Supporting Information for:

Synthesis and Optical Properties of Trioxatriangulenium Dyes with One and Two Peripheral Amino Substituents

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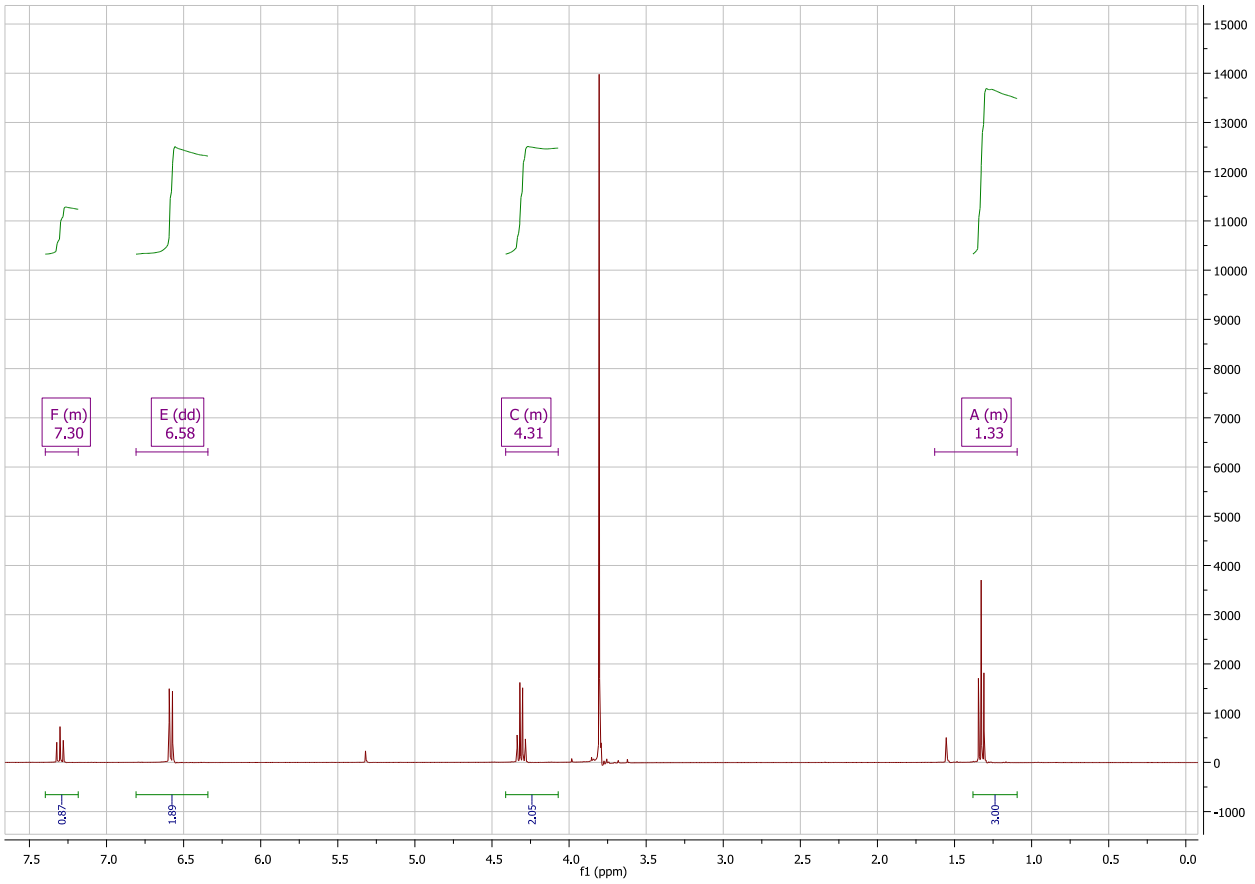
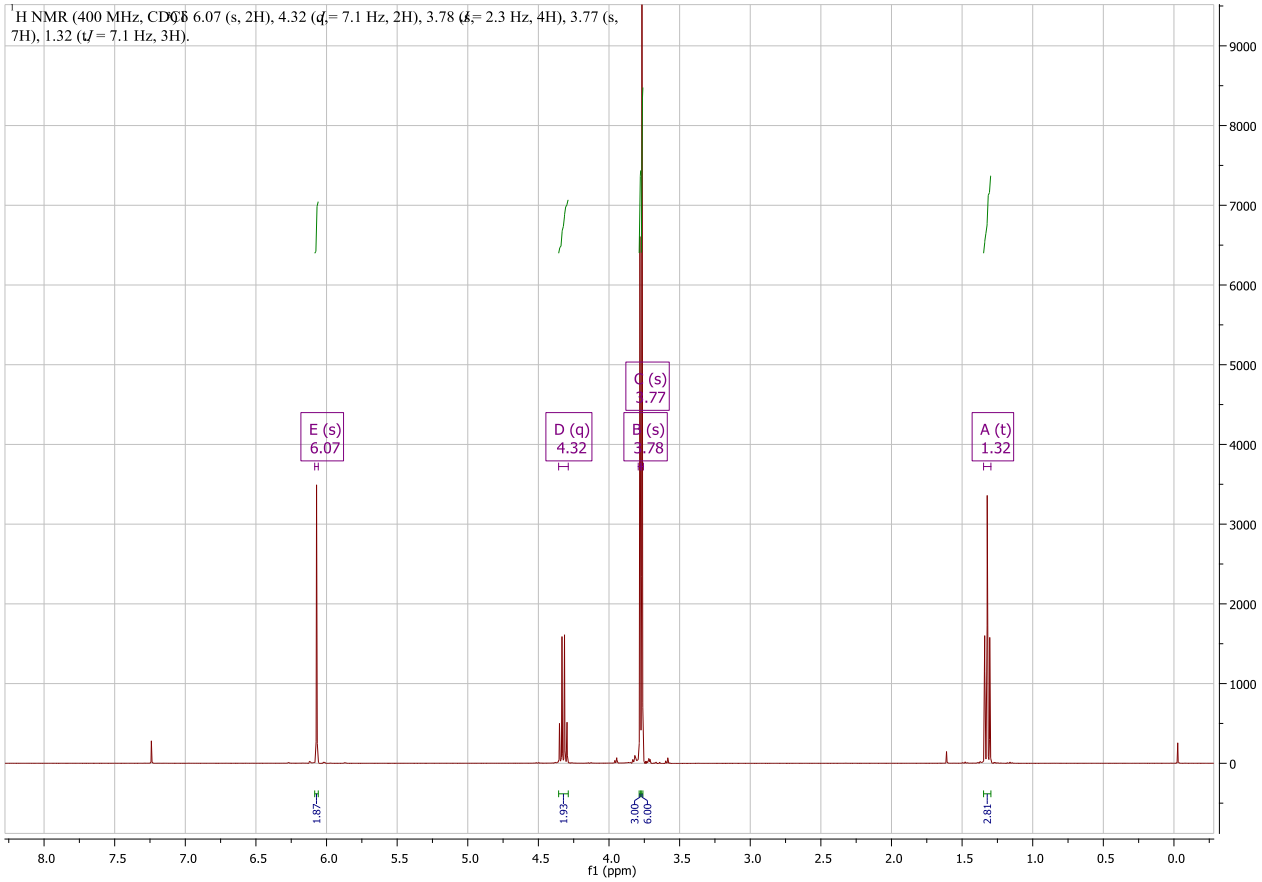
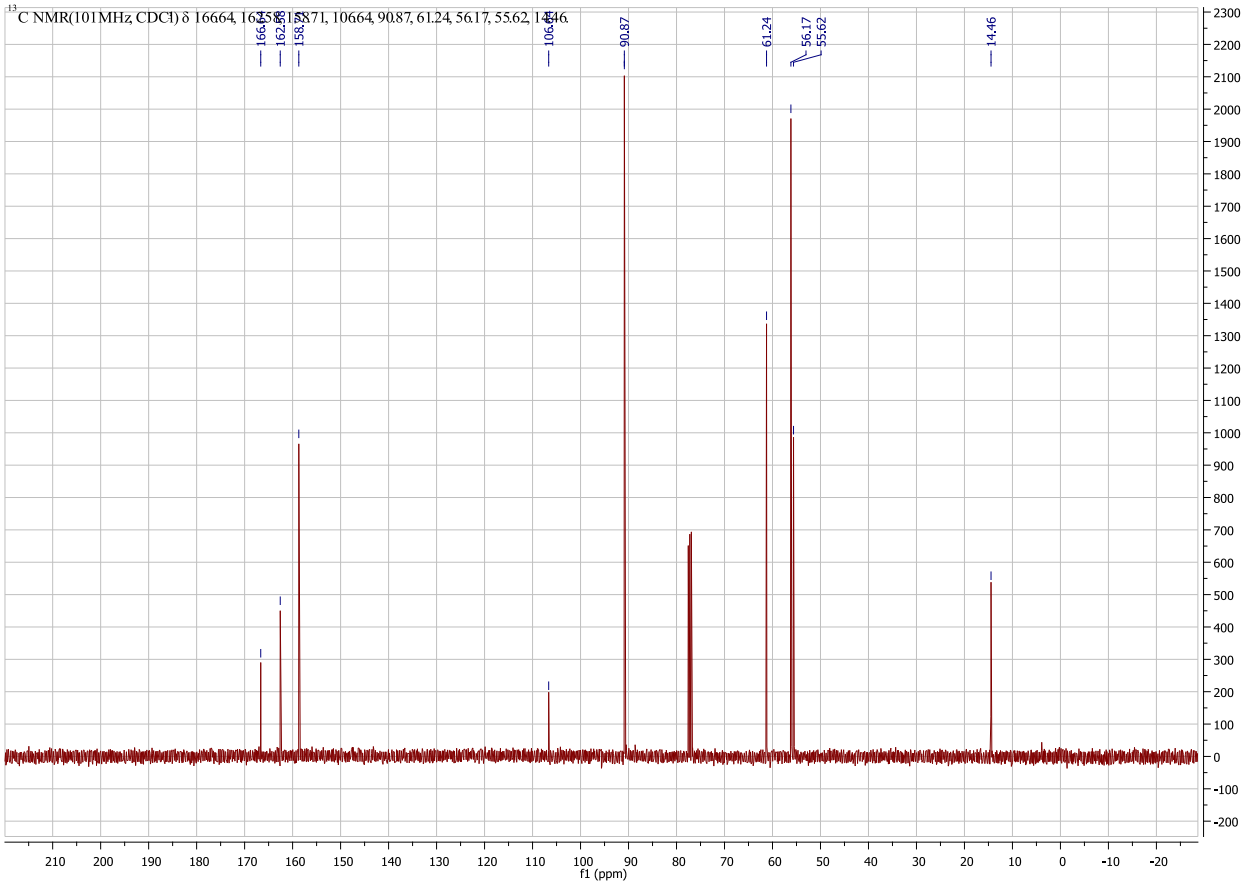
NMR spectra of the synthesized compounds

