Supporting Information

Synthesis and characterization of nitrogen-based ionic liquids bearing allyl group and examples of their application

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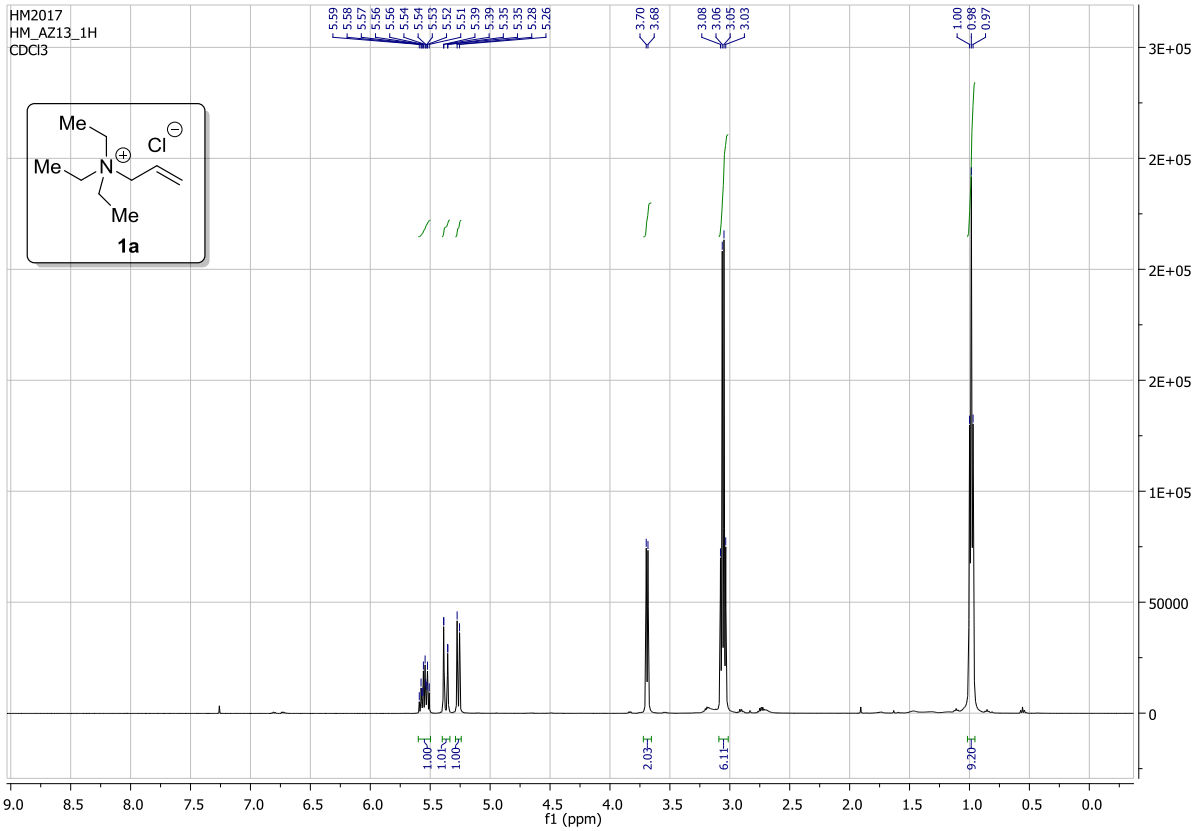
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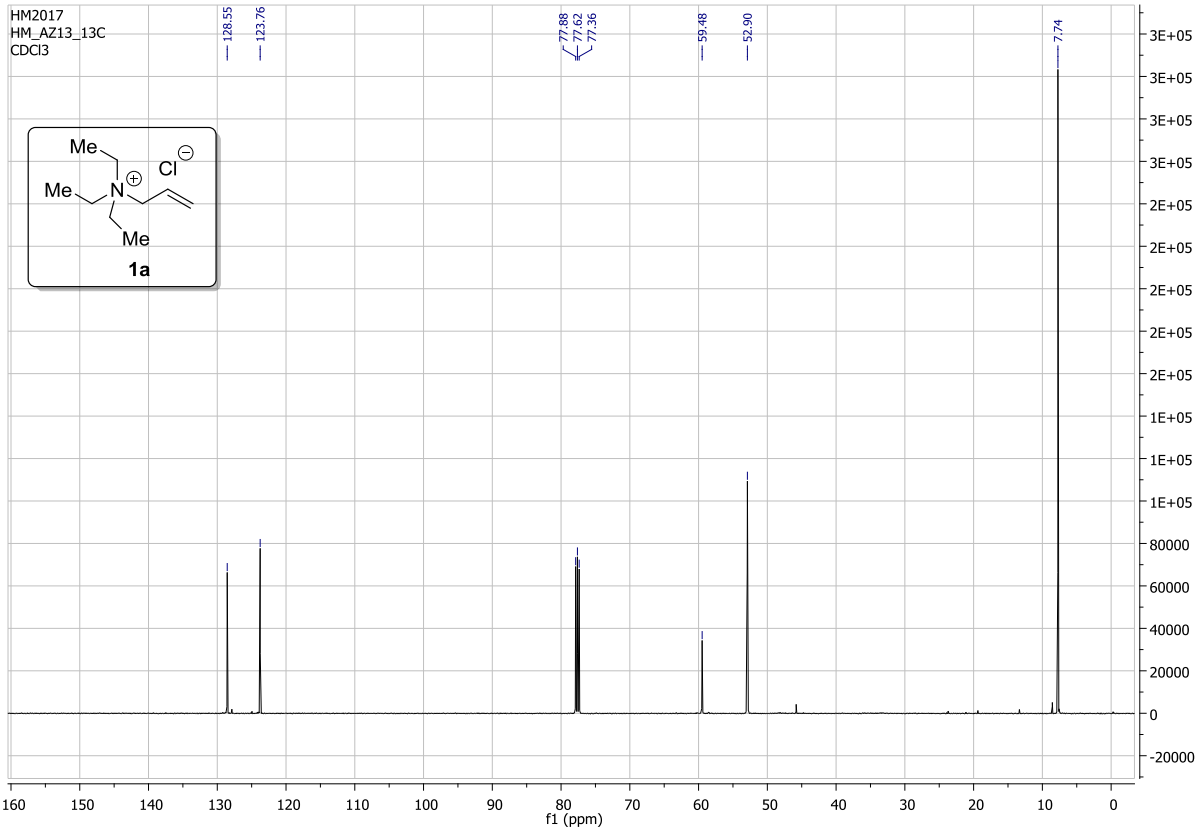
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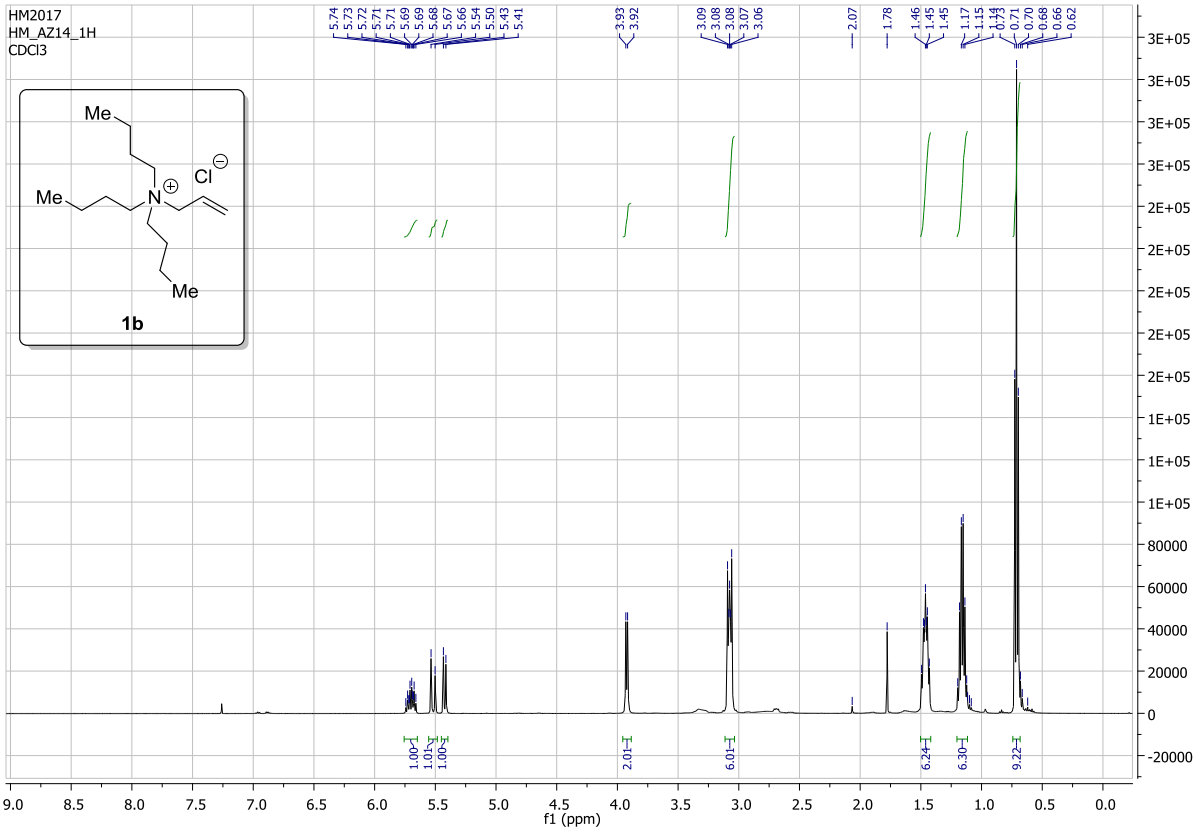
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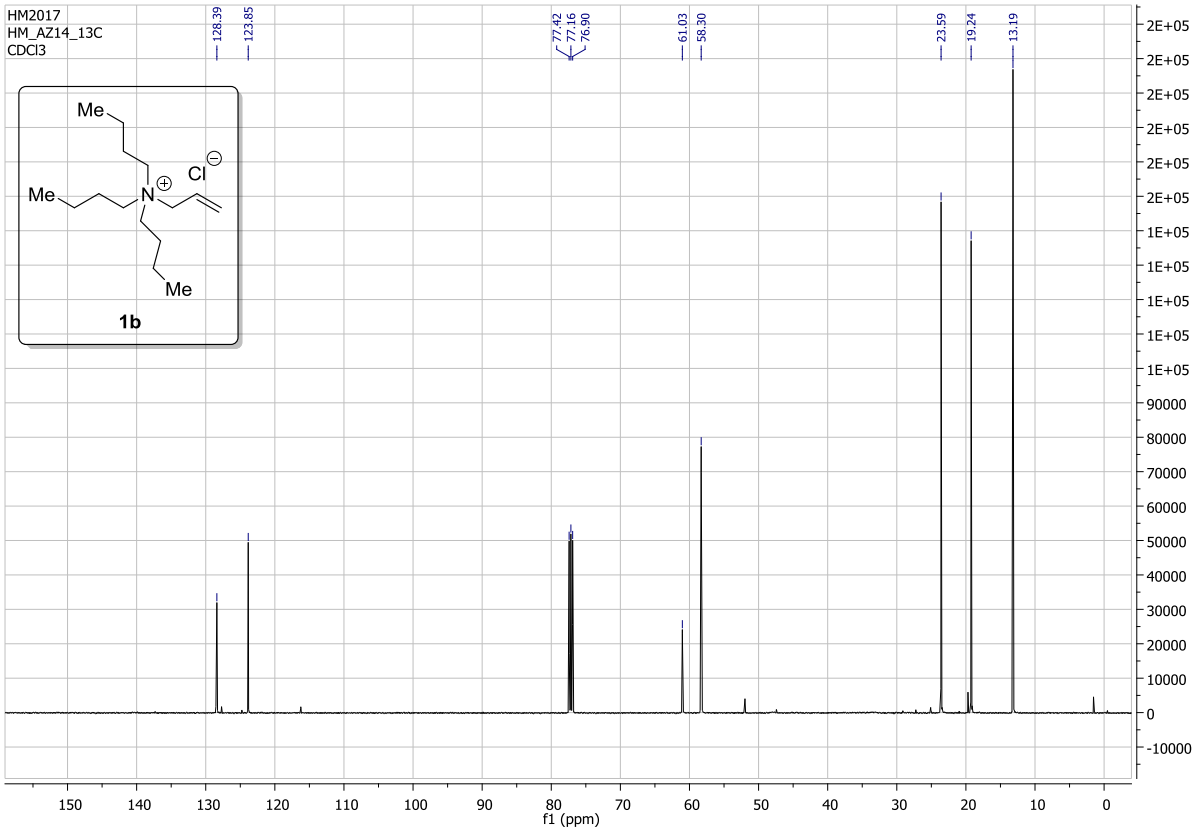
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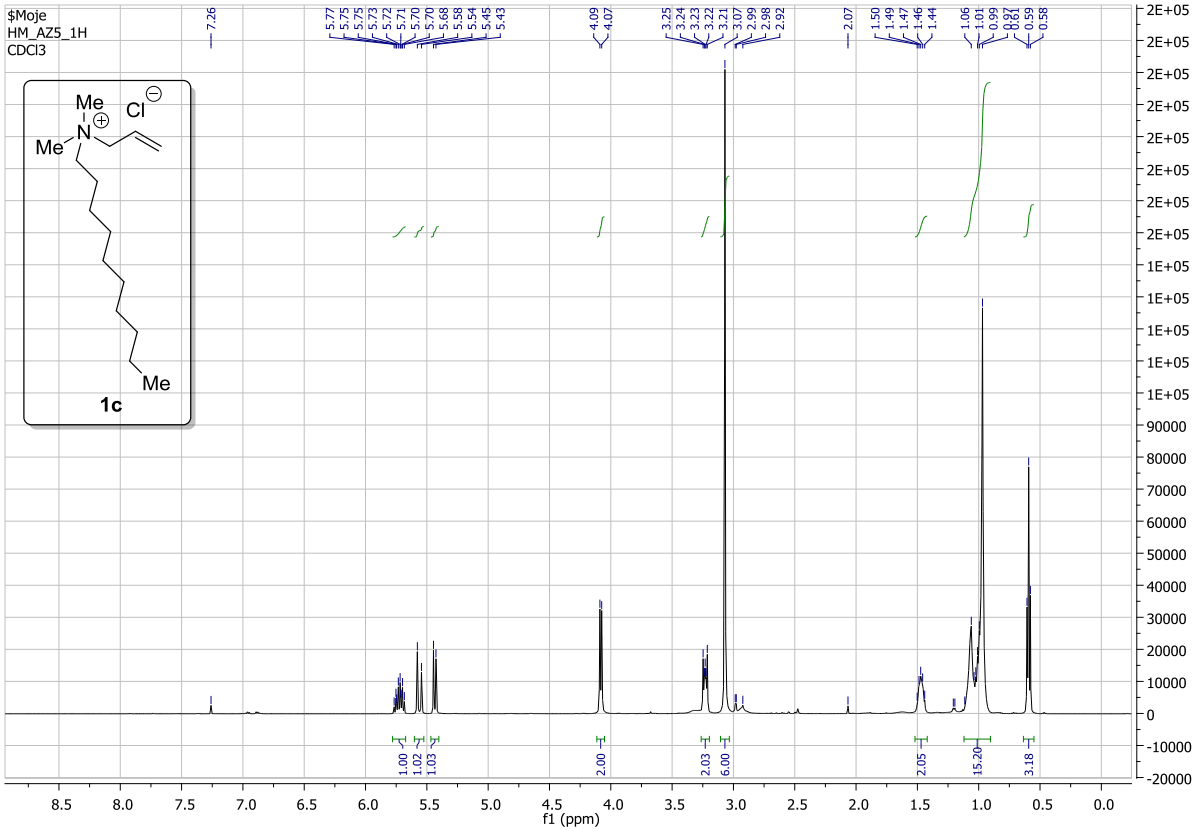
