

## Supplementary Material

### Halogen-bonding in 3-nitrobenzaldehyde-derived dichlorodiazadienes

Namiq G. Shikhaliyev,<sup>a\*</sup> Abel M. Maharramov,<sup>a</sup> Gulnar T. Suleymanova,<sup>a</sup> Gulnara V. Babayeva,<sup>a</sup>  
Gunay Z. Mammadova,<sup>a</sup> Irada M. Shikhaliyeva,<sup>a</sup> Aliyar A. Babazade,<sup>a</sup> and Valentine G. Nenajdenko<sup>\*b</sup>

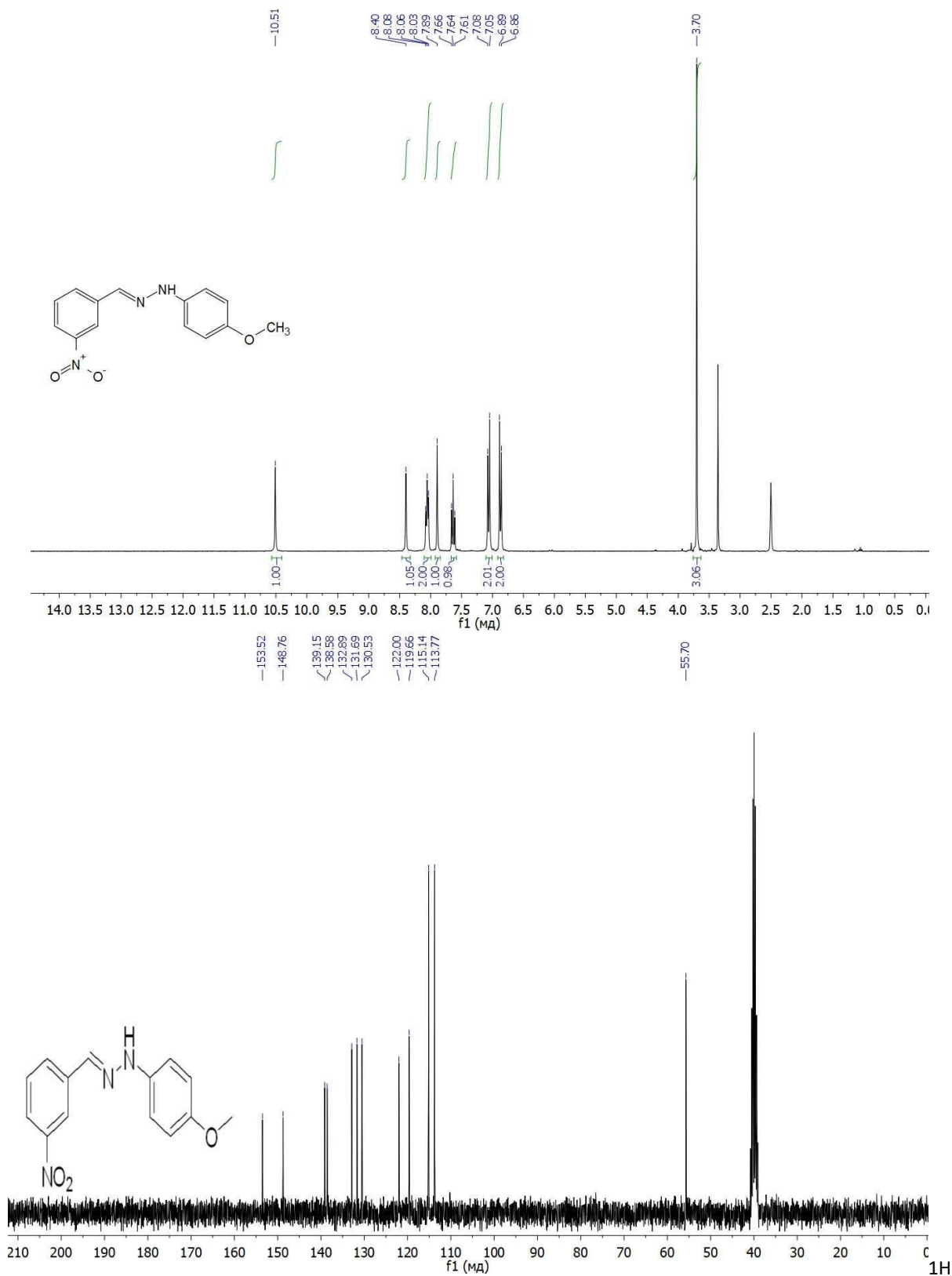
<sup>a</sup> *Organic Chemistry Department, Baku State University, Z. Xalilov Str. 23, Az 1148 Baku, Azerbaijan*