*Ethyl 2,6-dimethoxybenzoate (**1**):*

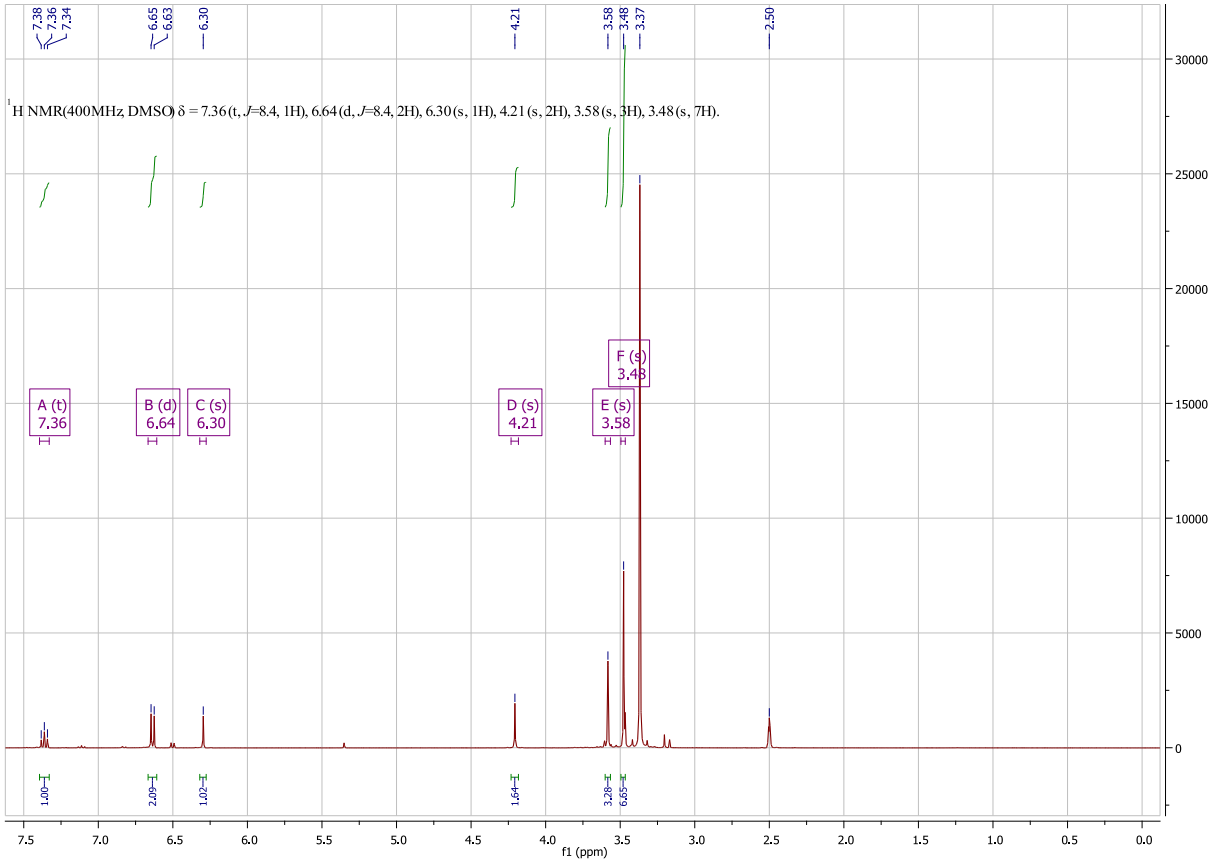


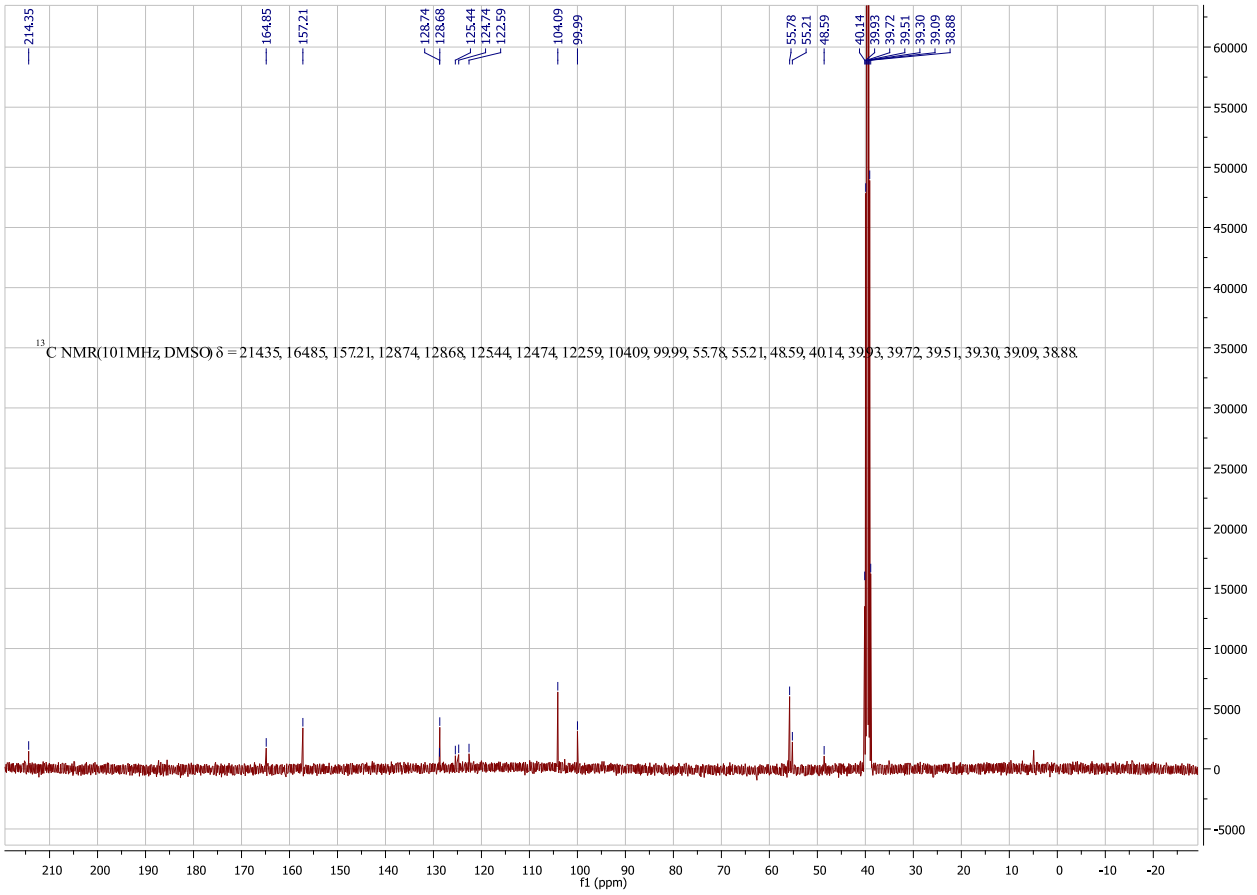
*Ethyl 2,4,6-trimethoxybenzoate (**2**)*:



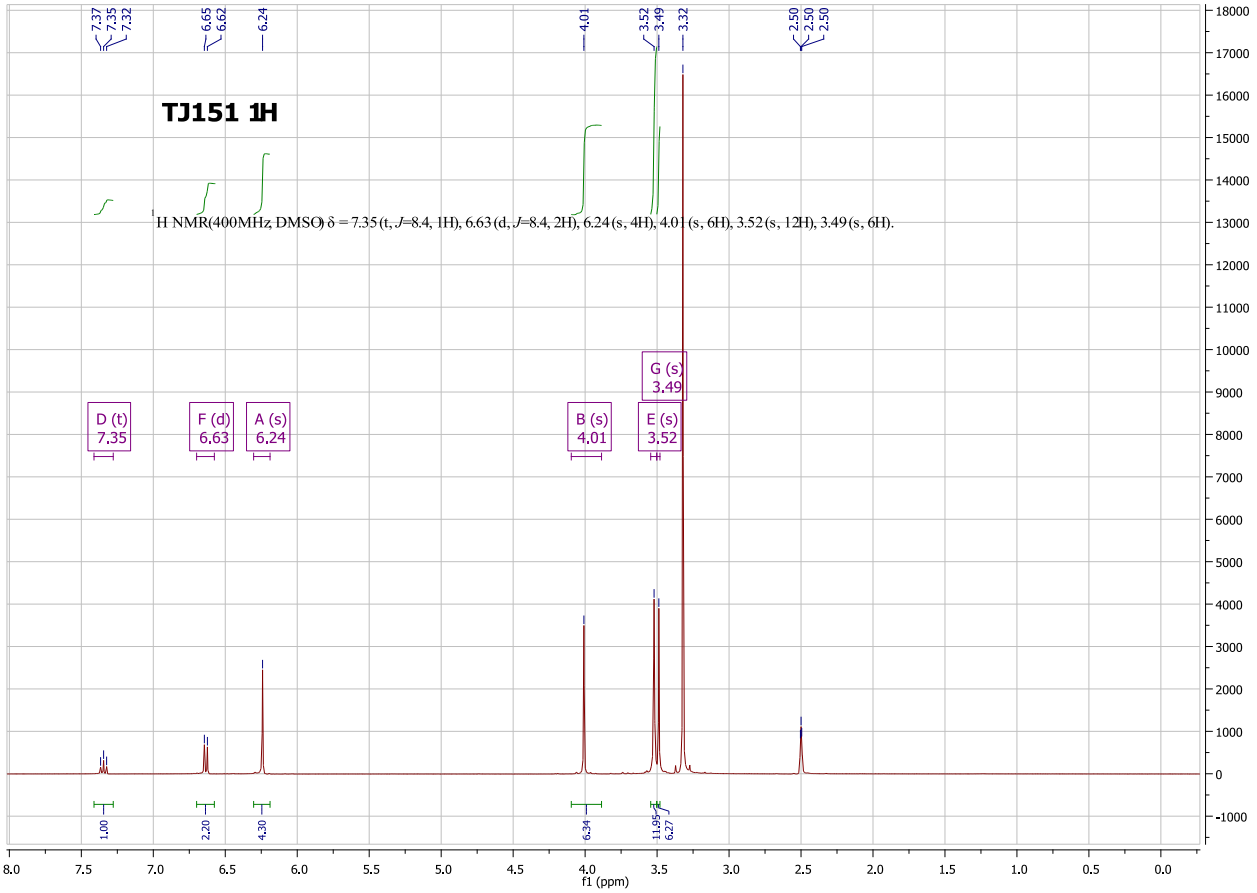


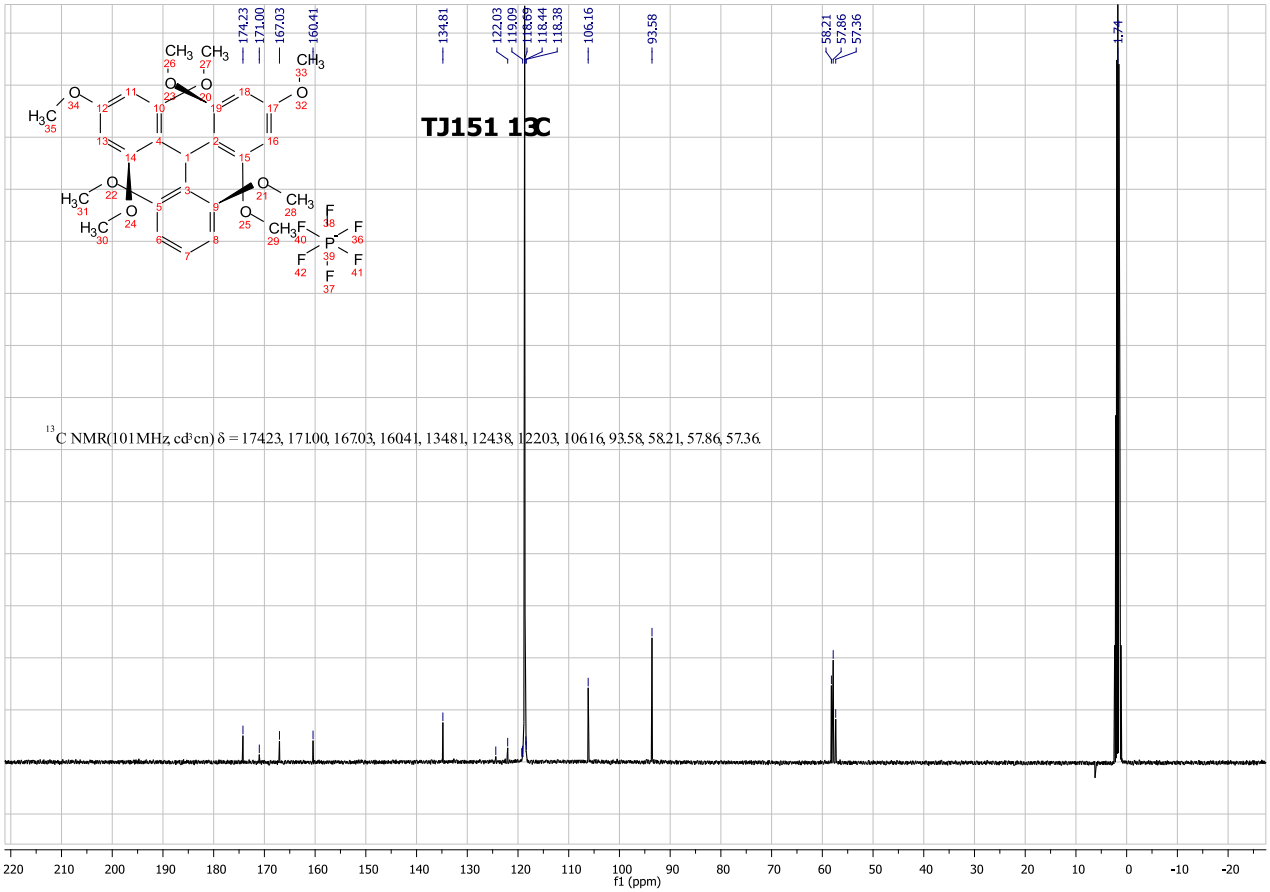
*Bis(2,6-dimethoxyphenyl)-(2,4,6-trimethoxyphenyl)-methylium hexafluorophosphate (**3**):*
OBS. The compound is unstable in solution. The extra peaks in the aromatic region and the grass around 3.5 ppm is from the helicene formed by this reaction and will appear in all spectra recorded after ~5 min. after in solution.



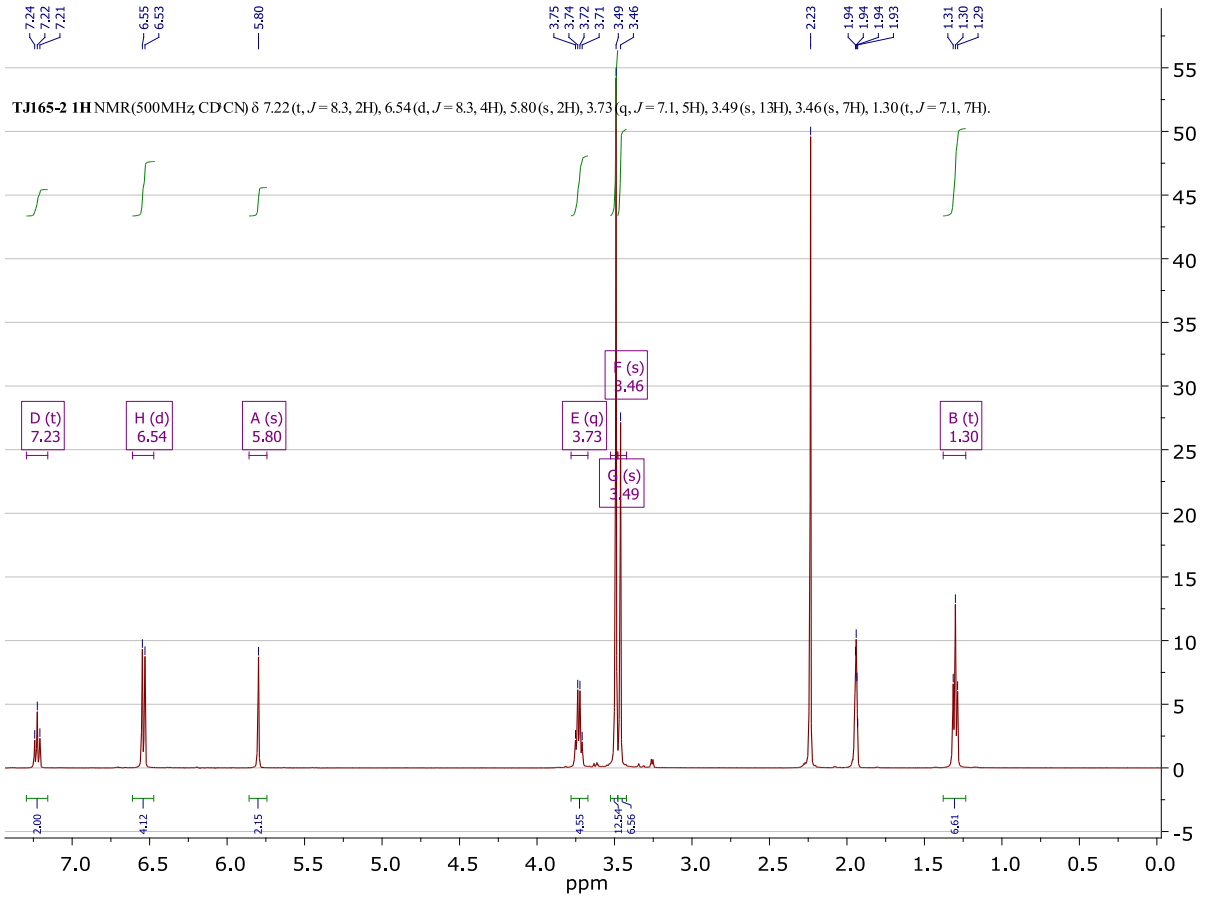


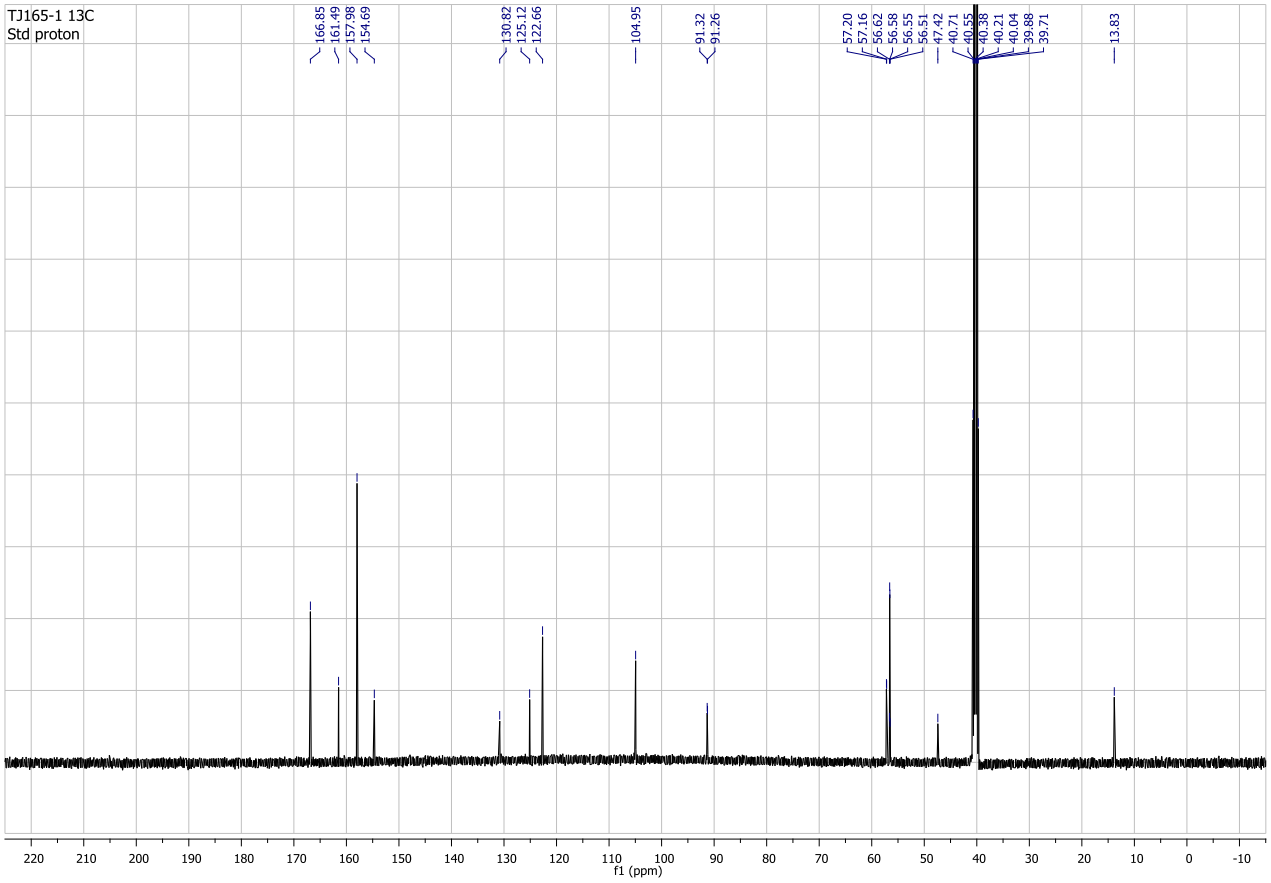
*(2,6-dimethoxyphenyl)-bis(2,4,6-trimethoxyphenyl)-methylium hexafluorophosphate (**4**):*



