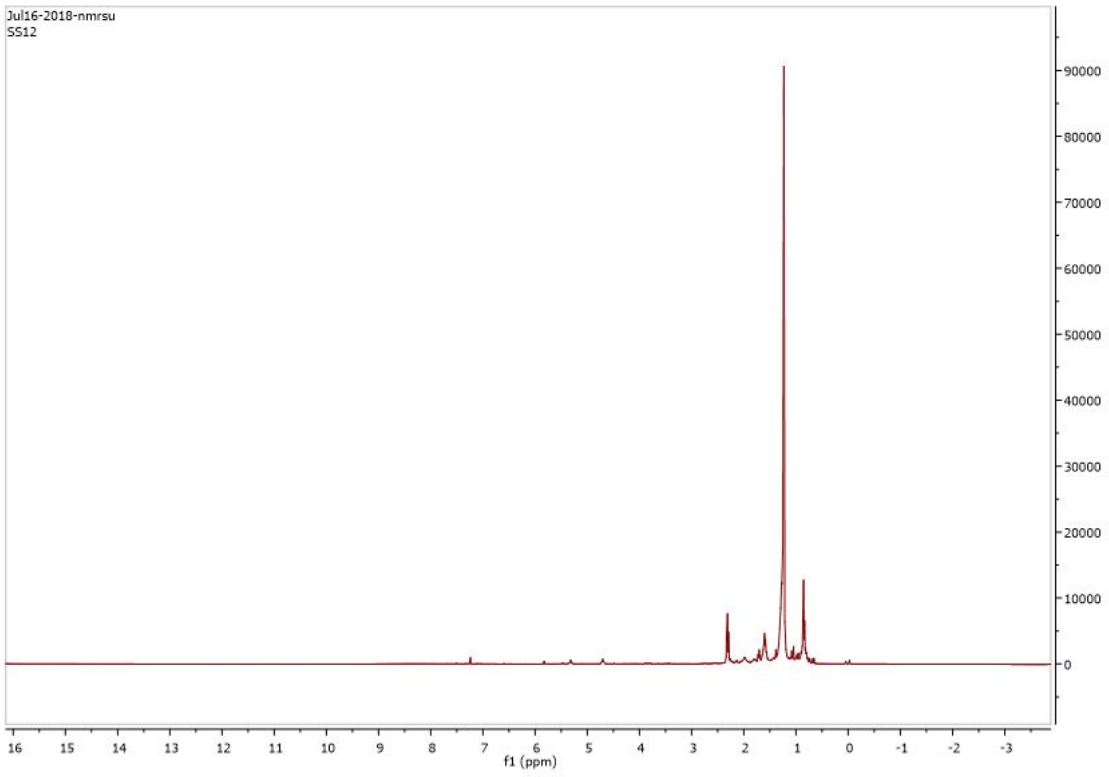
Molecular weight : 284.48 g/mol

Melting point : 69.3%

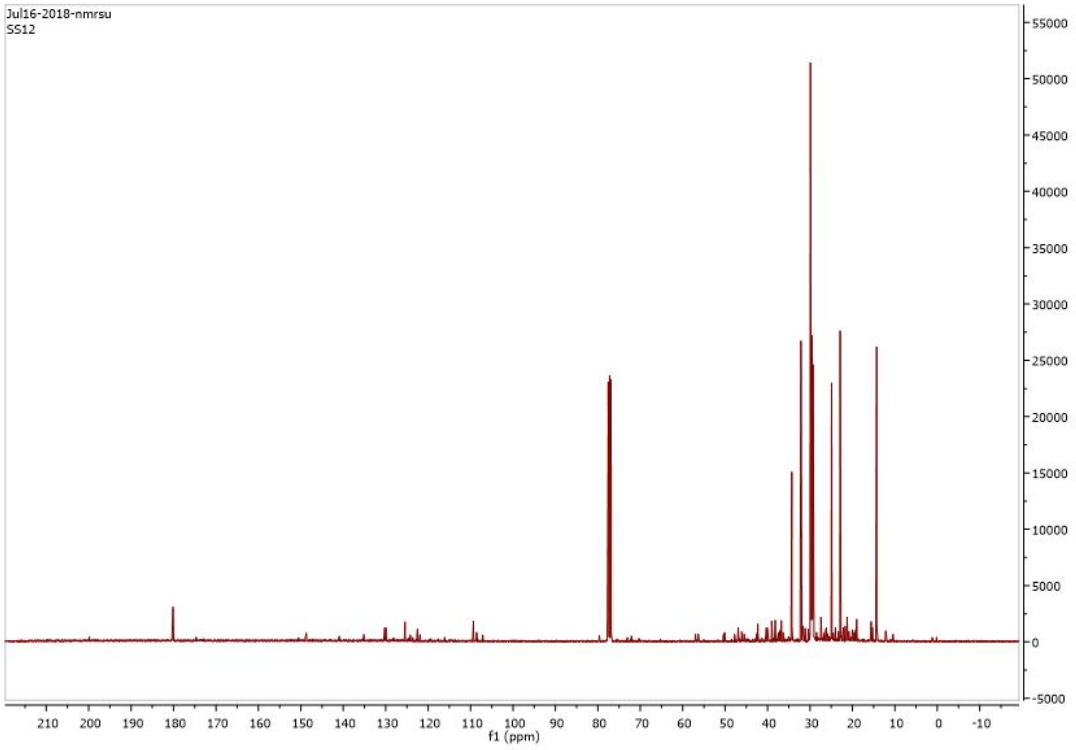
Boiling point : 361^0C

Physical state : Saturated fatty acid