<sup>b</sup> *Department of Chemistry, M. V. Lomonosov Moscow State University, 1 Leninskie Gory, 119992 Moscow, Russian Federation*

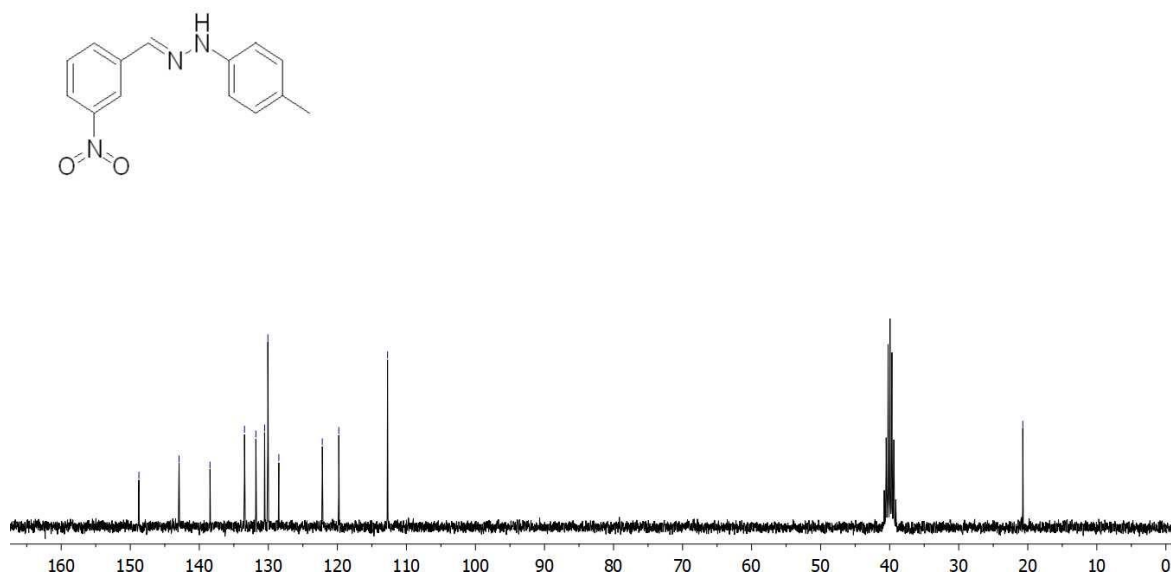
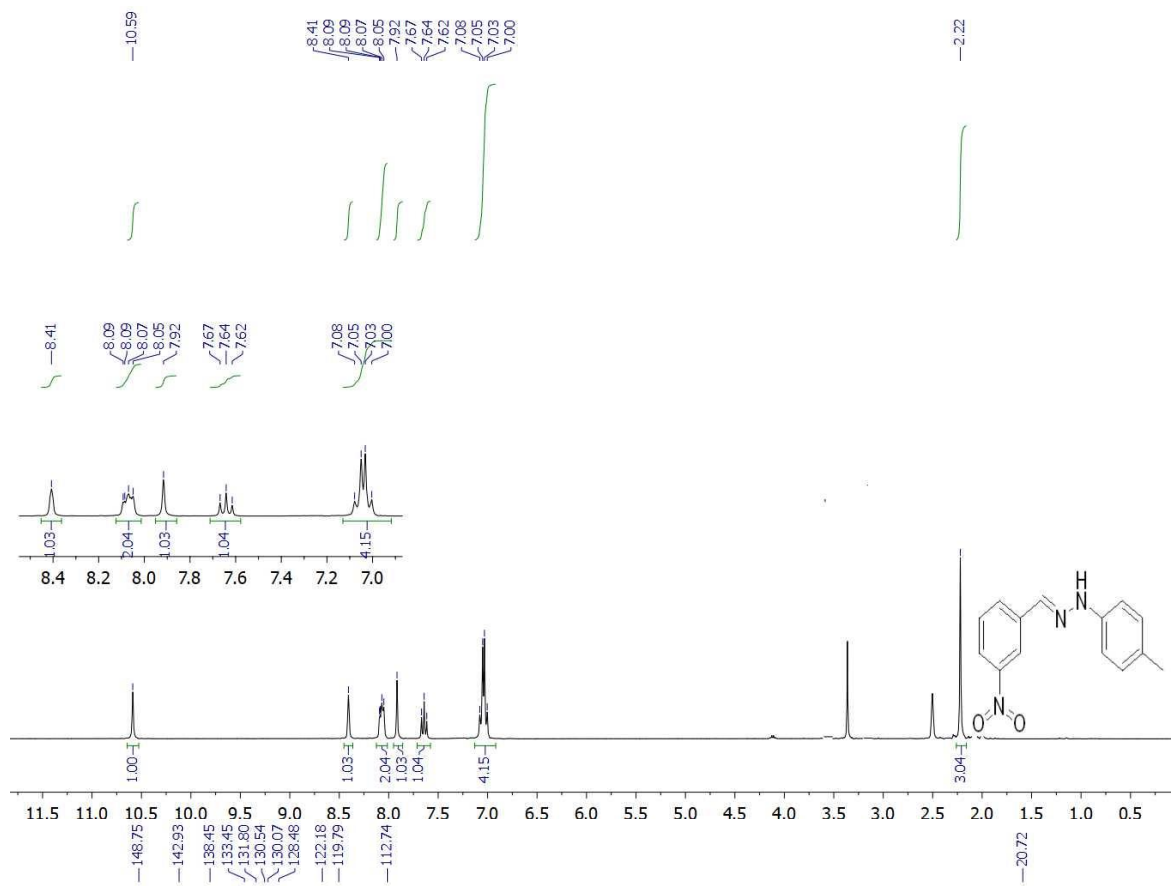
Email: [namiqst@gmail.com](mailto:namiqst@gmail.com), [nenajdenko@gmail.com](mailto:nenajdenko@gmail.com)