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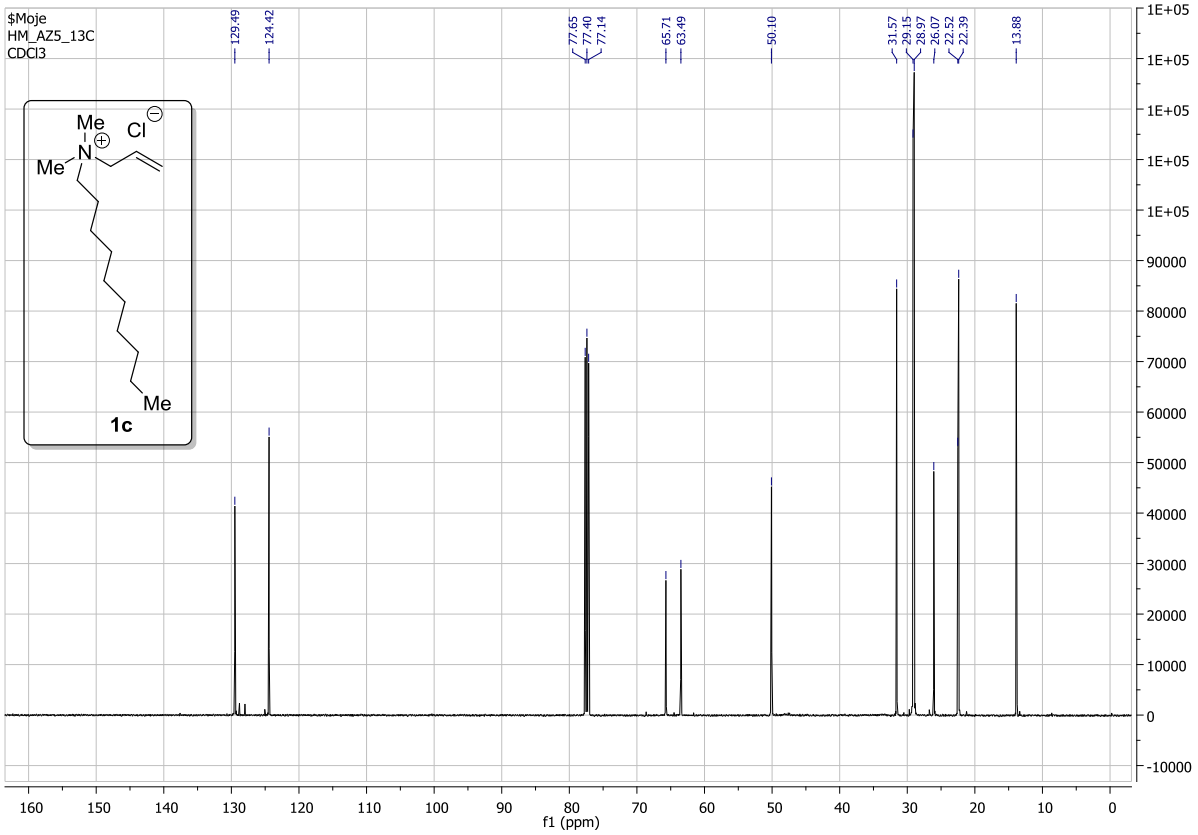
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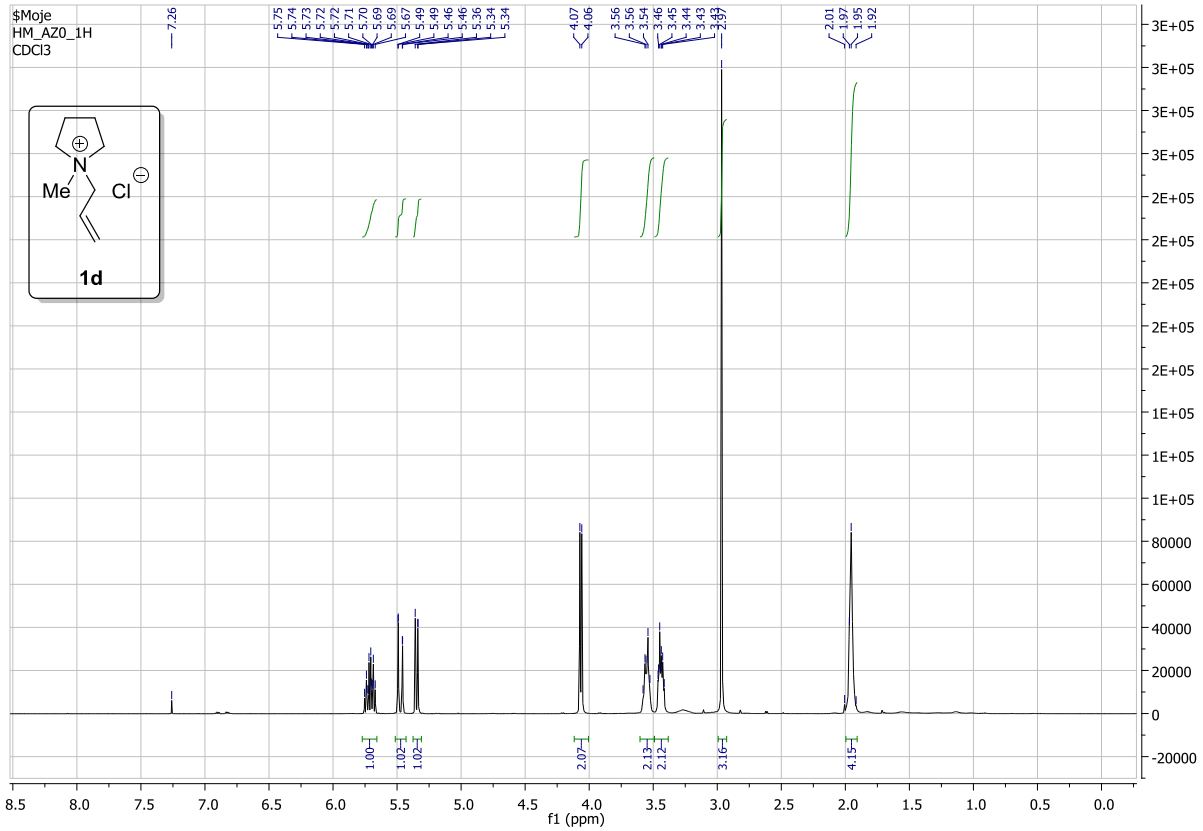
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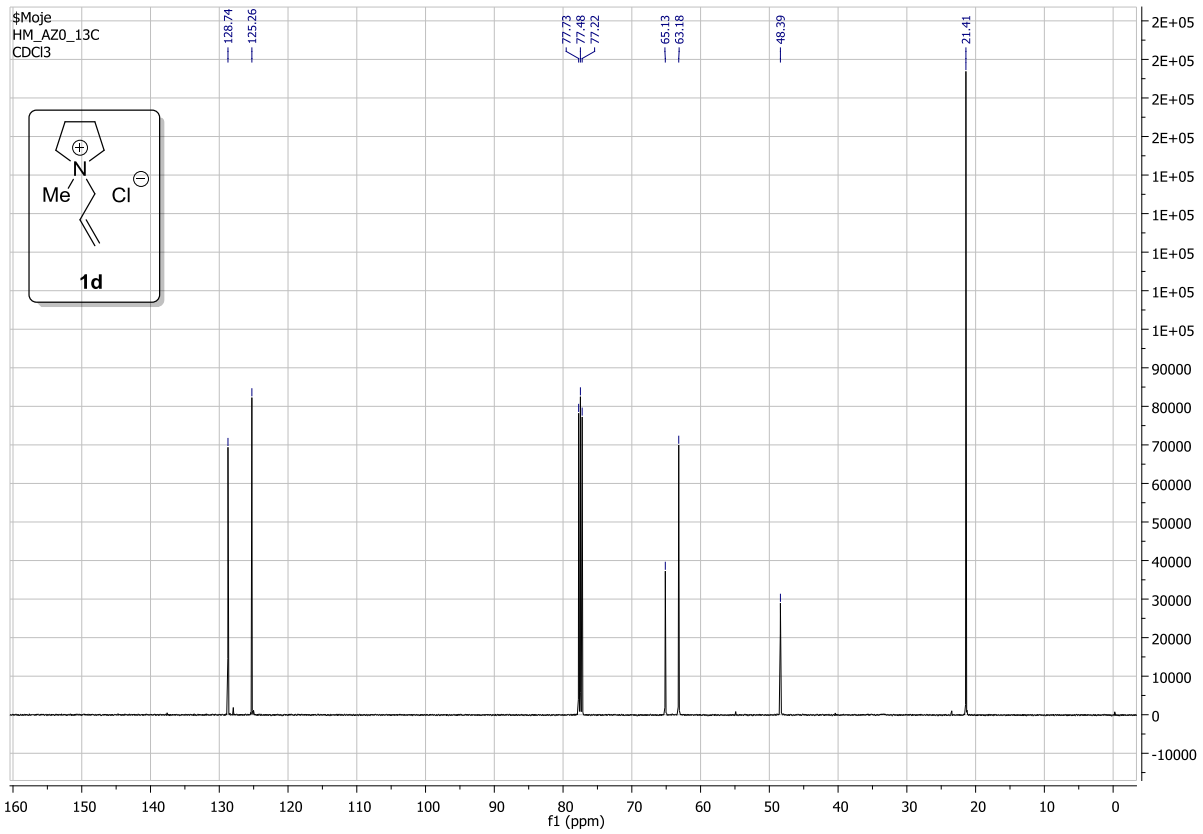
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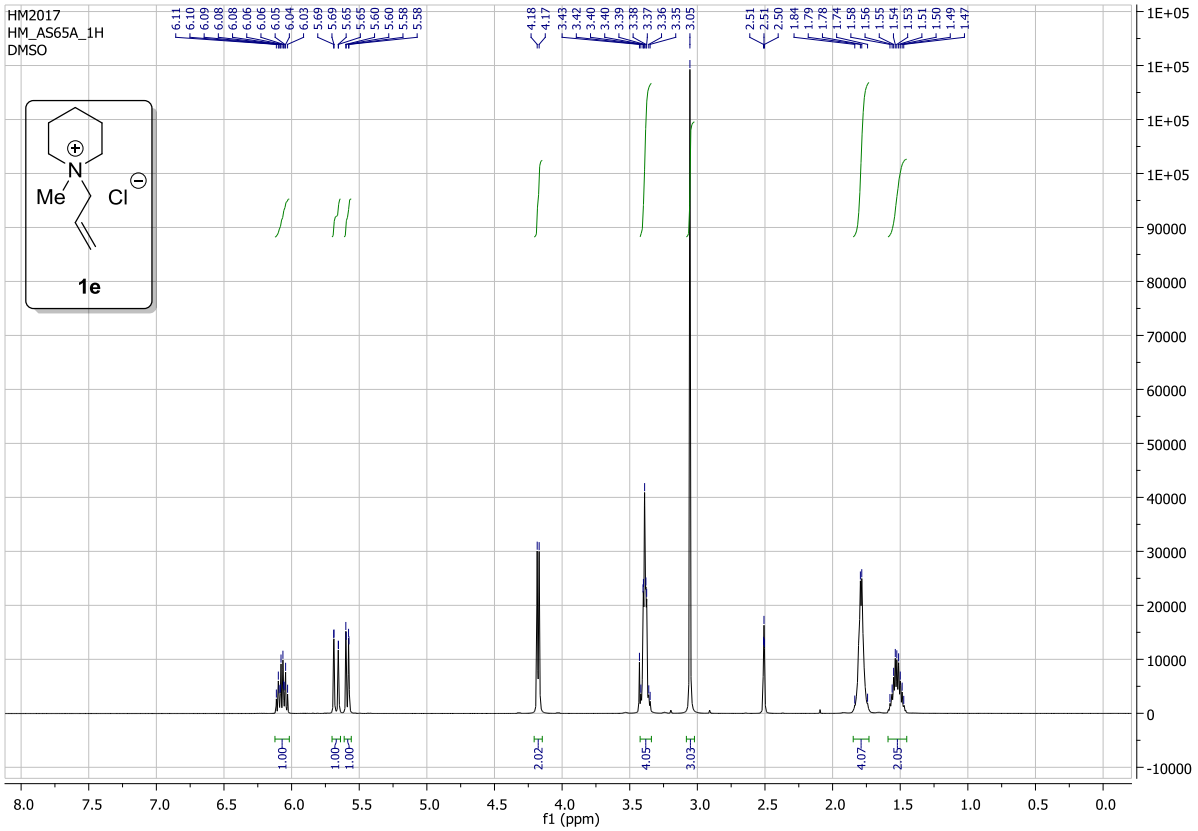
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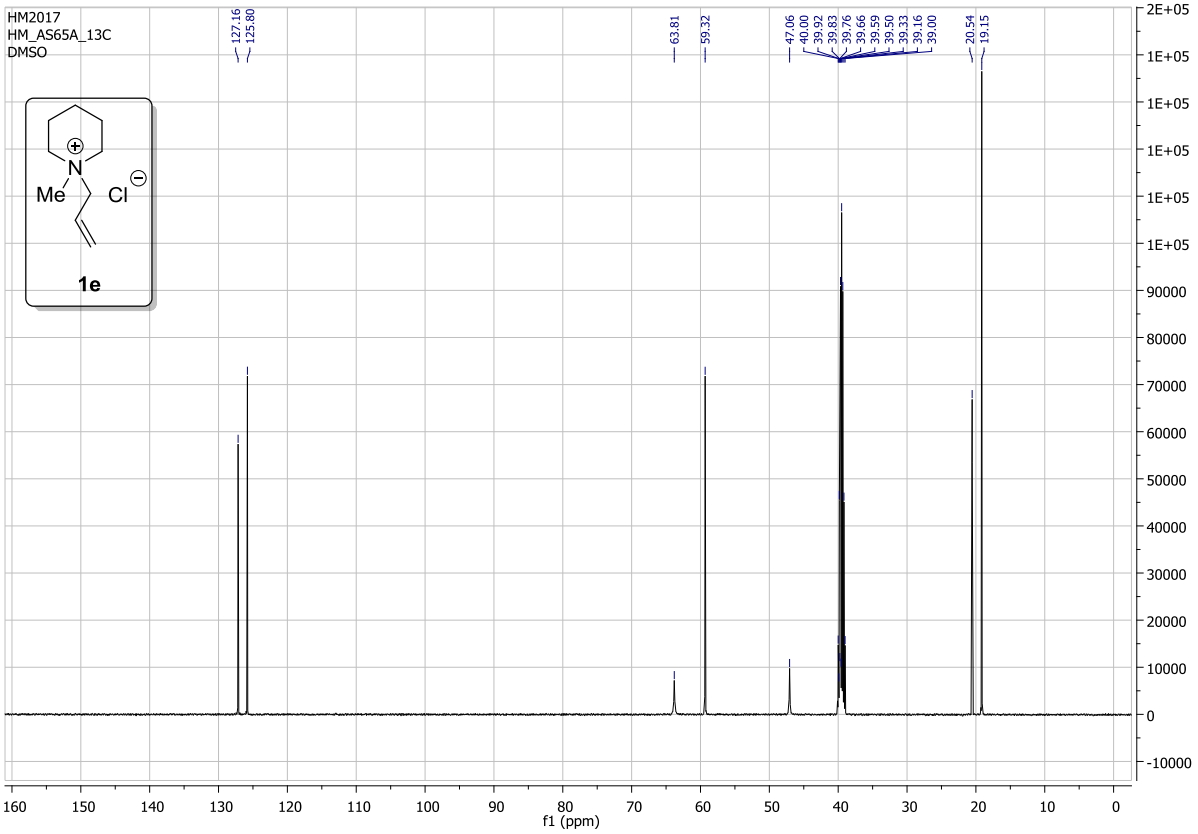
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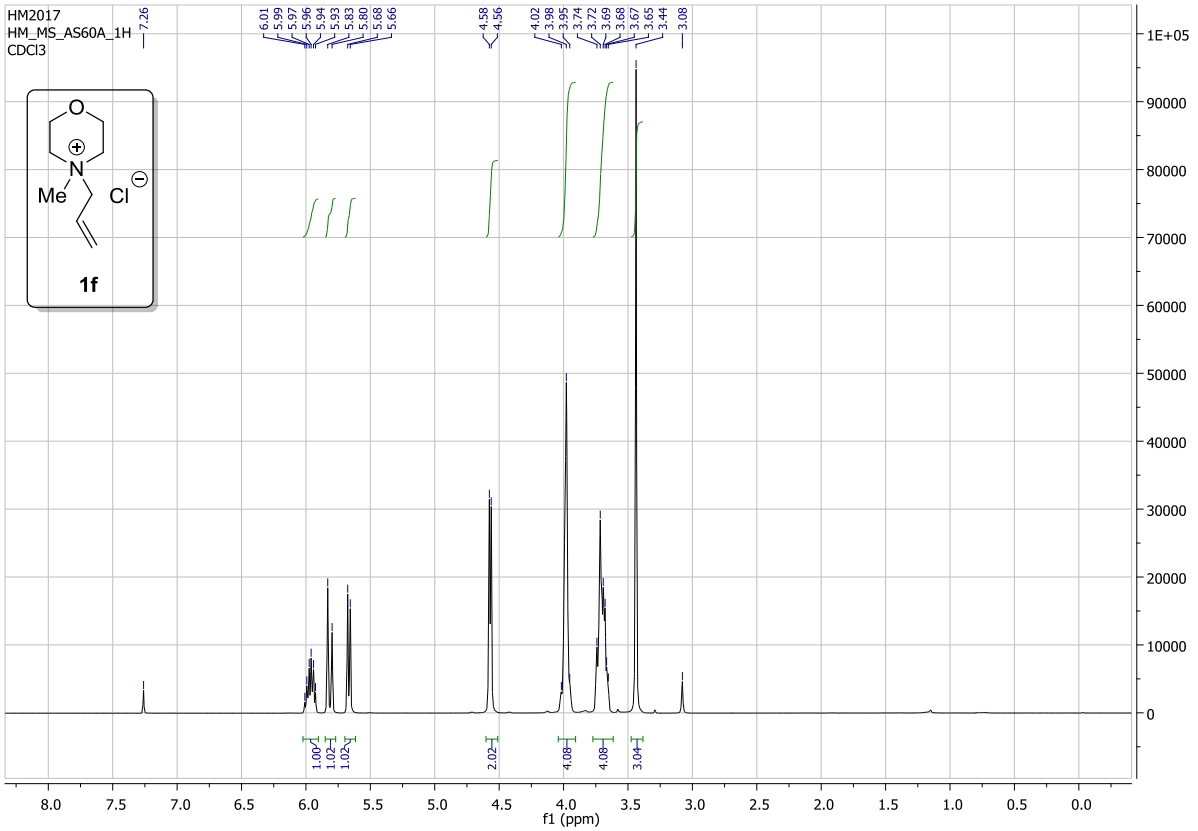