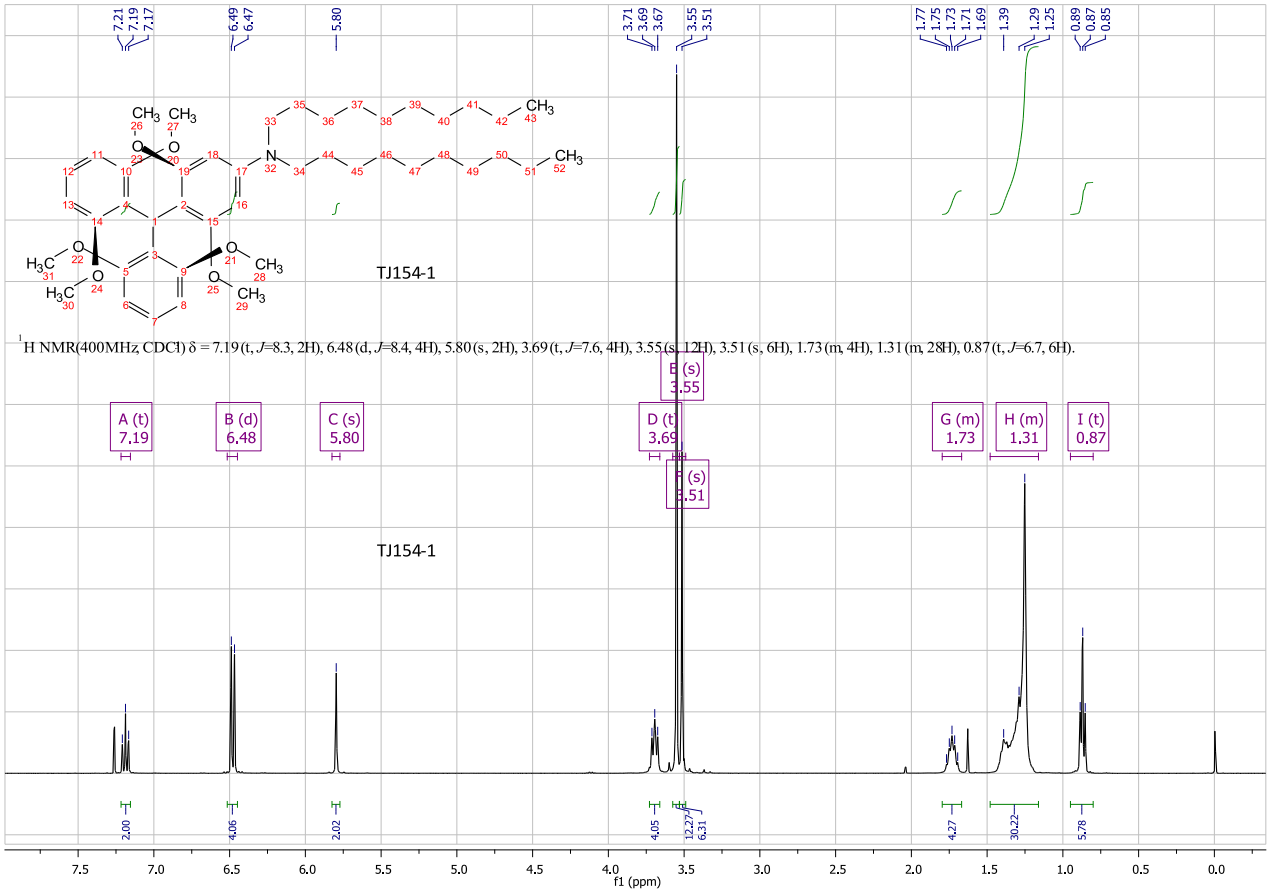


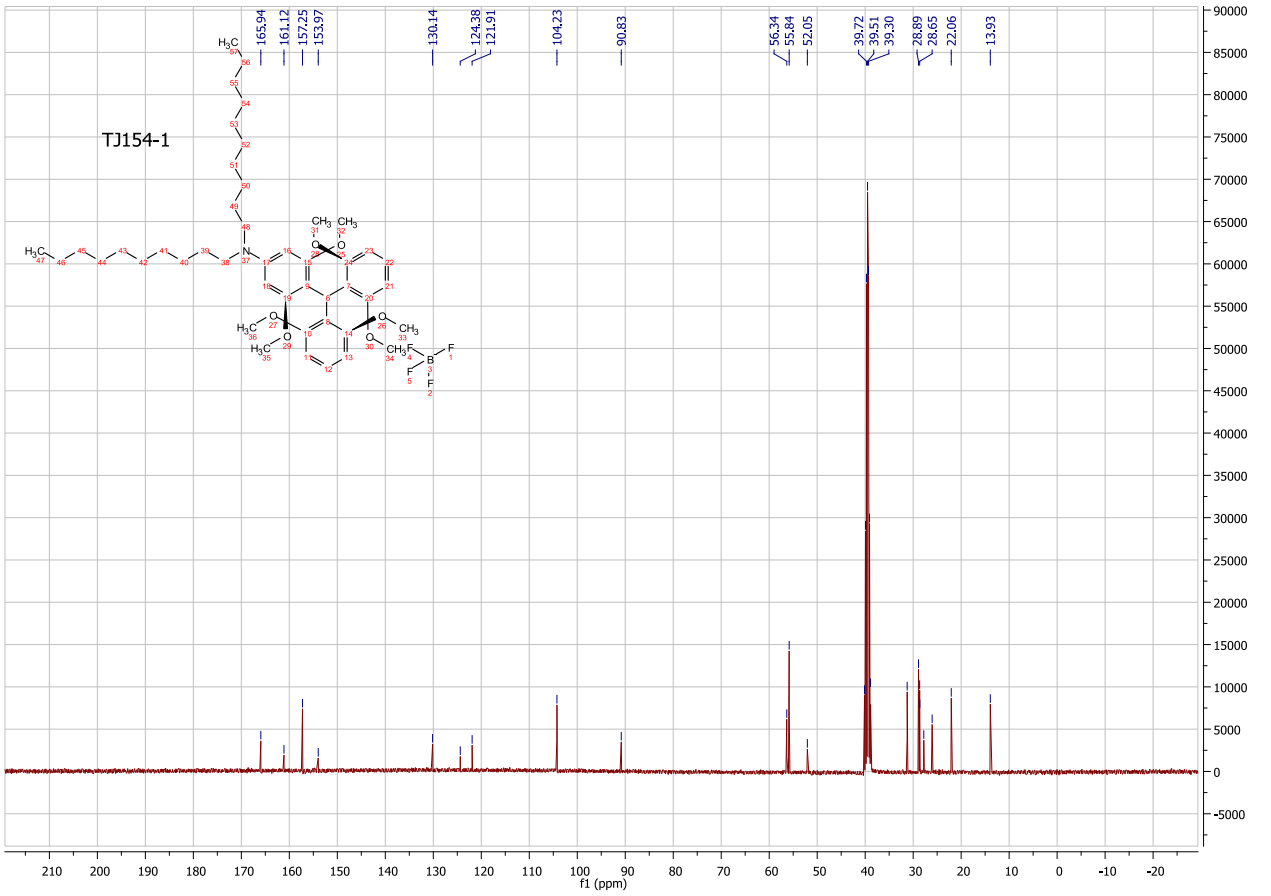
*Bis(2,6-dimethoxyphenyl)-(4-diethylamino-2,6-trimethoxyphenyl)-methylium hexafluorophosphate (**5a**)*:



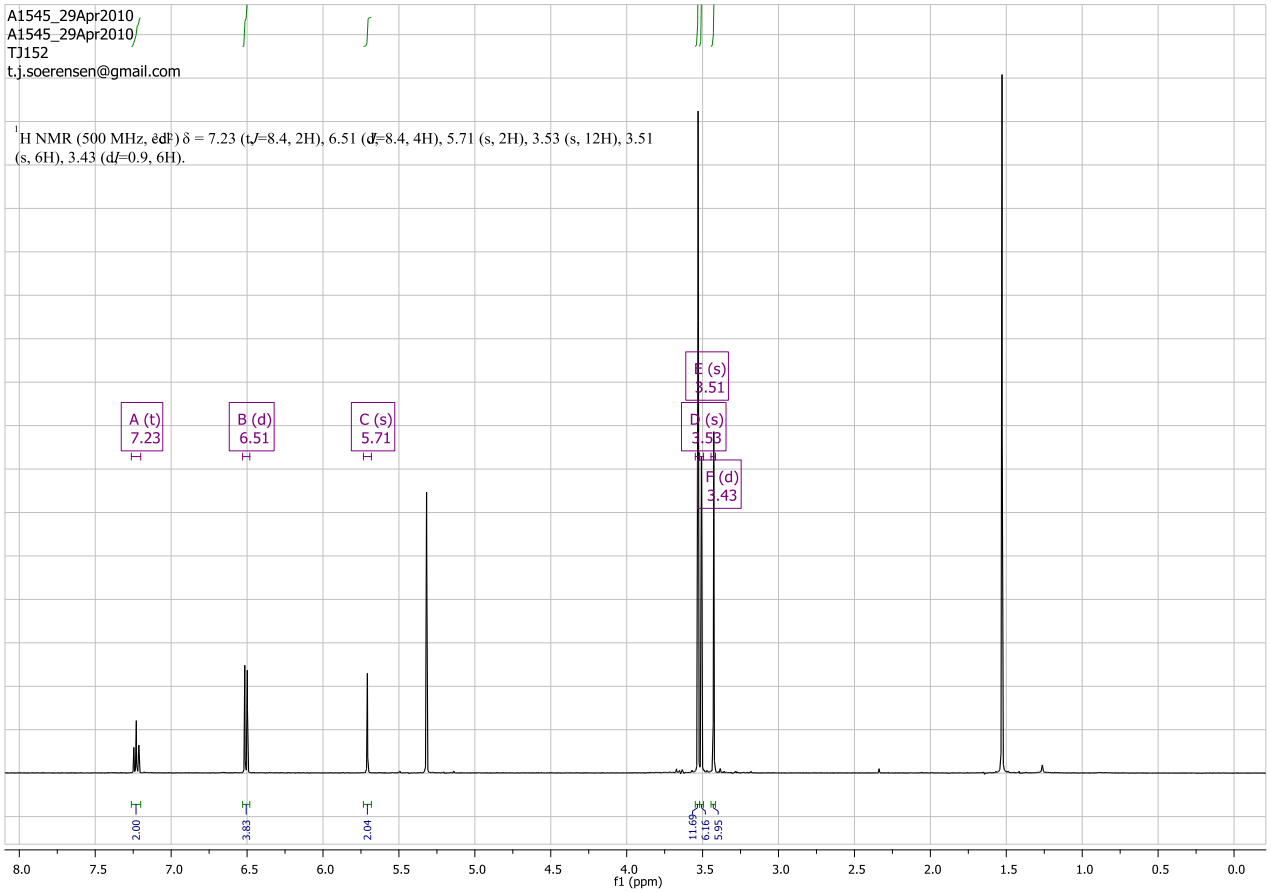


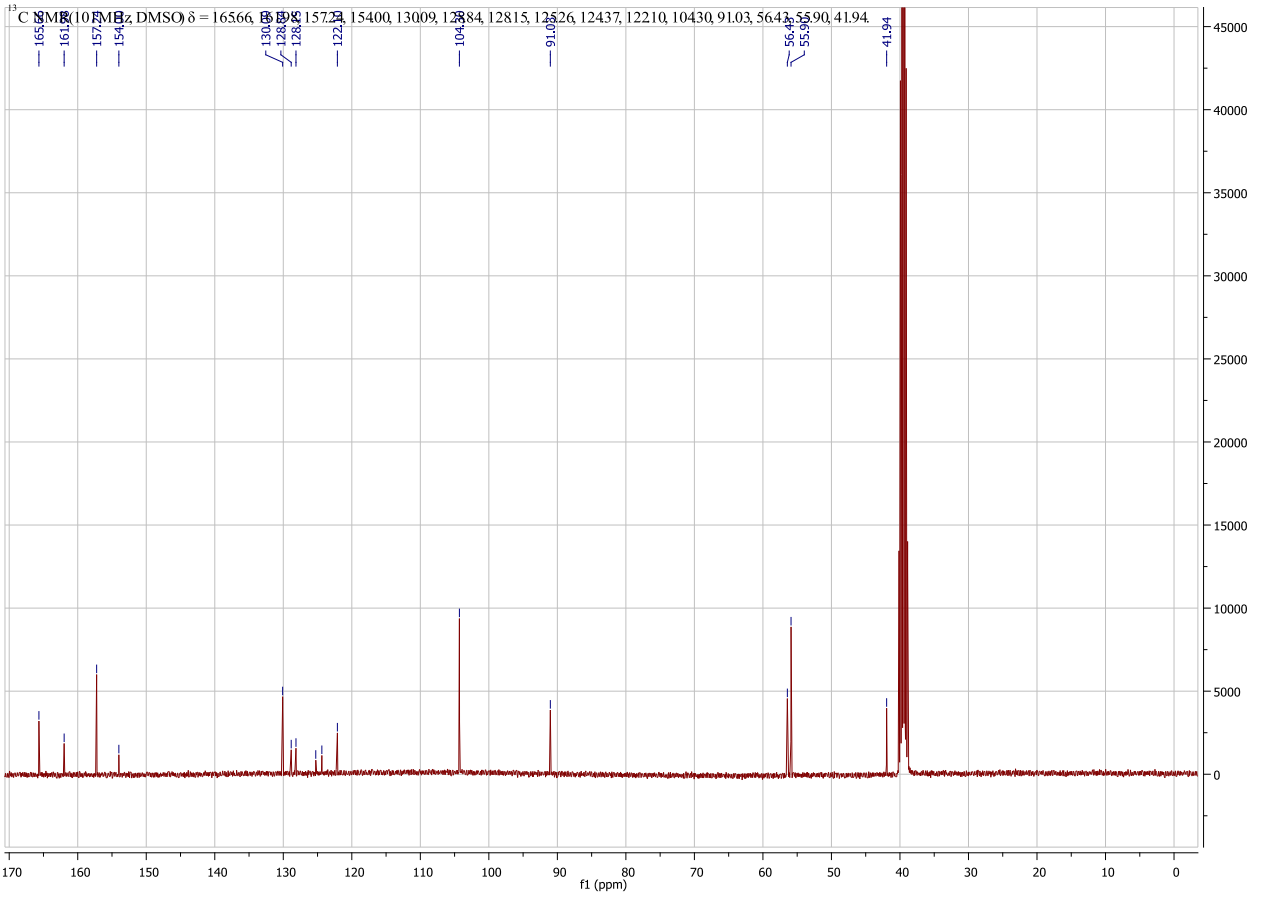
*Bis(2,6-dimethoxyphenyl)-(4-didecylamino-2,6-trimethoxyphenyl)-methylium tetrafluoroborate (**5b**):*