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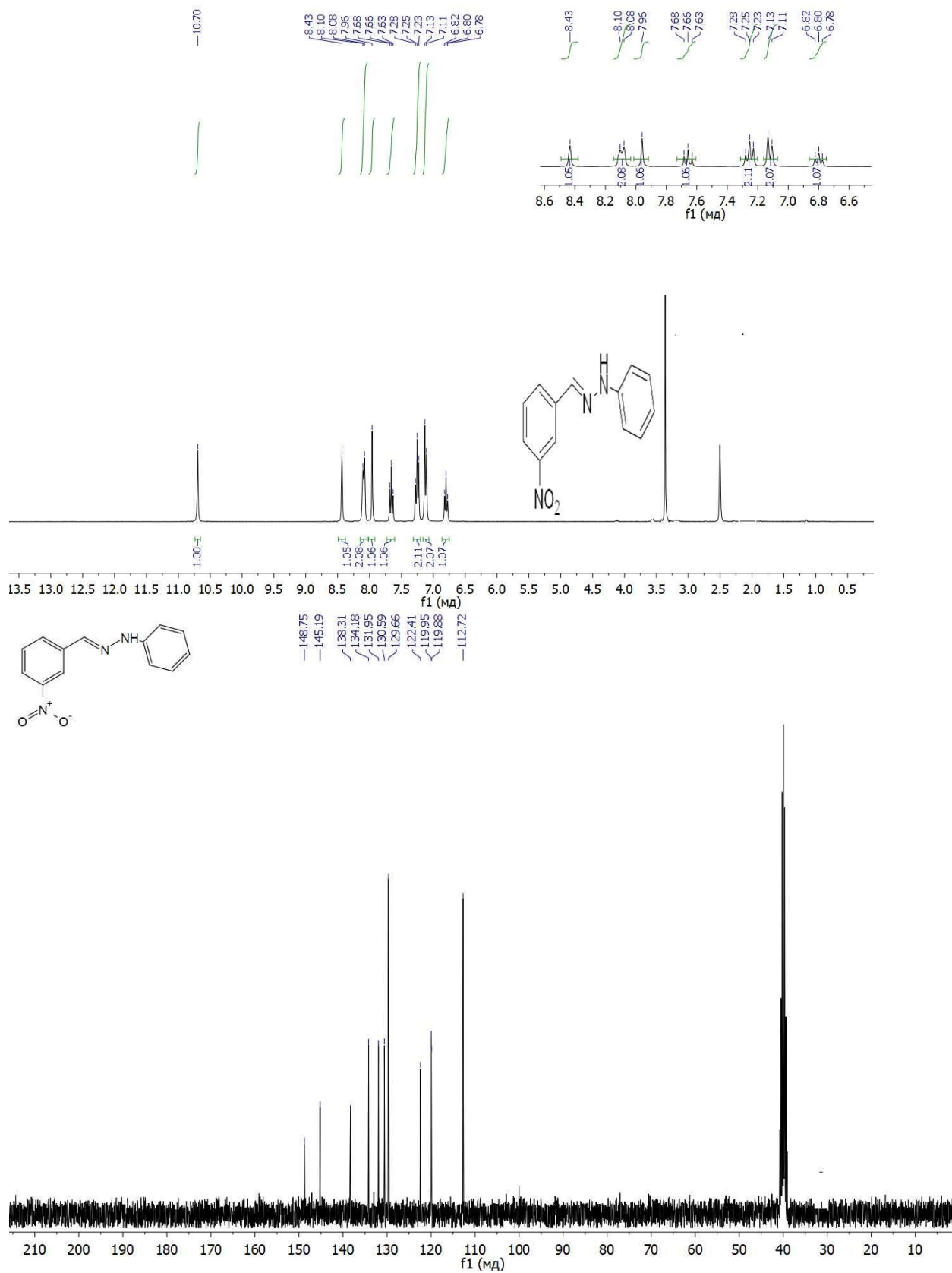
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