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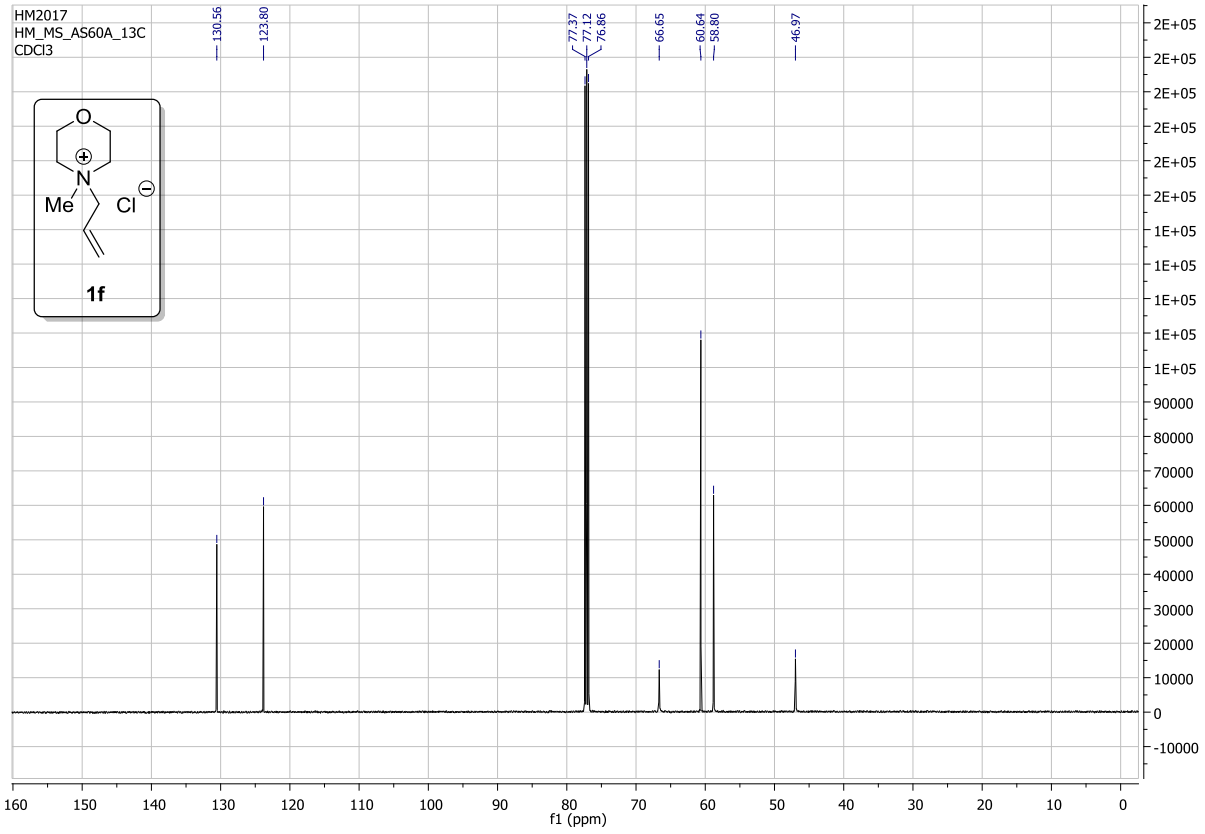
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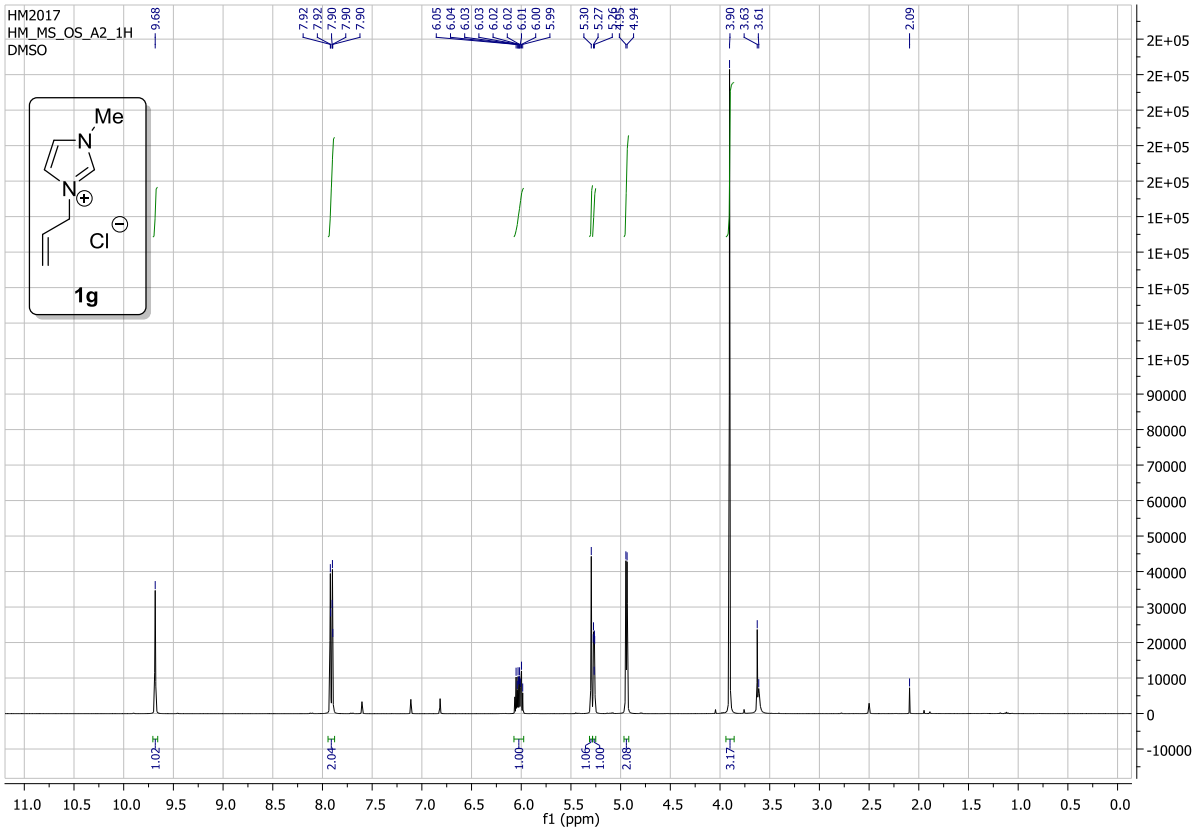
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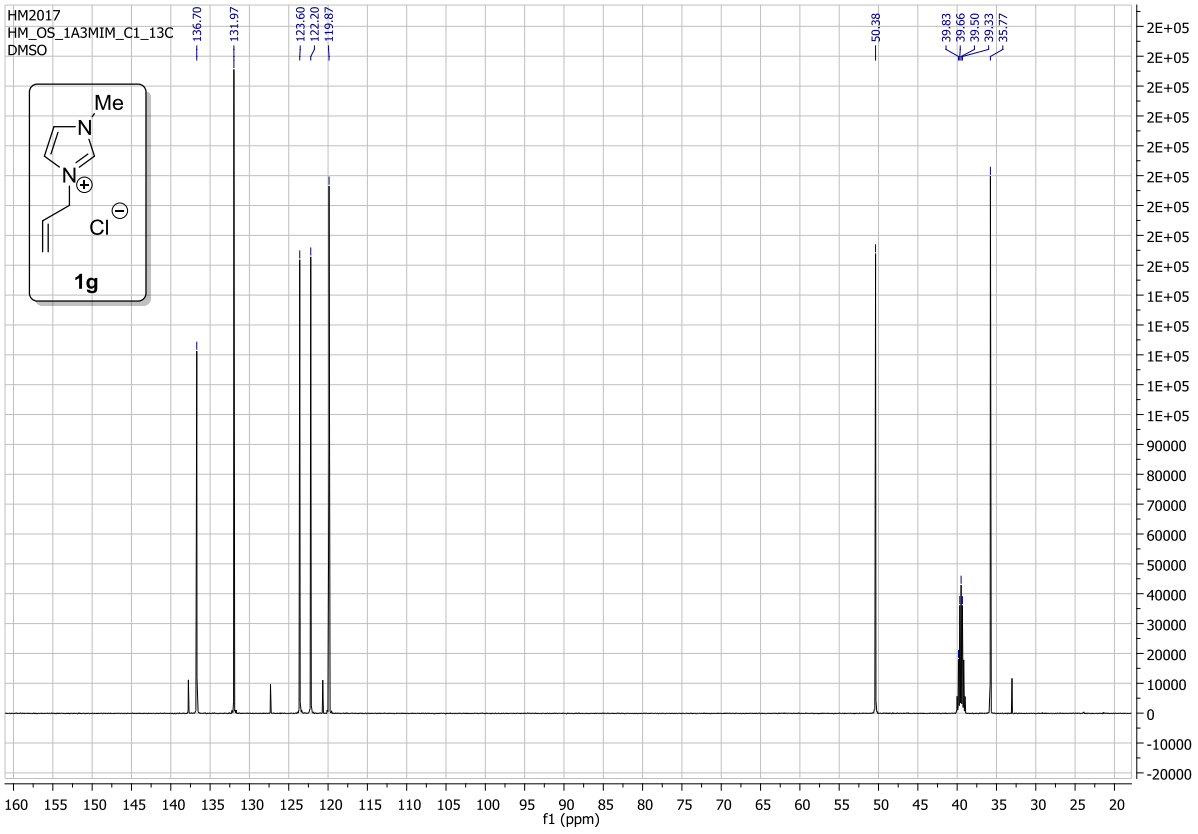
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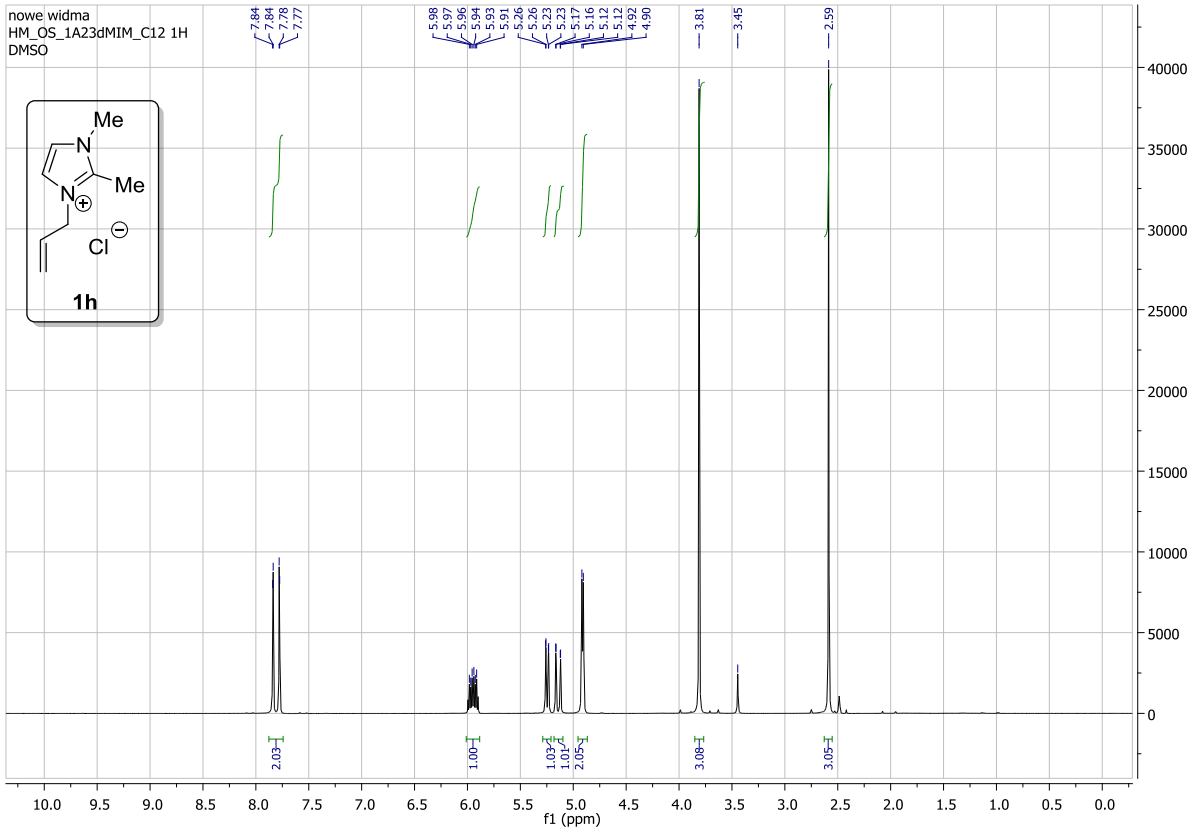
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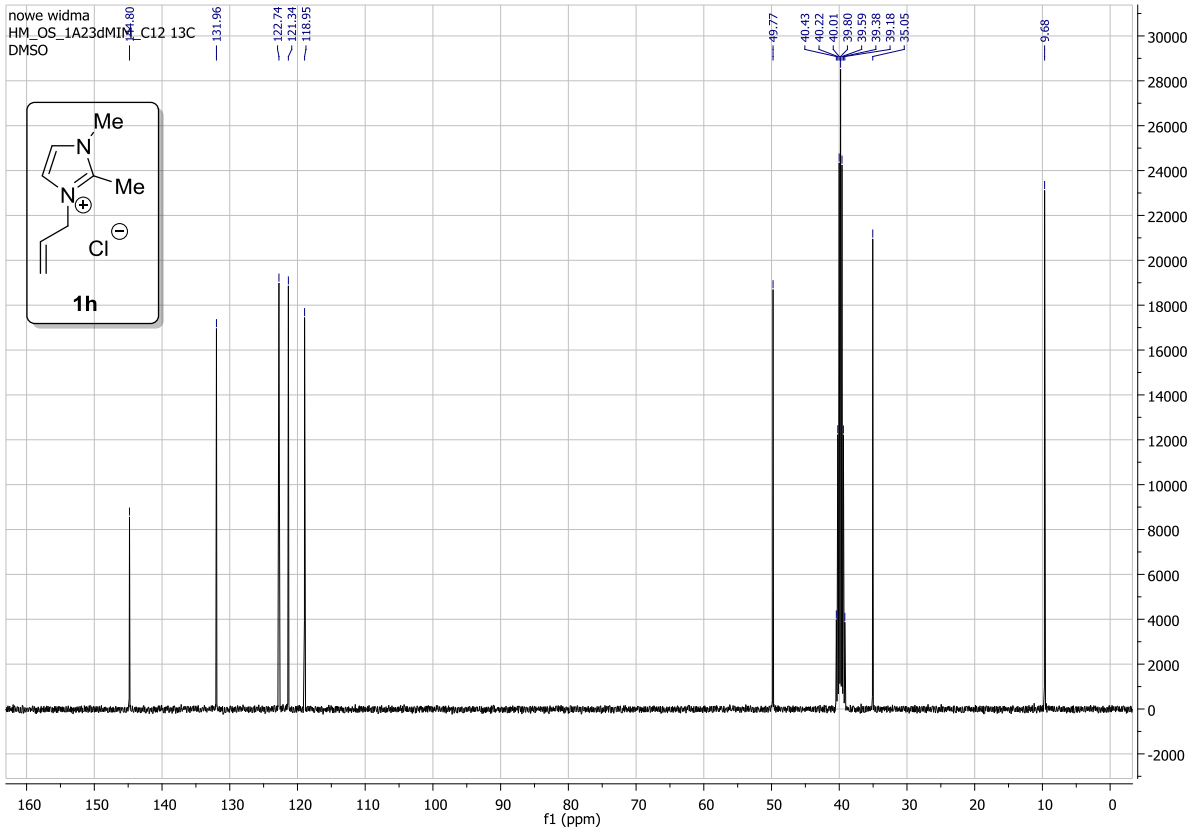
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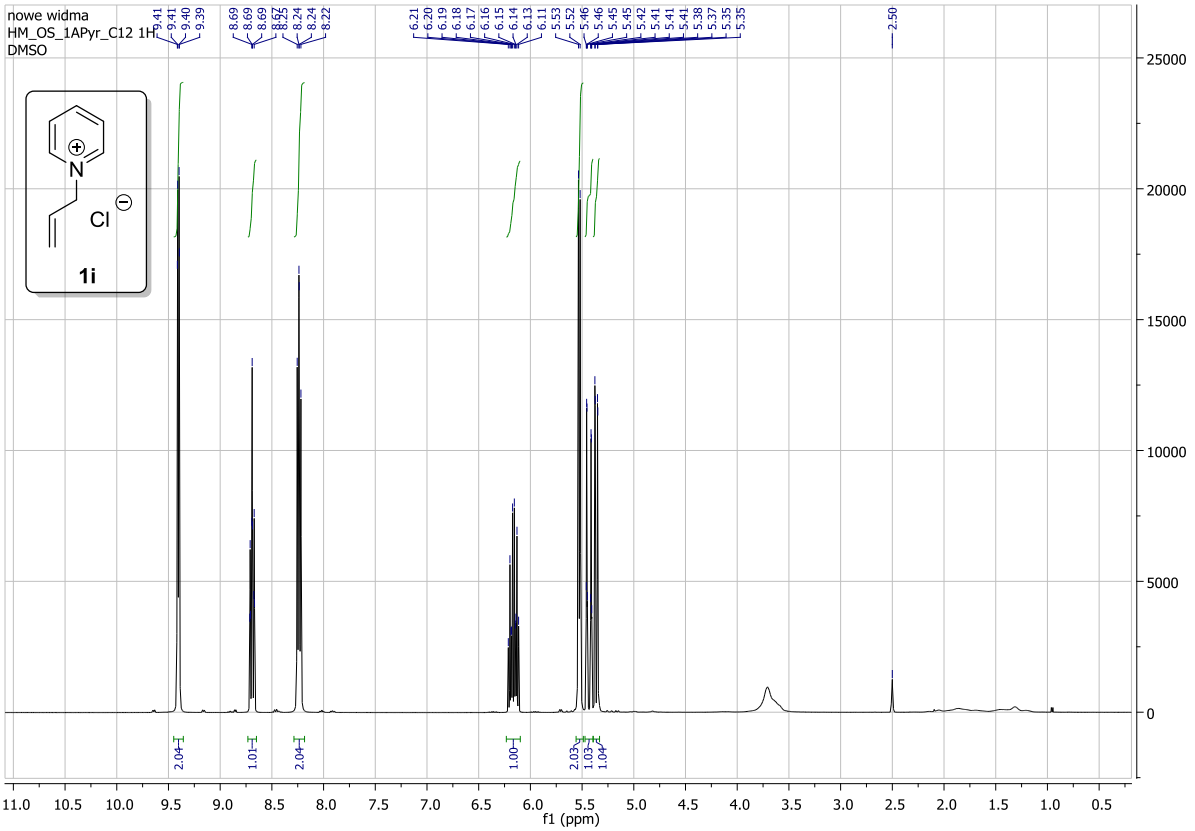
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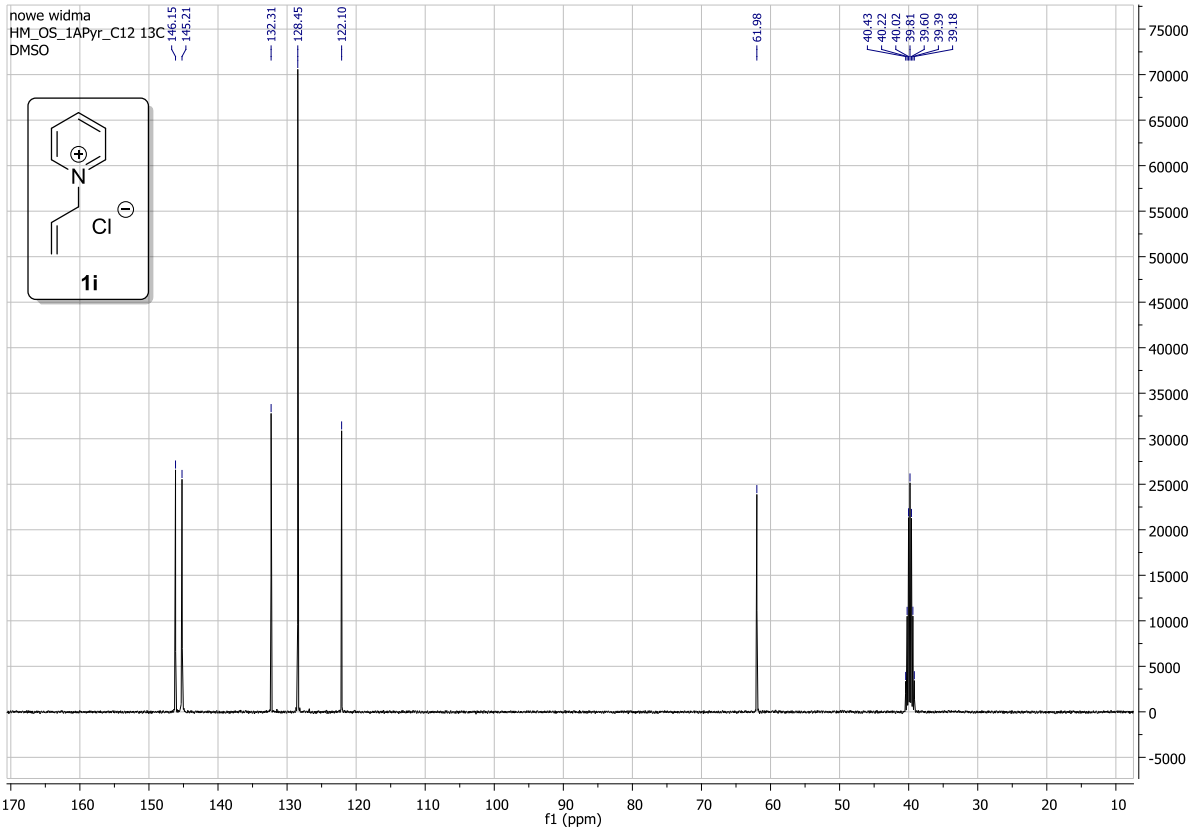