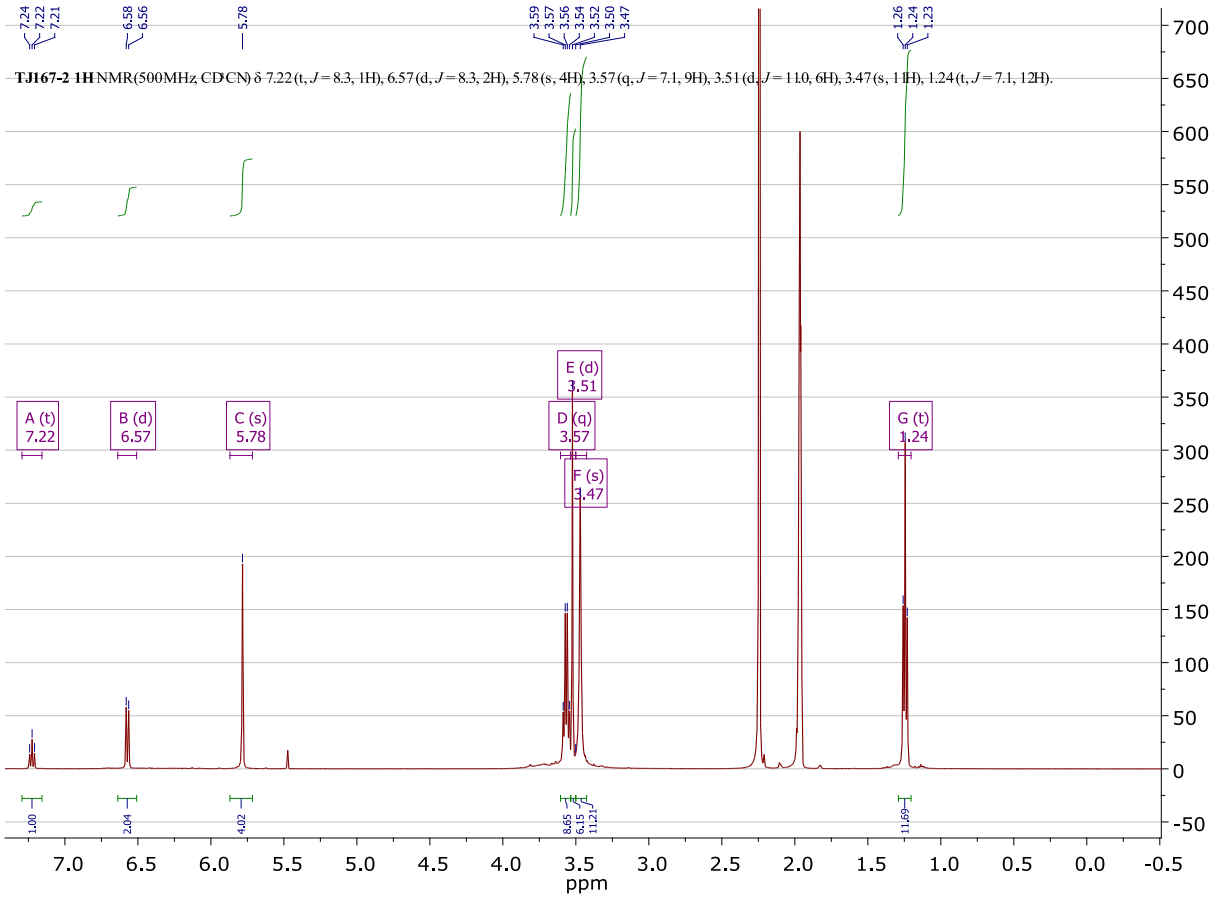


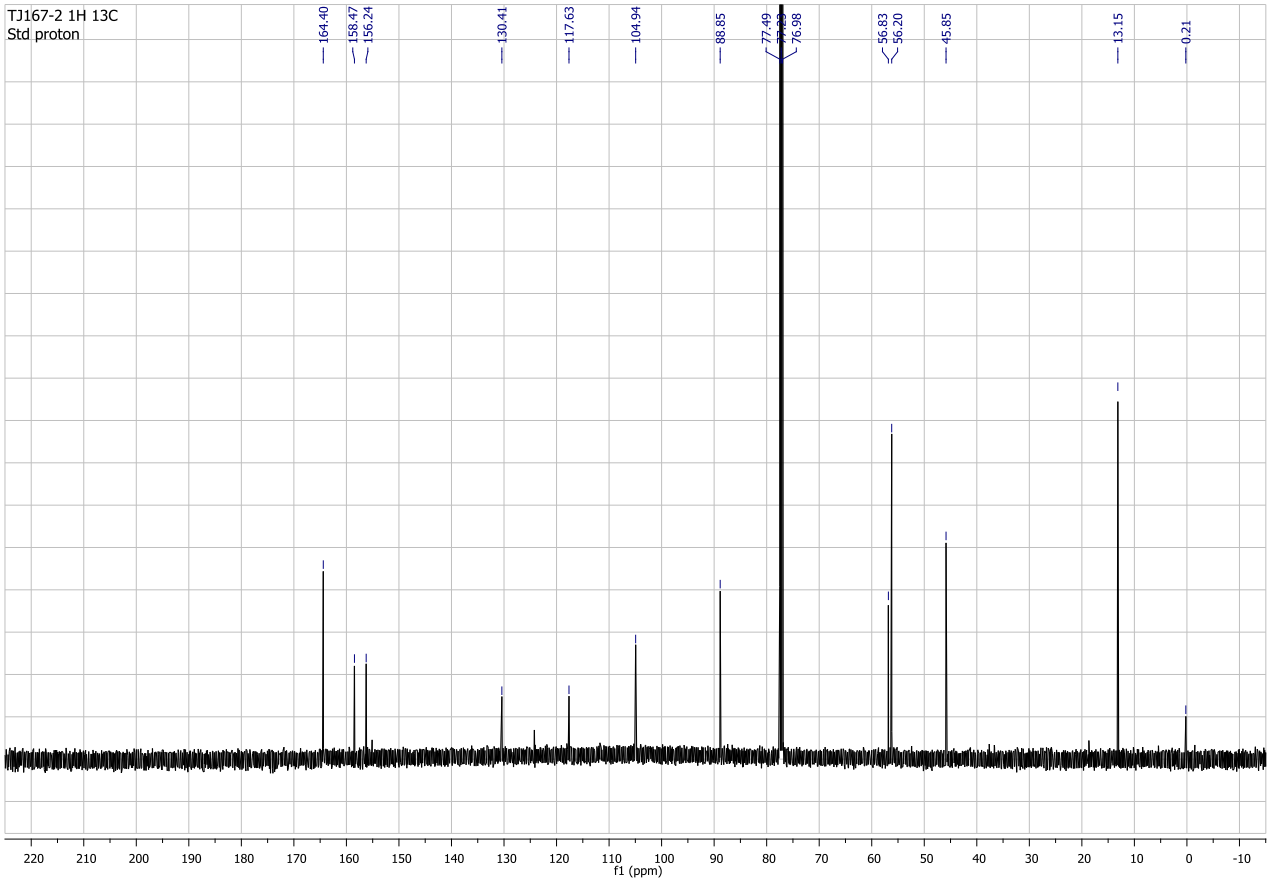
*Bis(2,6-dimethoxyphenyl)-(4-dimethylamino-2,6-dimethoxyphenyl)-methylium hexafluorophosphate (**5c**):*





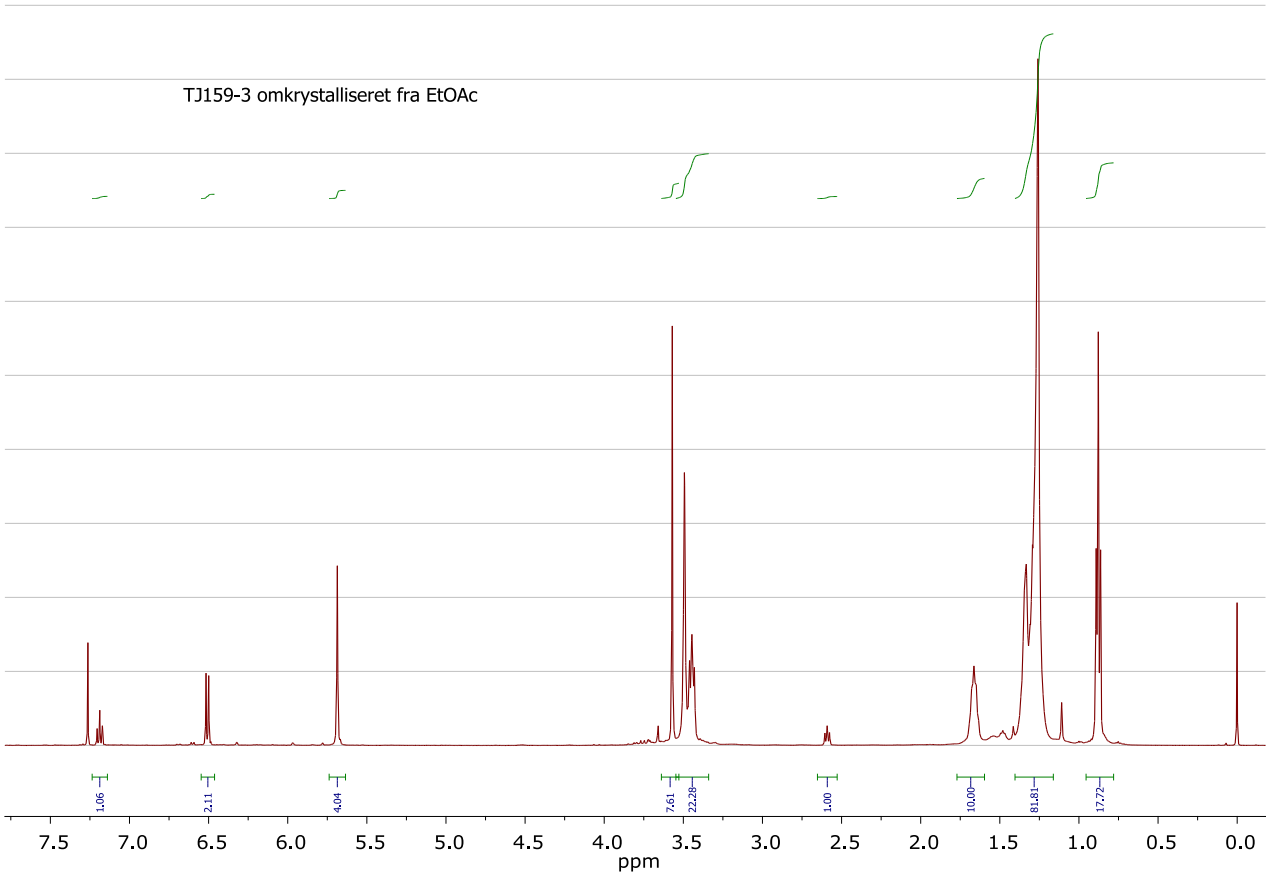
*(2,6-dimethoxyphenyl)-bis(4-diethylamino-2,6-dimethoxyphenyl)-methylium hexafluorophosphate (**6a**):*