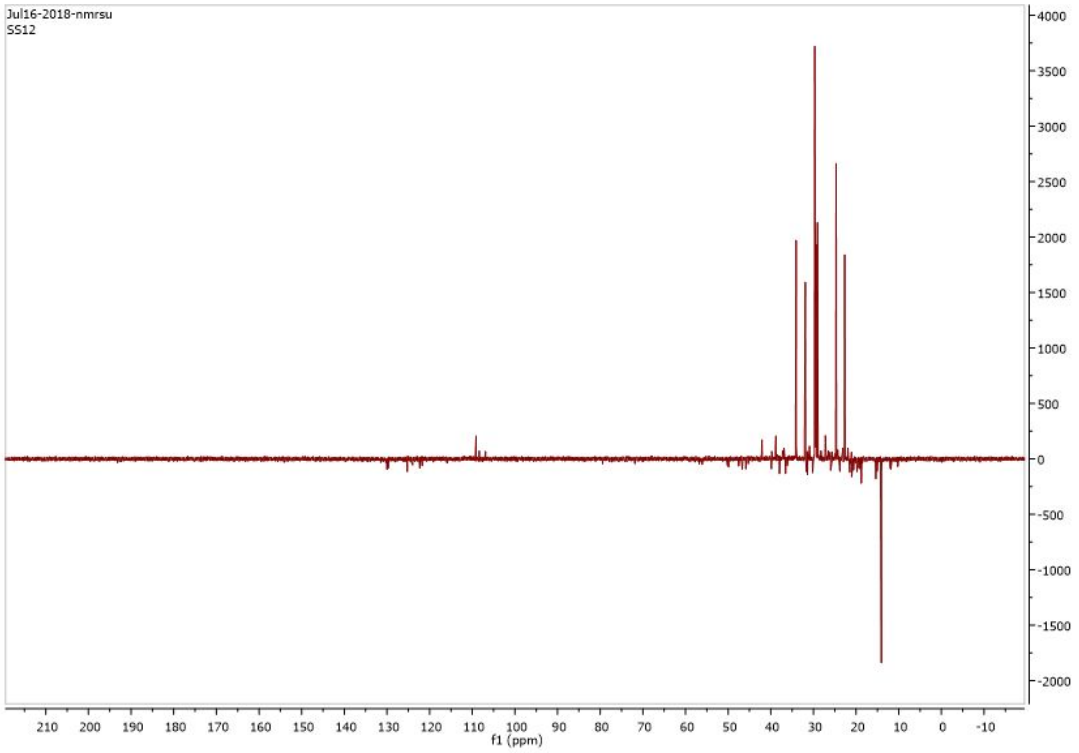
Density : 941kg/m



^{1}H NMR Spectrum of compound Stearic acid



^{13}C NMR Spectrum of compound Stearic acid



DEPT Spectrum of compound stearic acid