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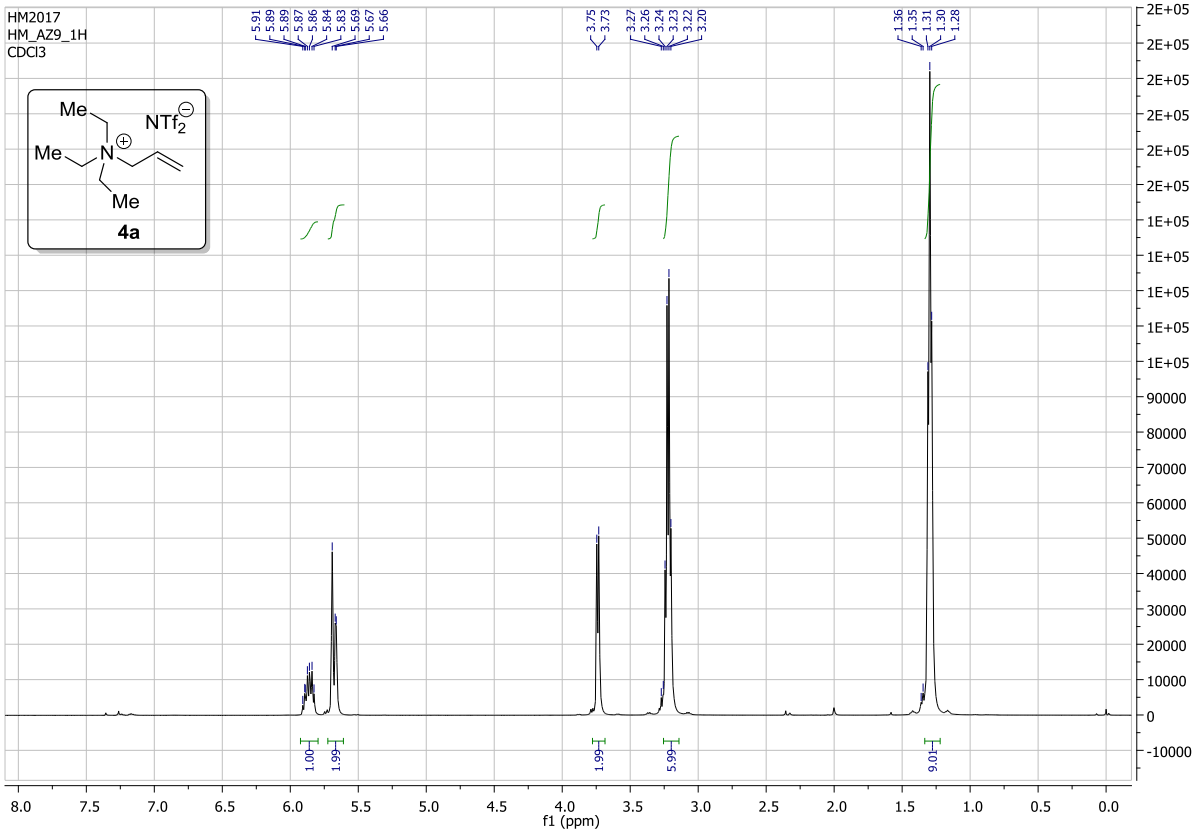
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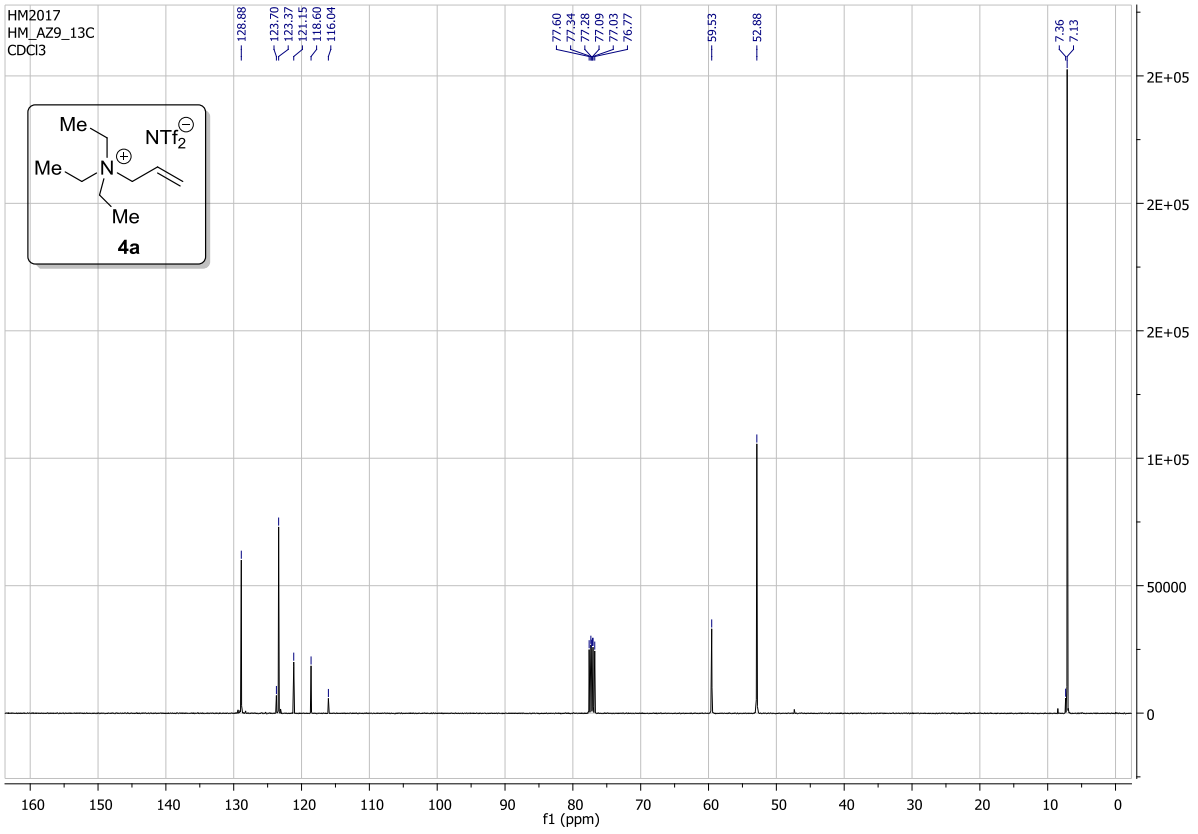
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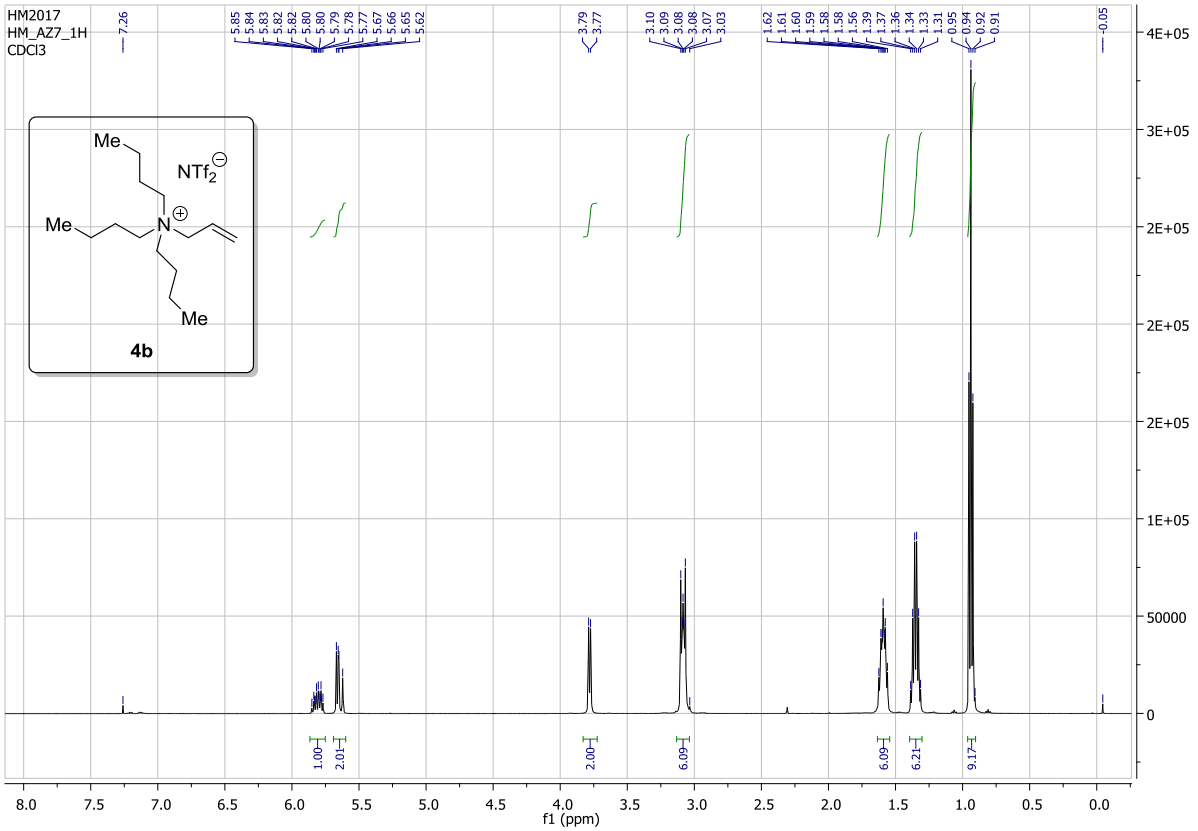
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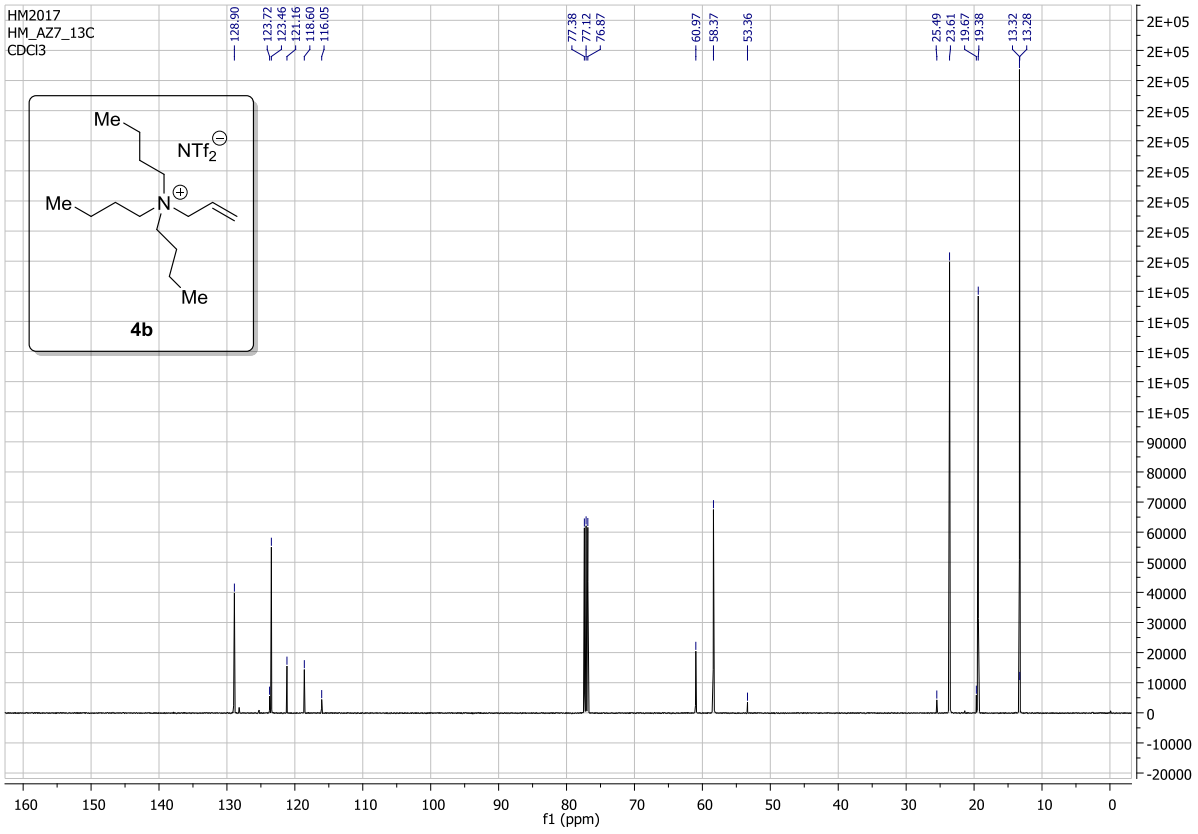
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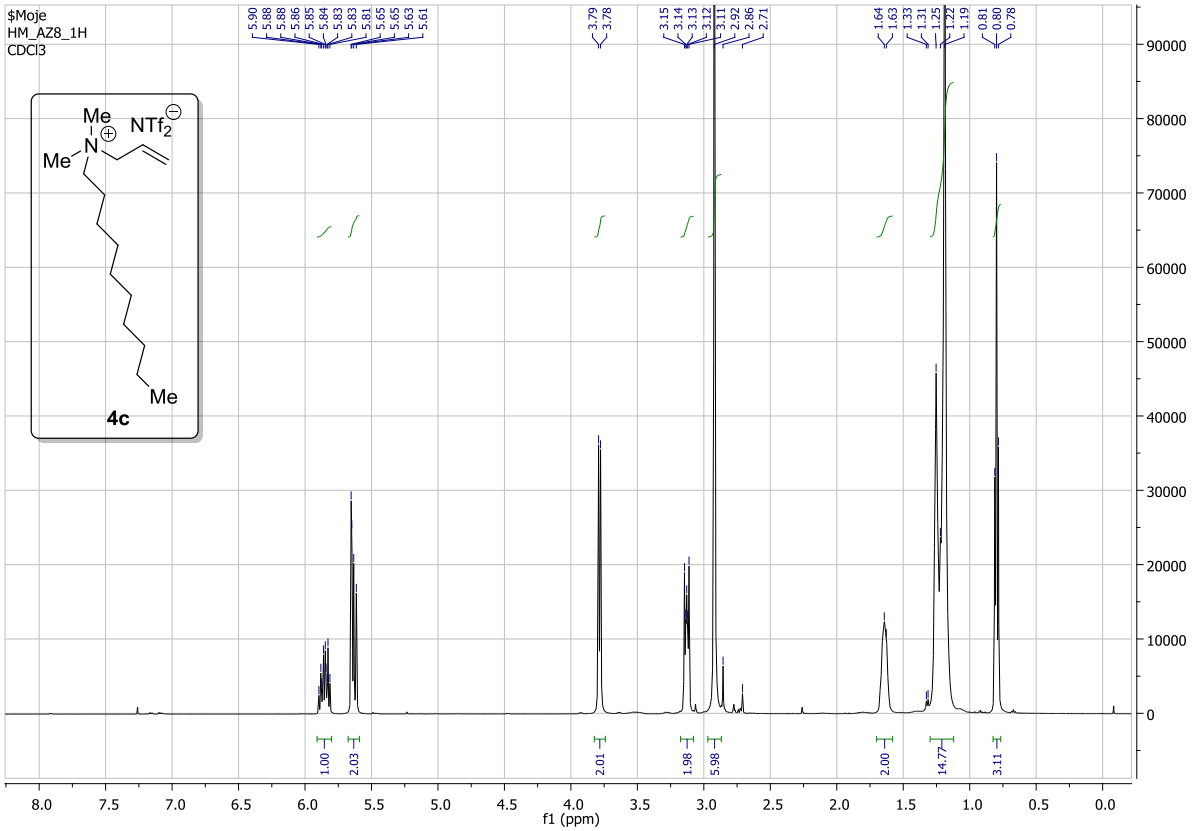
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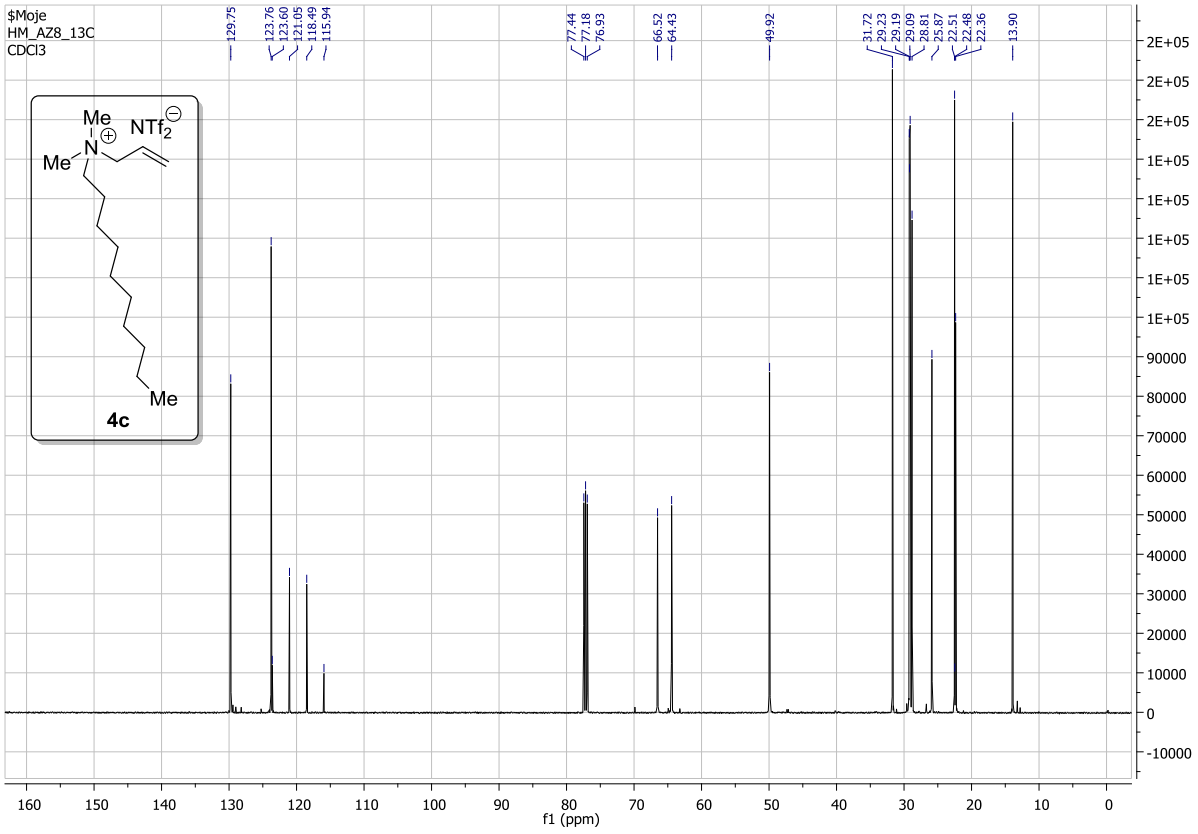