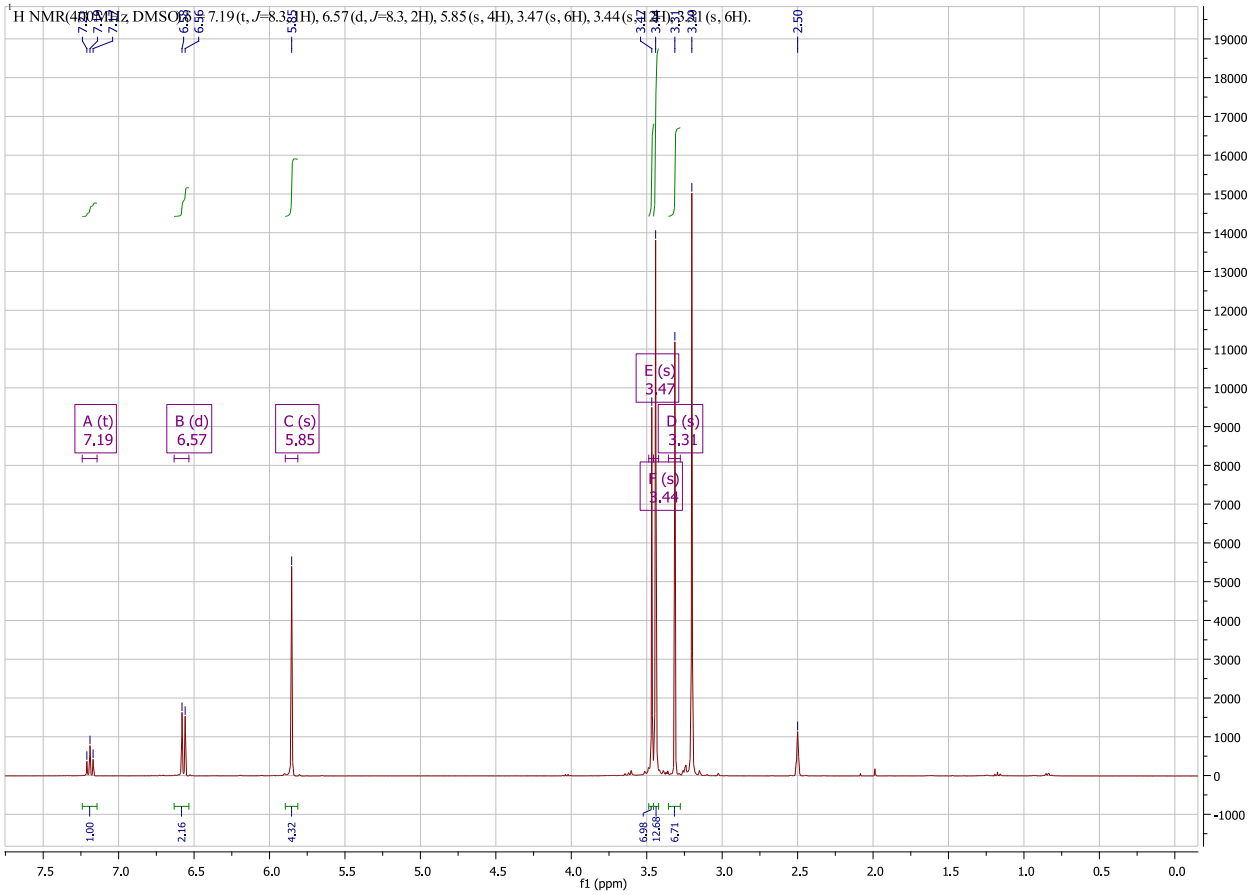


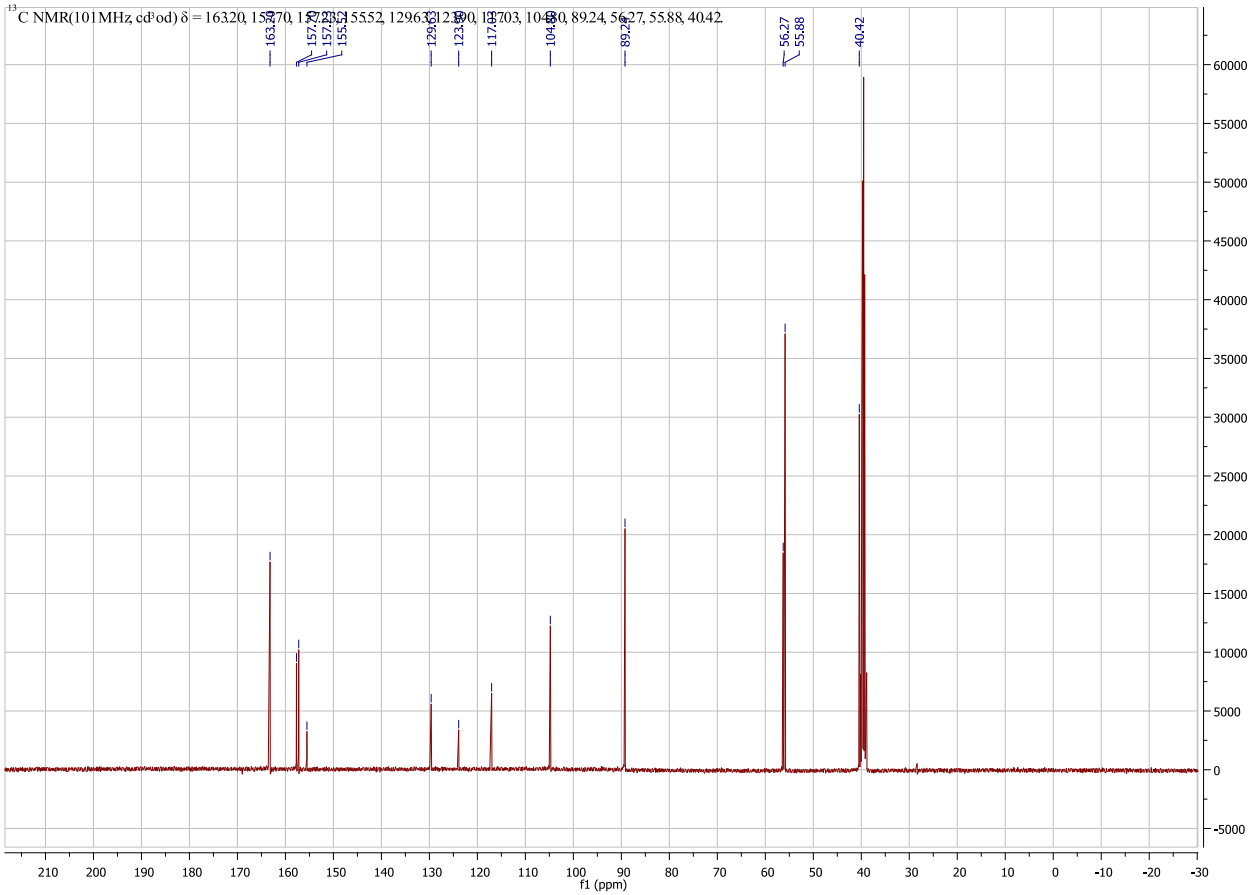
*(2,6-dimethoxyphenyl)-bis(4-didecylamino-2,6-dimethoxyphenyl)-methylium hexafluorophosphate (**6b**):*

Co-crystallizes with didecylamine.

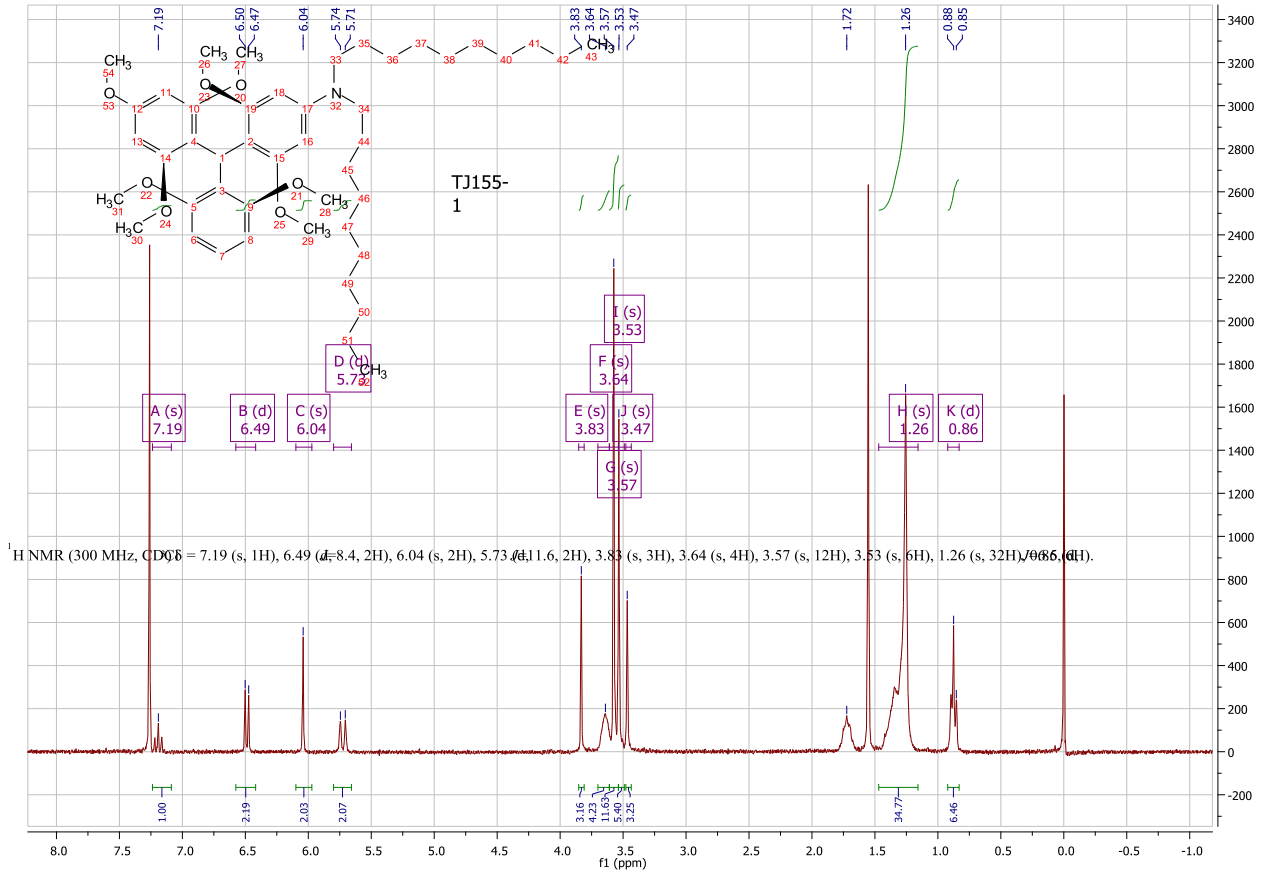


*(2,6-dimethoxyphenyl)-bis(4-dimethylamino-2,6-dimethoxyphenyl)-methylium hexafluorophosphate (**6c**):*