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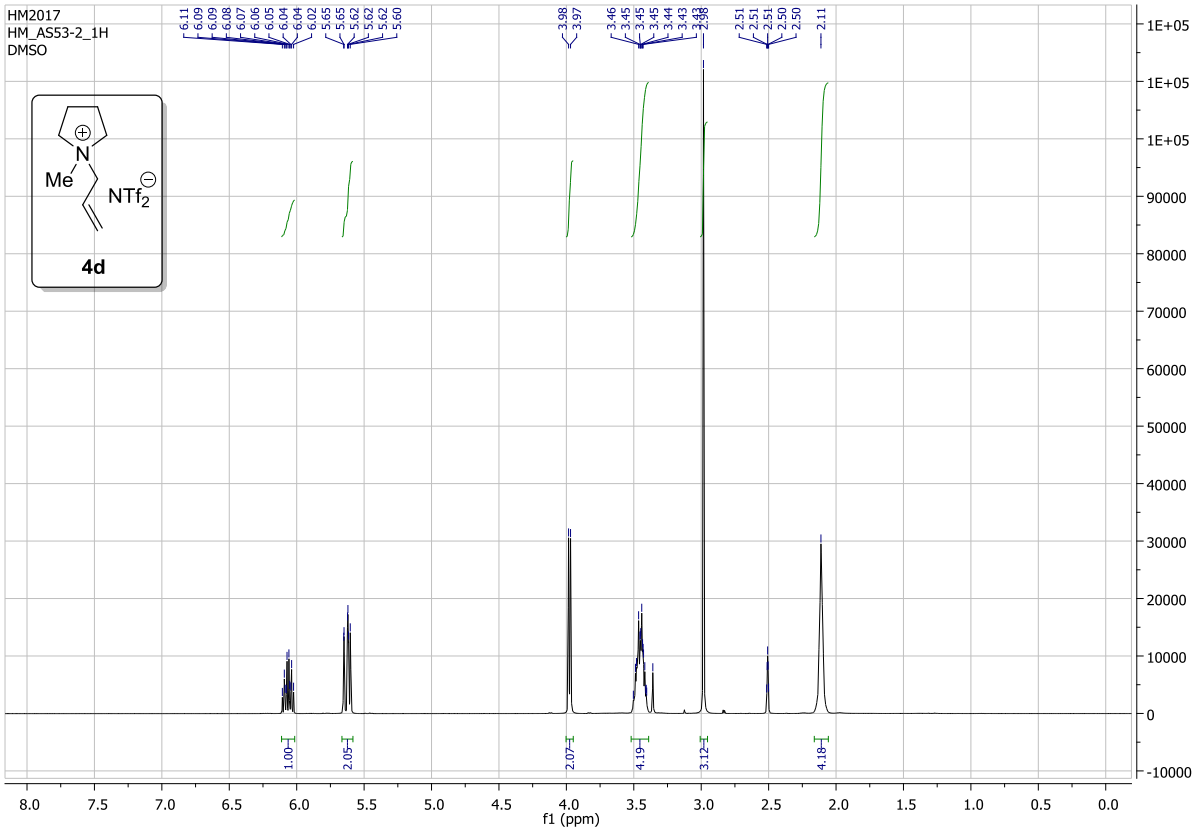
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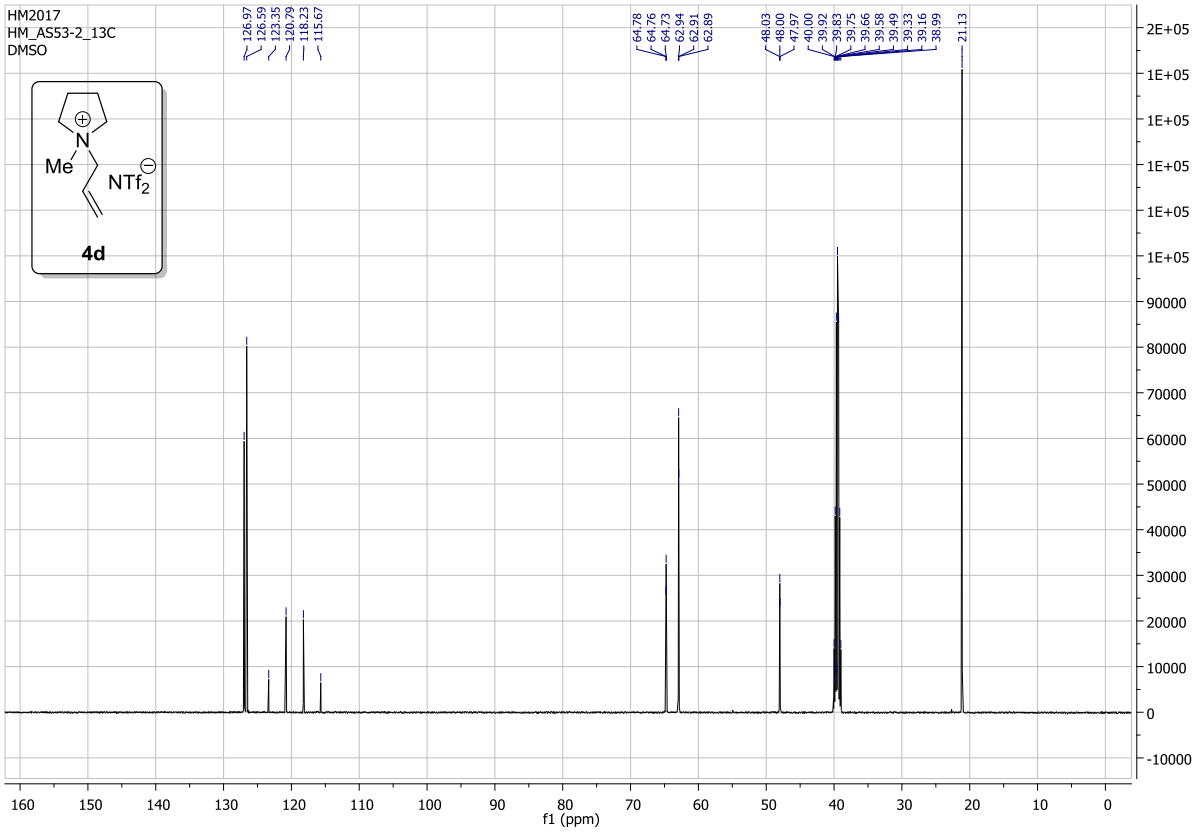
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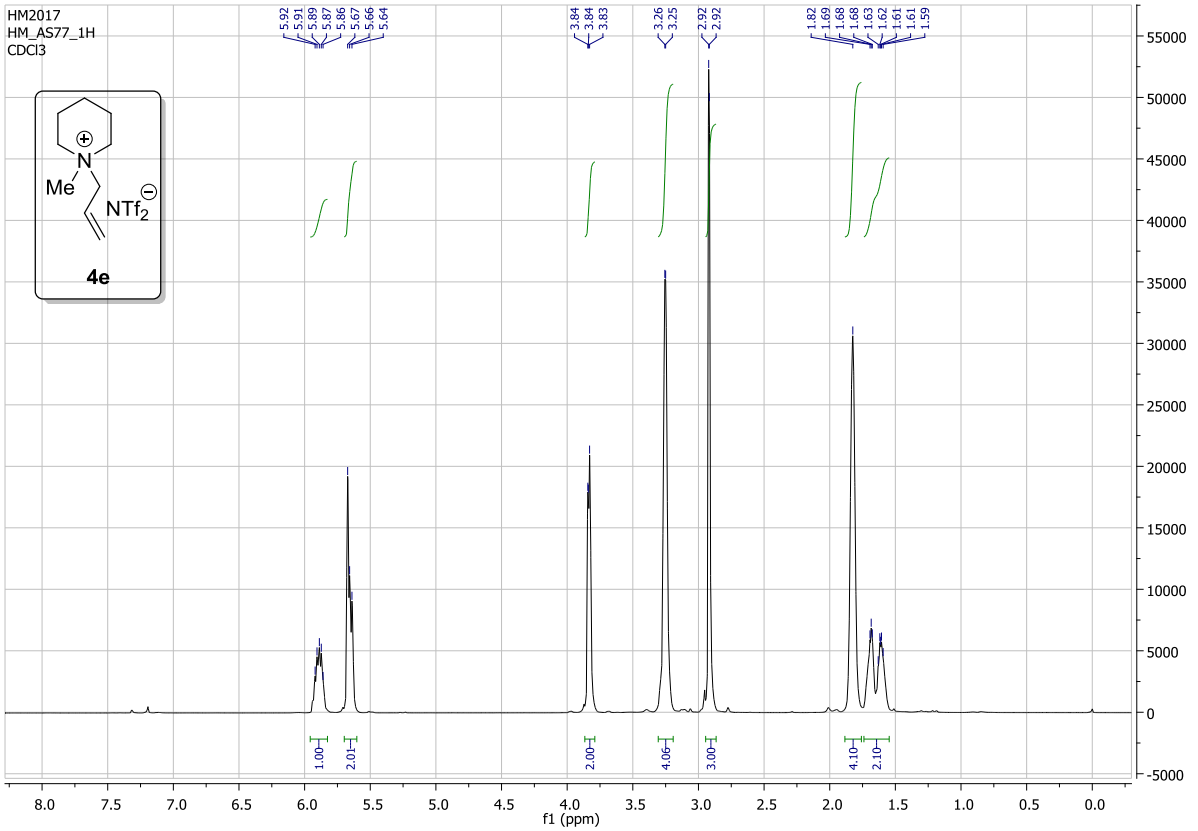
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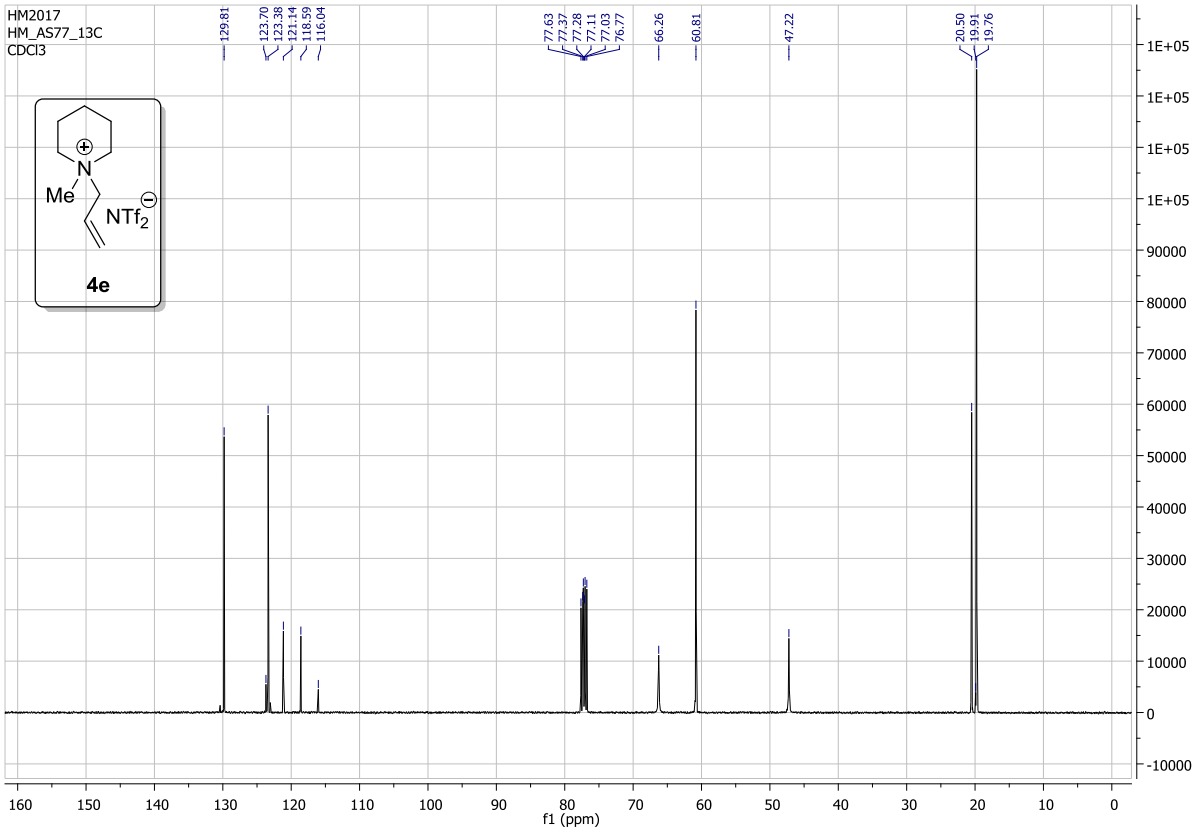
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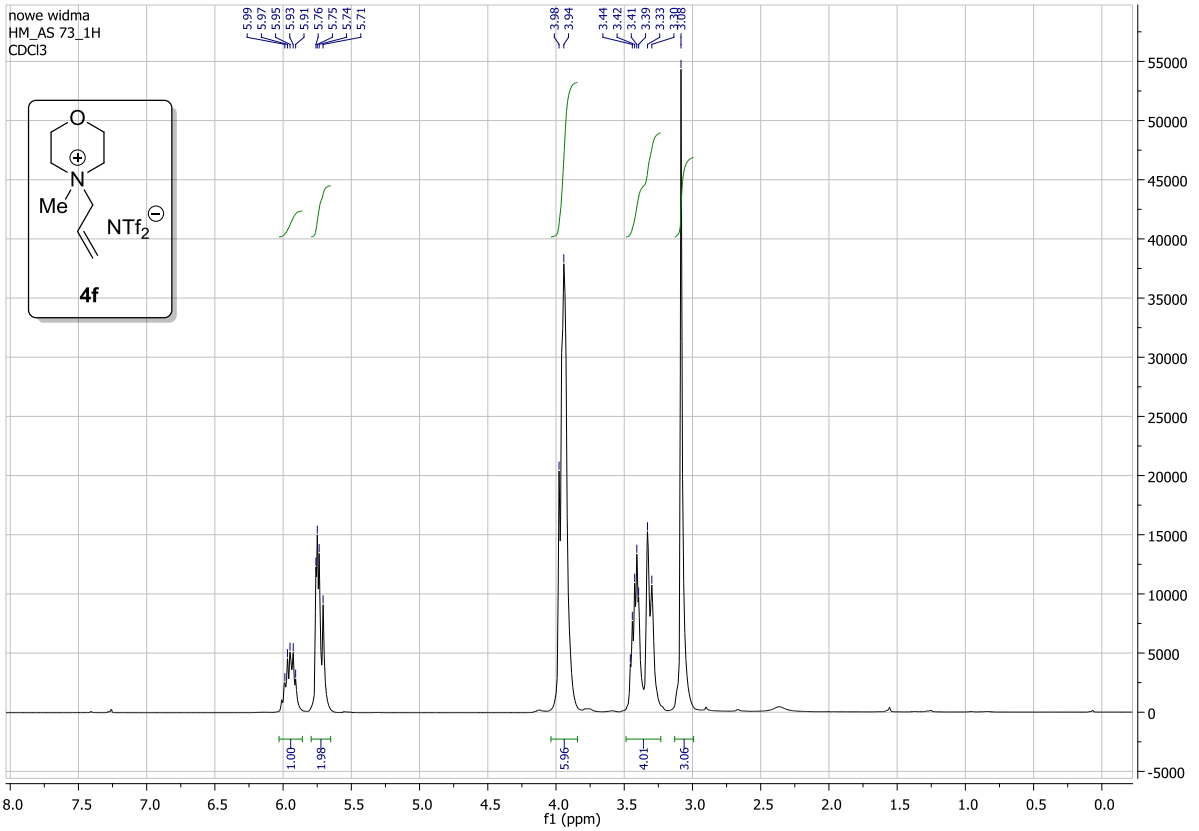
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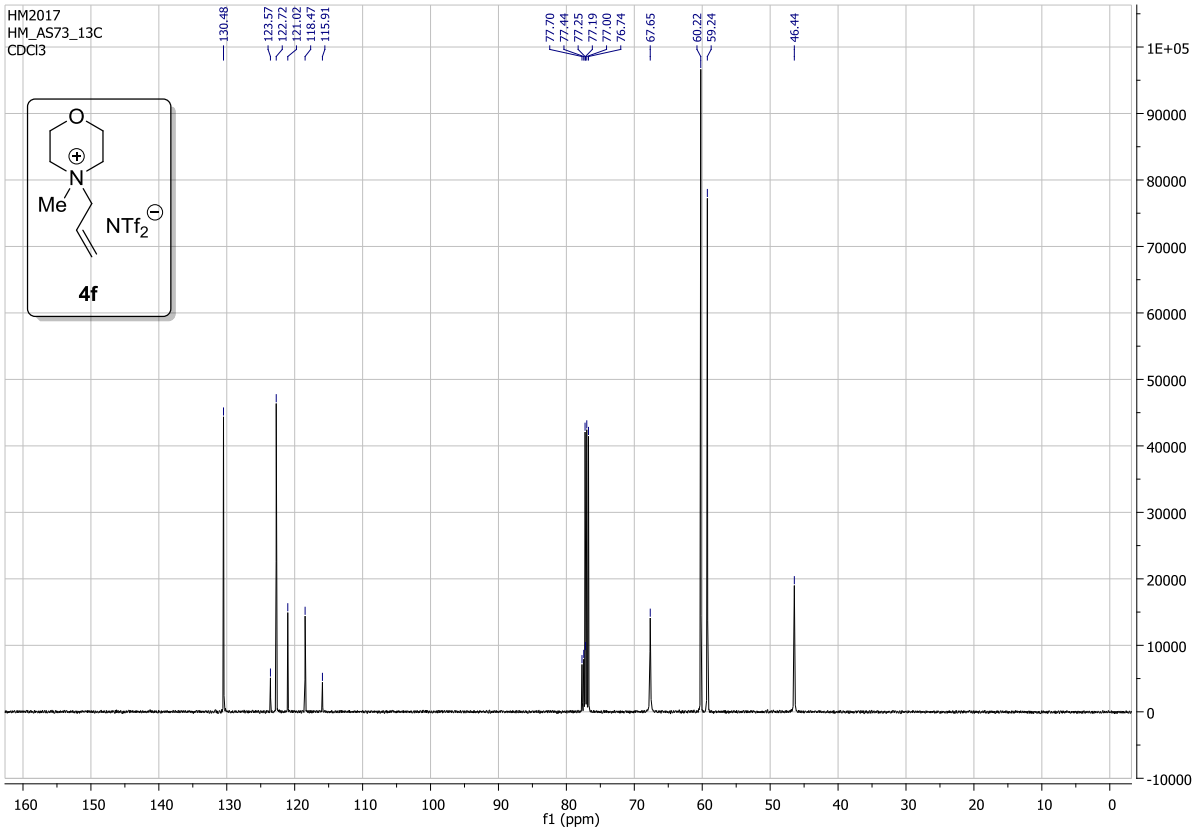
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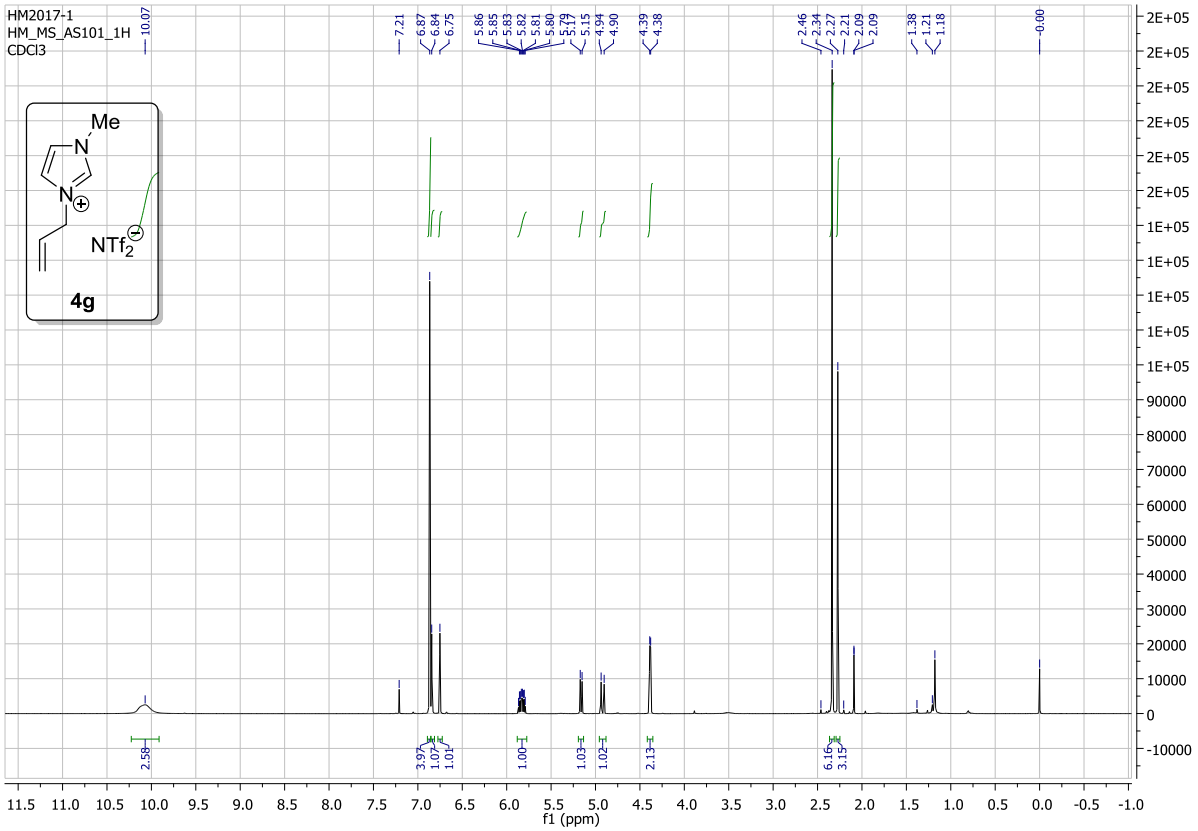
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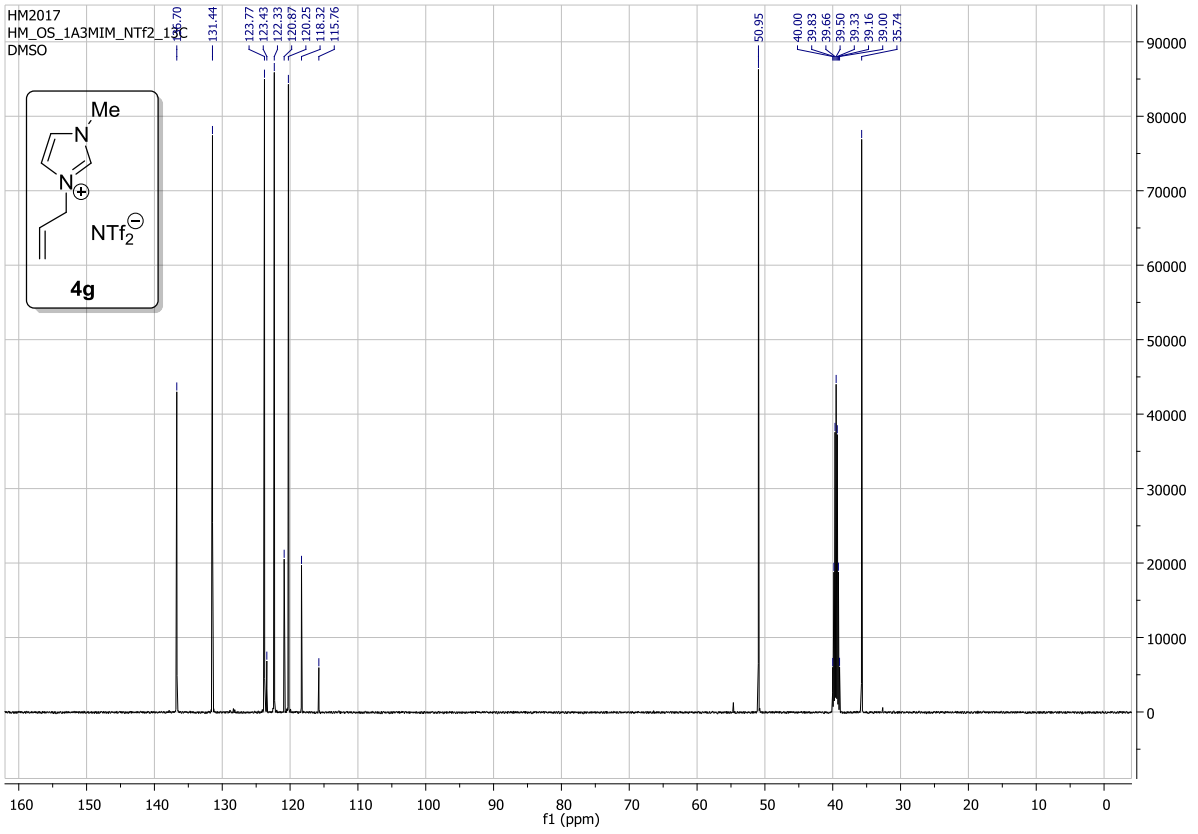
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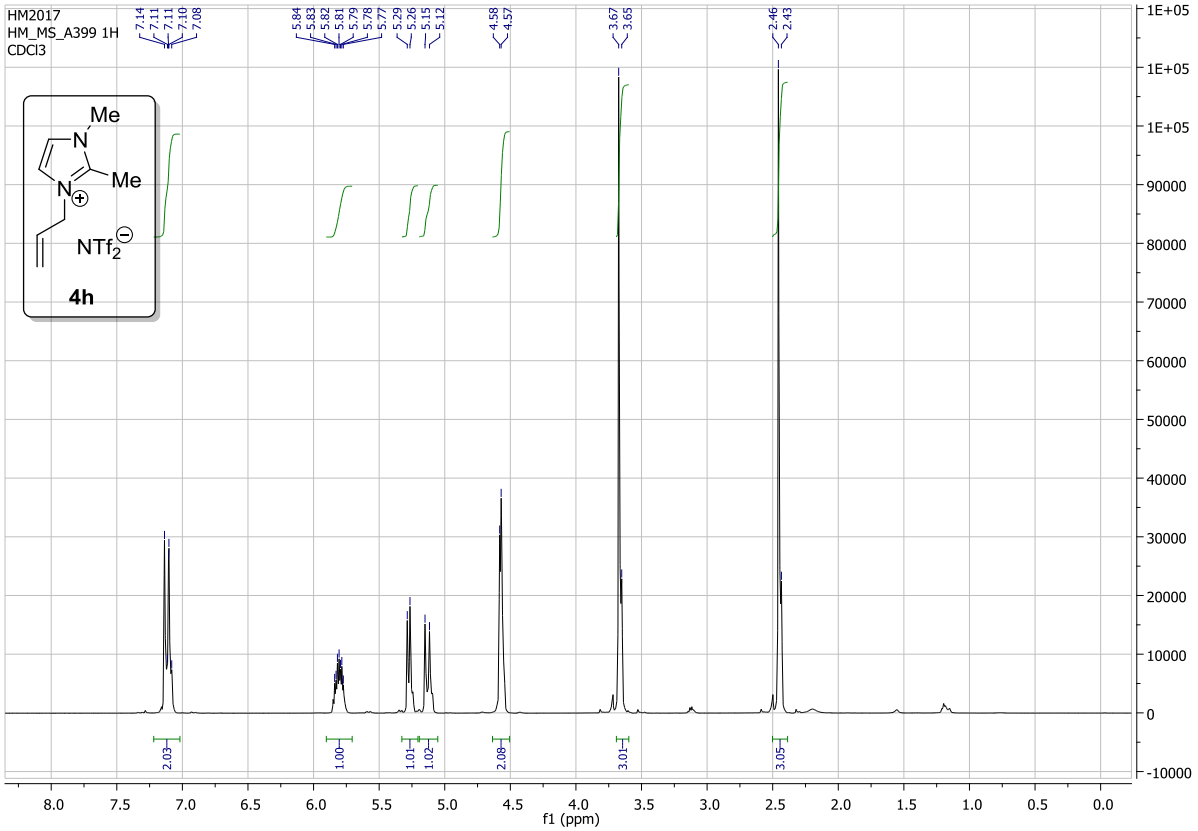
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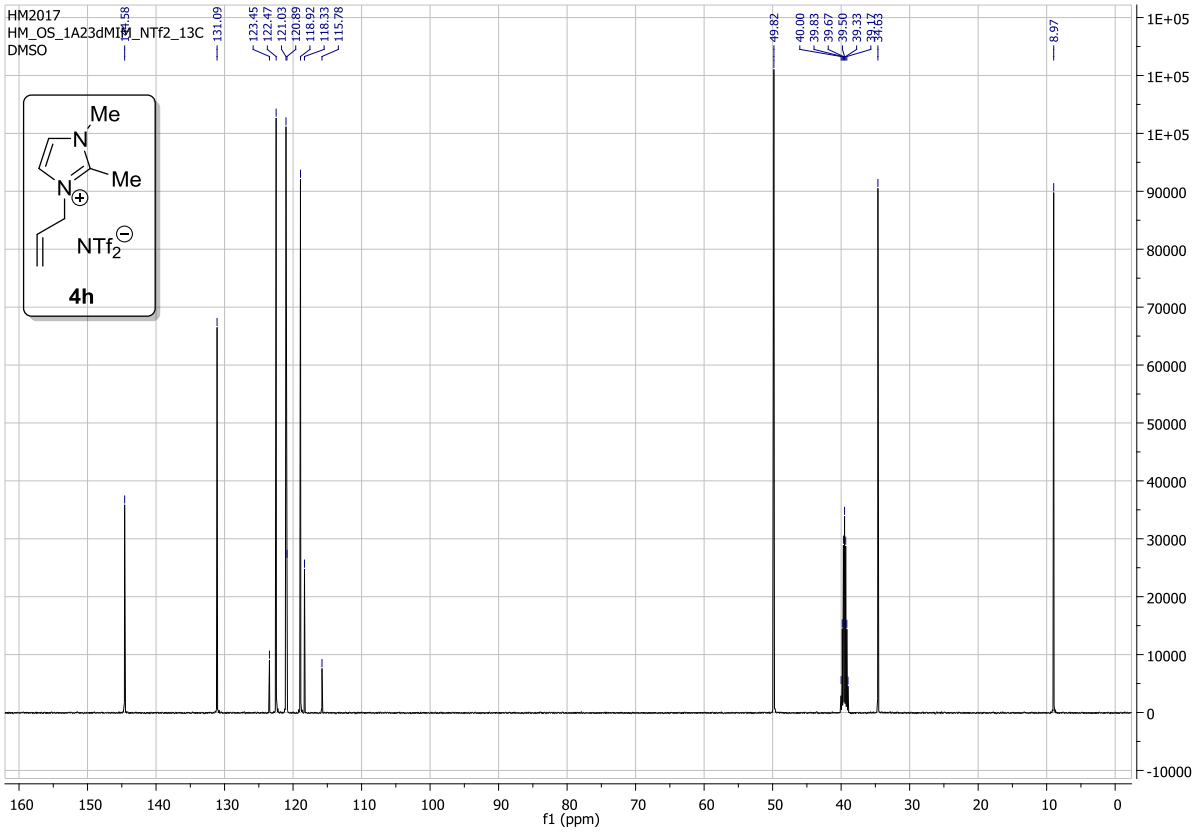
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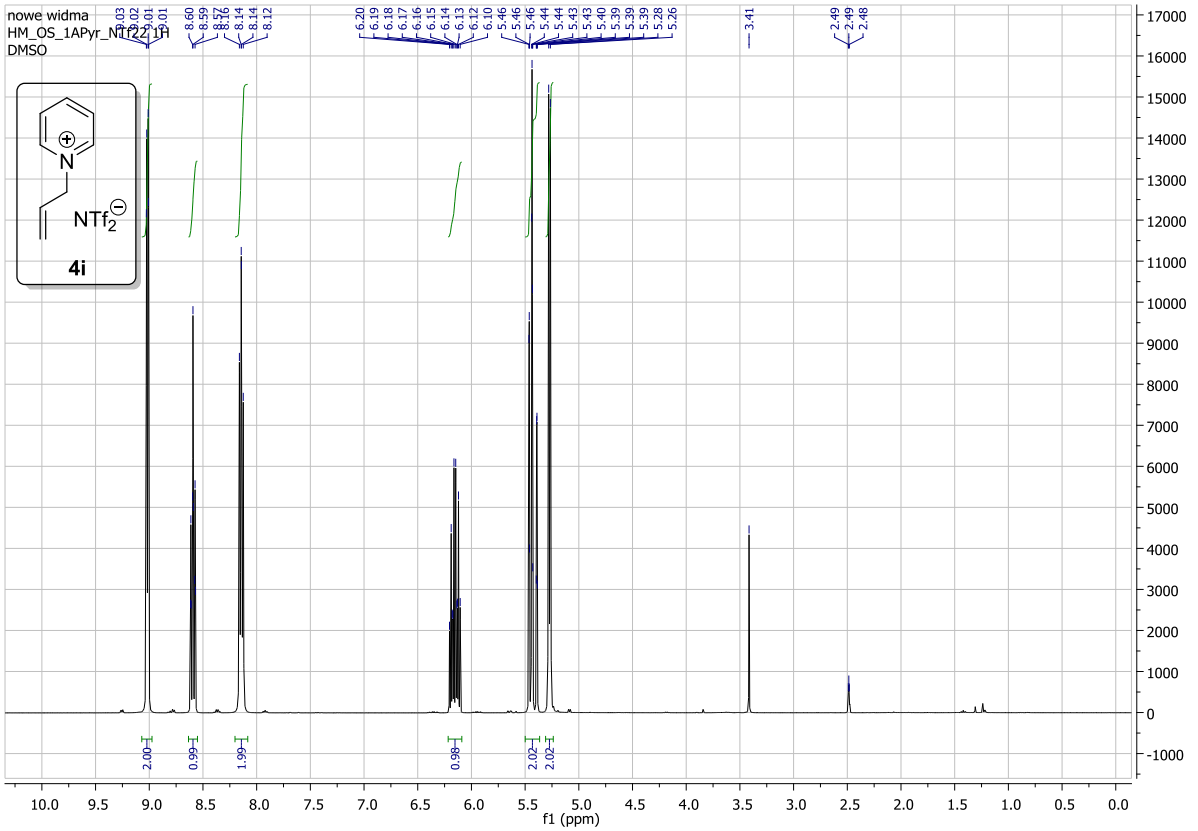
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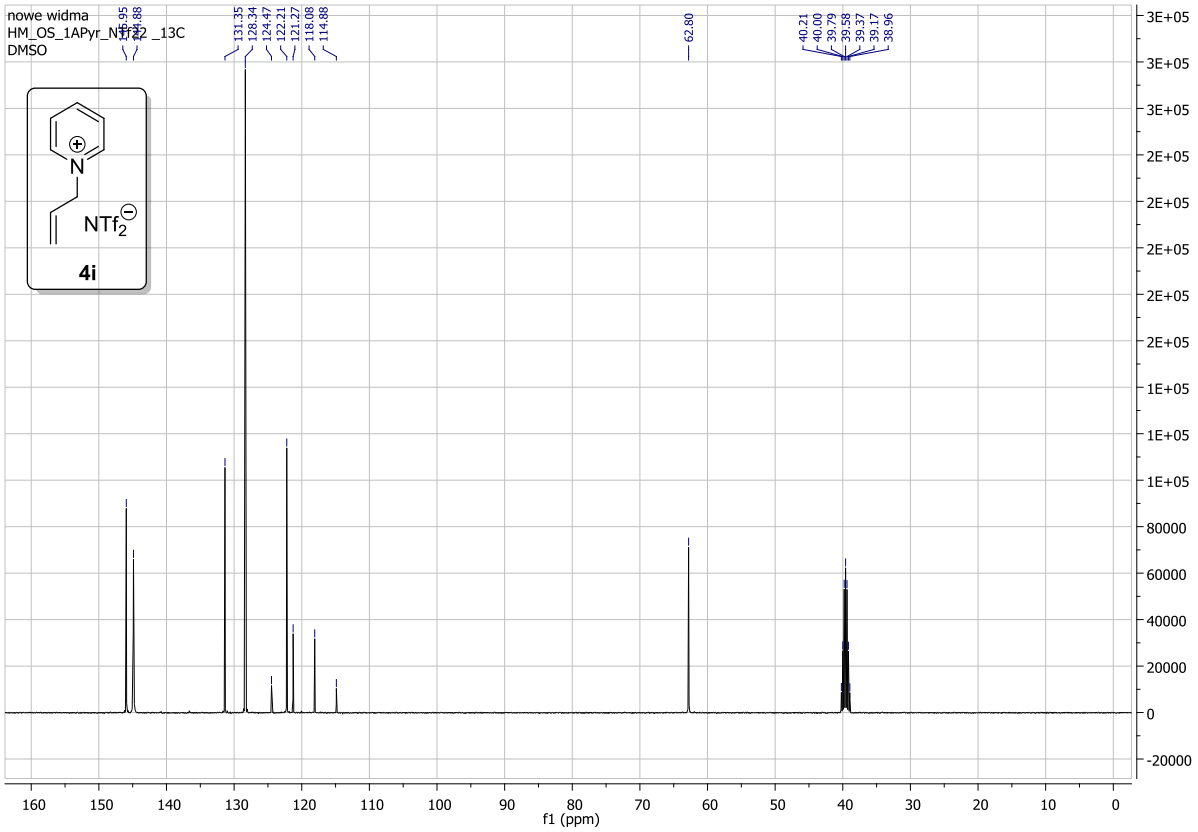
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TABLE 1. Data obtained for cations from ion chromatography analysis.