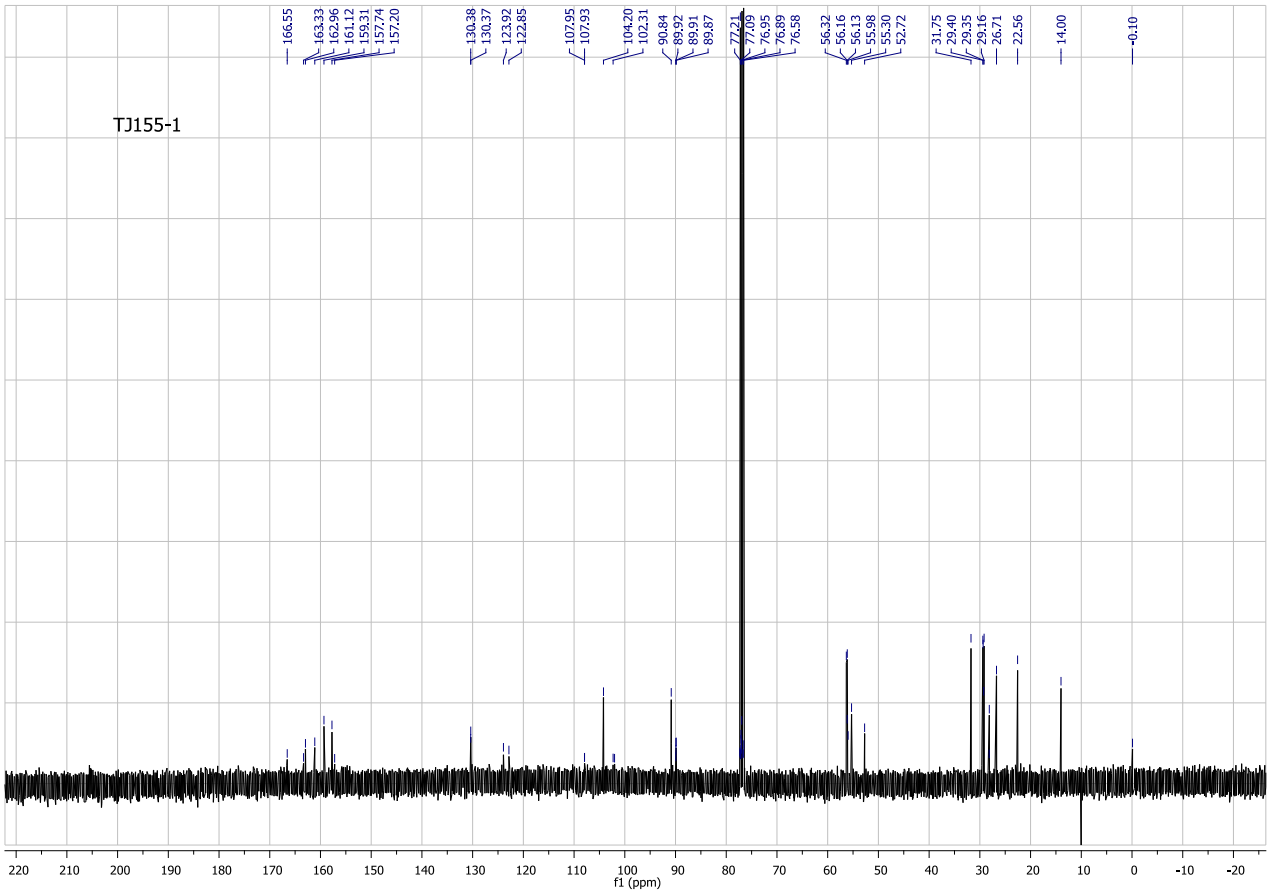




(2,6-dimethoxyphenyl)-(2,4,6-trimethoxyphenyl)- (4-didecylamino-2,6-trimethoxyphenyl)-methylium tetrafluoroborate (7):



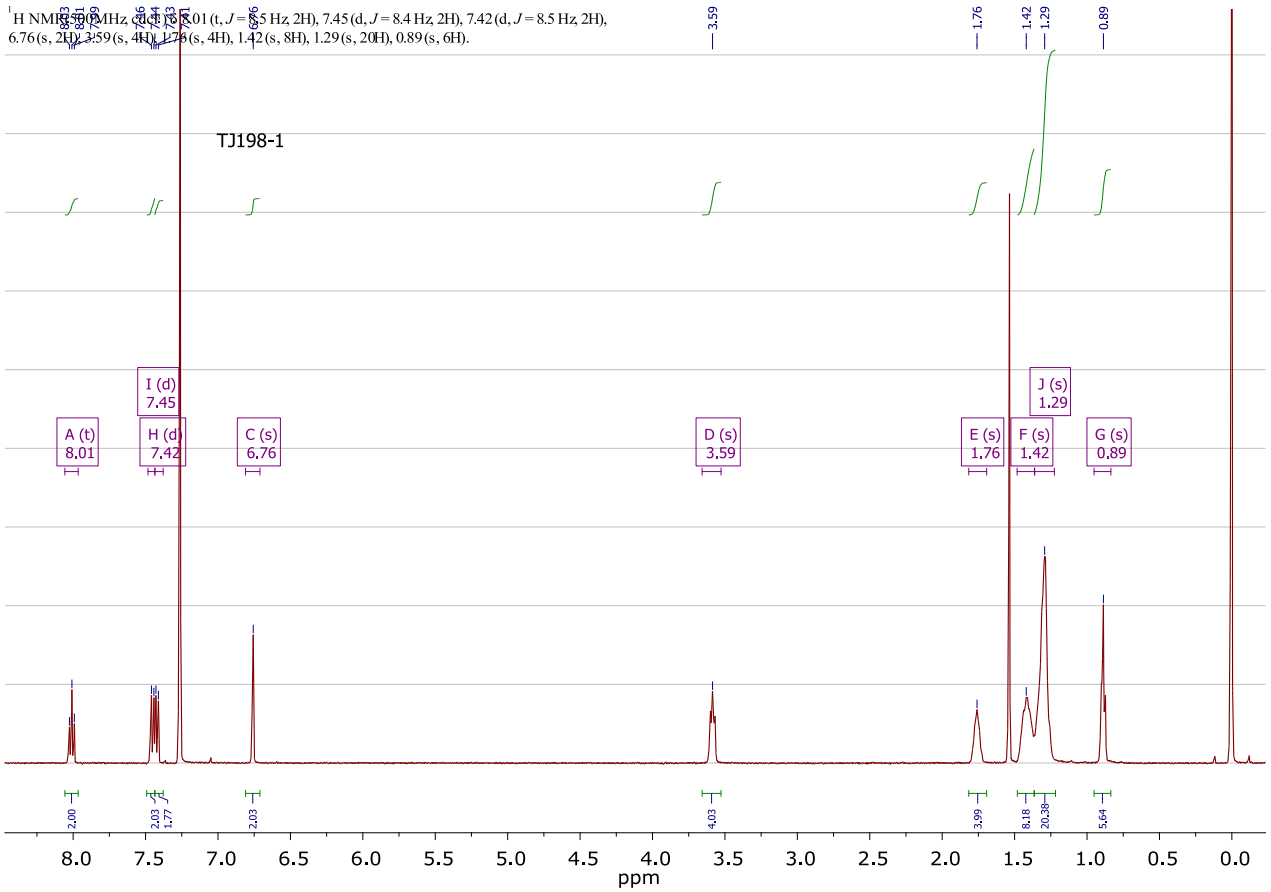
^{1}H NMR (300 MHz, CDCl$_3$) δ = 7.19 (s, 1H), 6.49 (*d*=8.4, 2H), 6.04 (s, 2H), 5.73 (*d*=11.6, 2H), 3.83 (s, 3H), 3.64 (s, 4H), 3.57 (s, 12H), 3.53 (s, 6H), 1.26 (s, 32H), 0.86 (t, 6H).

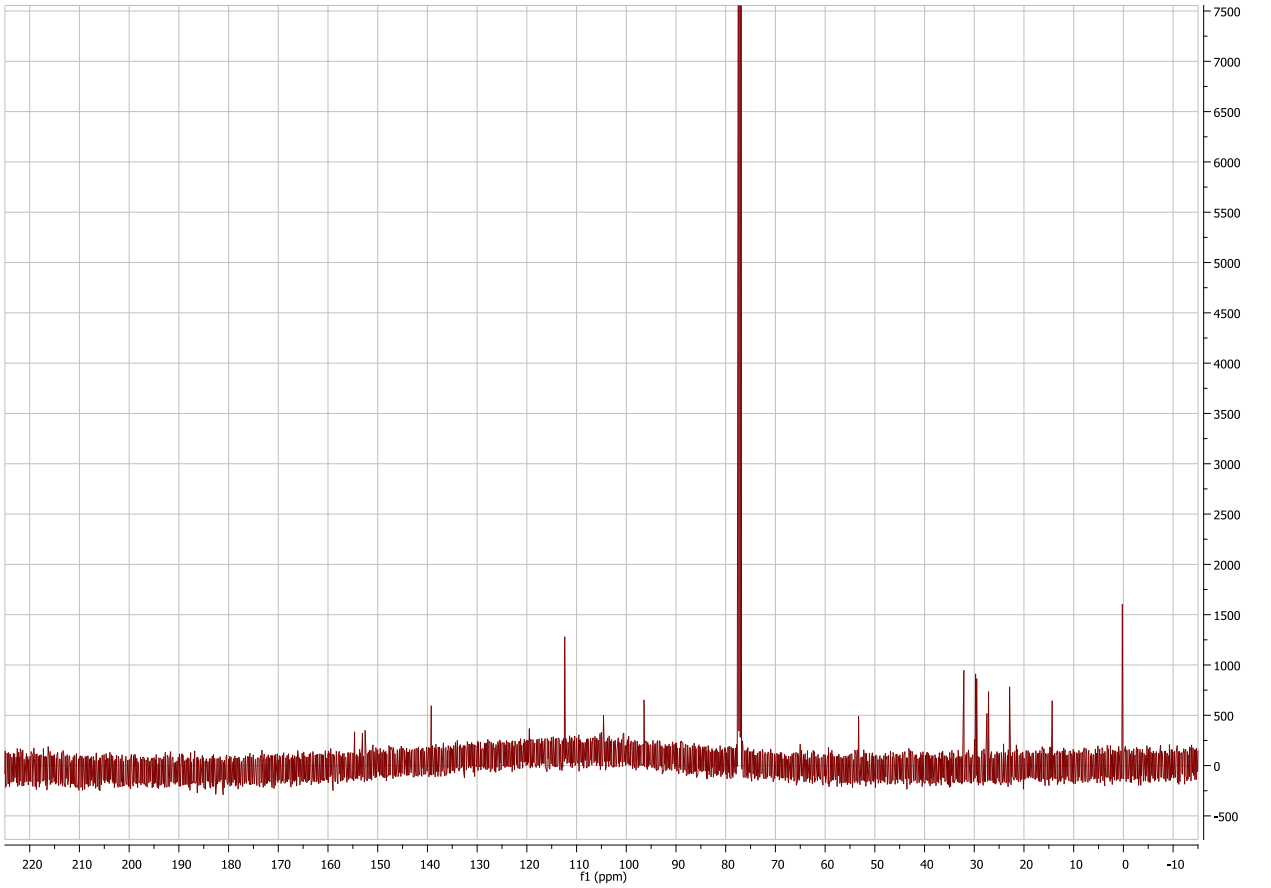


*Diethylamino-trioxatriangulenium hexafluorophosphate (**8a**):*

Only traces isolated!

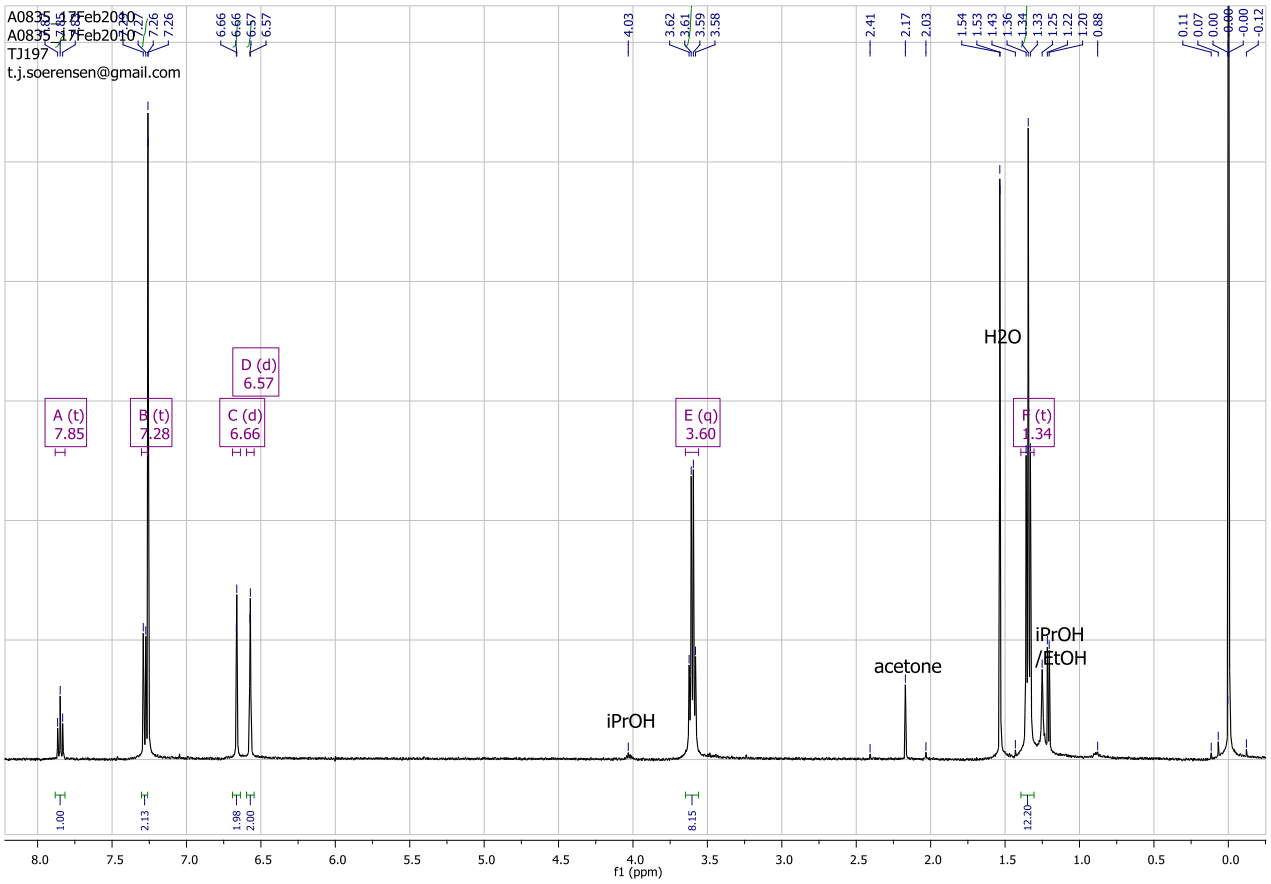
*Didecylamino-trioxatriangulenium hexafluorophosphate (**8b**):*



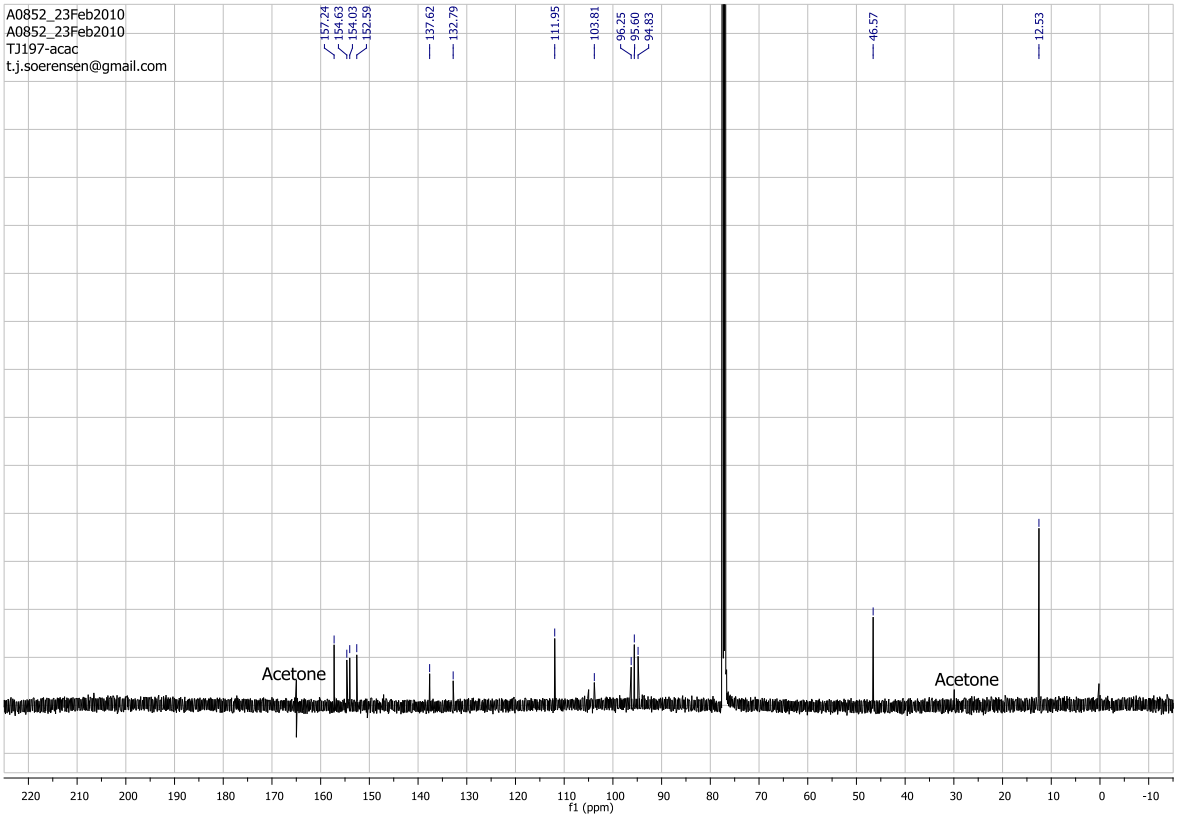


*Bis(diethylamino)-trioxatriangulenium hexafluorophosphate (**9a**):*

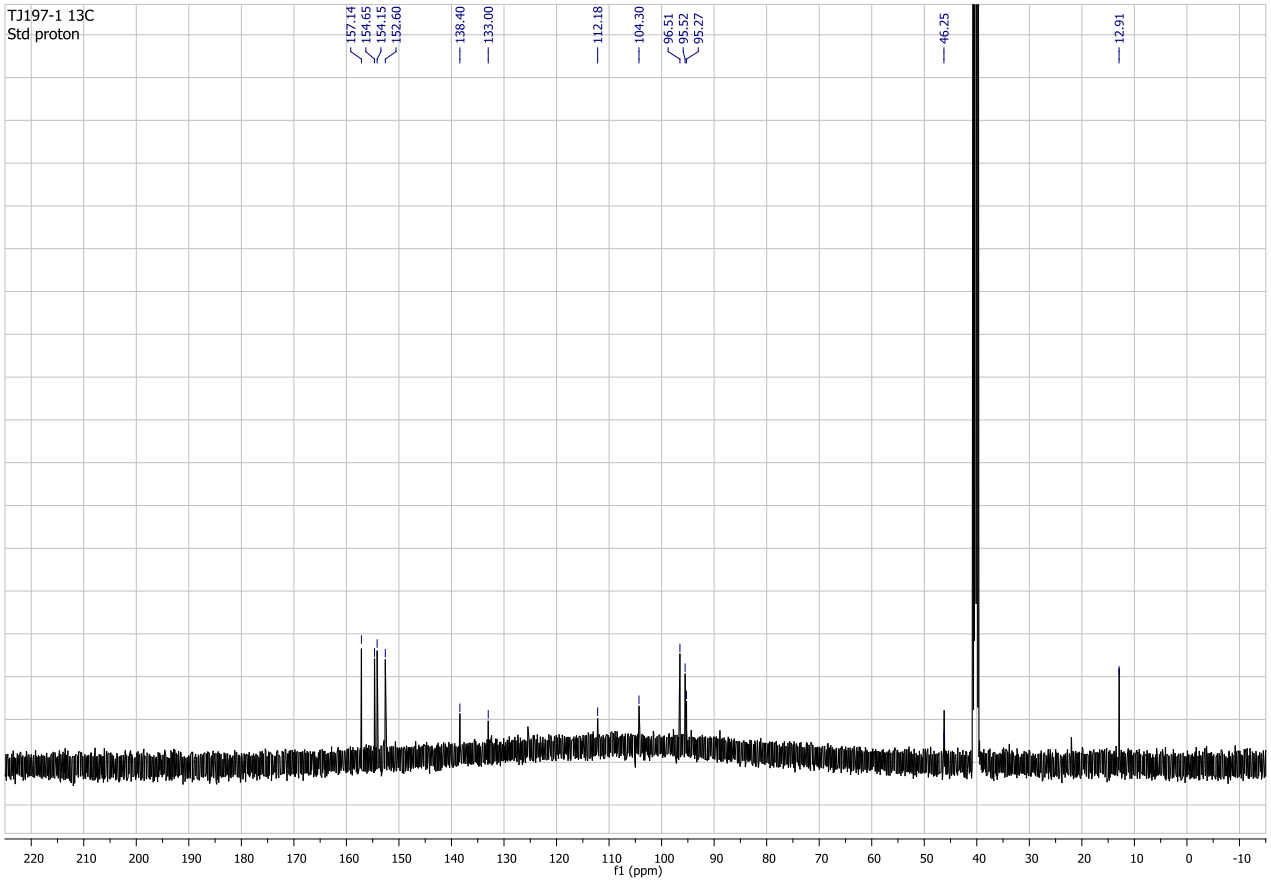
H NMR



C NMR with $Cr(acac)_3$


A0852_23Feb2010
A0852_23Feb2010
TJ197-acac
t.j.soerensen@gmail.com
157.24
154.63
154.03
152.59
137.62
132.79
111.95
103.81
96.25
95.60
94.83
46.57
12.53
Acetone
Acetone
f1 (ppm)

C NMR


TJ197-1 13C
Std proton
157.14
154.65
154.15
152.60
138.40
133.00
112.18
104.30
96.51
95.52
95.27
46.25
12.91
f1 (ppm)

*Bis(didecylamino)-trioxatriangulenium hexafluorophosphate (**9b**):*

Only traces isolated!