Compound no.	Retention time t_R [min]	Peak area a [(μS/cm)min]	Peak height h [μS/cm]	Purity[a] [%]
1a	7.95	1.786	2.366	99.03
1b	8.93	7.712	5.496	97.37
1c	17.91	4.776	1.655	99.43
1d	6.01	2.346	3.322	99.25
1e	6.70	13.224	10.734	>99.99
1f	5.12	4.059	6.577	>99.99
1g	4.06	27.075	32.981	97.62
1h	4.24	35.056	36.811	99.49
1i	11.67	6.450	7.803	97.87
4a	8.13	0.481	0.889	97.74
4b	9.07	2.753	2.570	97.11
4c	17.79	2.234	1.255	97.62
4d	5.80	11.210	11.871	99.41
4e	6.83	4.953	4.914	>99.99
4f	4.78	7.745	10.794	>99.99
4g	4.07	27.810	33.239	98.13
4h	4.77	18.404	18.881	98.95
4i	12.03	0.646	0.643	>99.99

[a] the highest value obtained from three repetitions of the synthetic procedure, all other obtained values were not lower by more than 0.2%

FIGURE 1. The juxtaposition of ^{1}H NMR chemical shift values of allyl group protons for compounds **4a-i**. Legend: -■- allyl –CH_2-; -▲- allyl –CH=; -●- allyl =CH-H(B) trans; -◆- allyl =CH-H(B') cis.

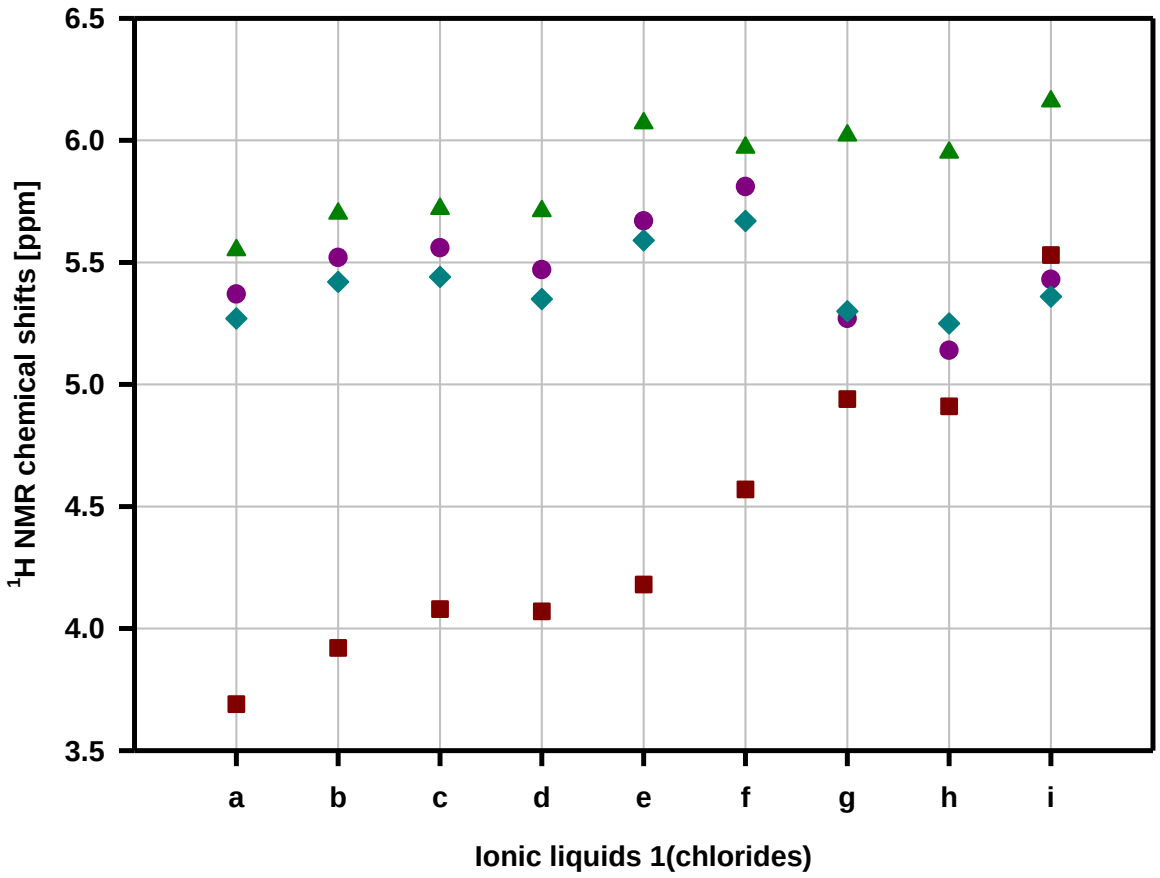

FIGURE 2. The juxtaposition of ^{1}H NMR chemical shift values of methylene group protons for compounds **1a-i** and **4a-i**. Legend: -■- allyl –CH_2- for compounds **1a-i**; -■- allyl –CH_2- for compounds **4a-i**.