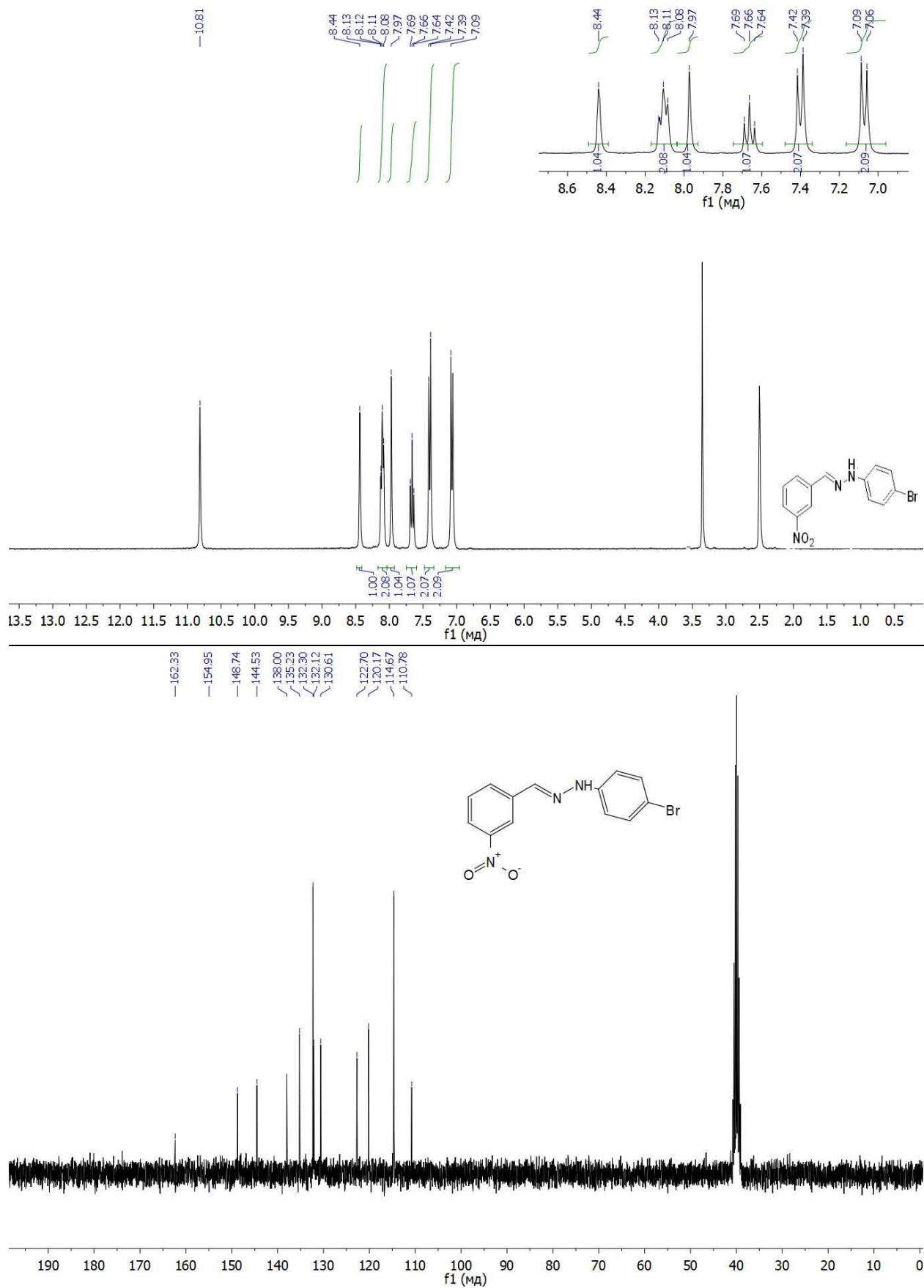
<sup>1</sup>H and <sup>13</sup>C spectra for compound 1



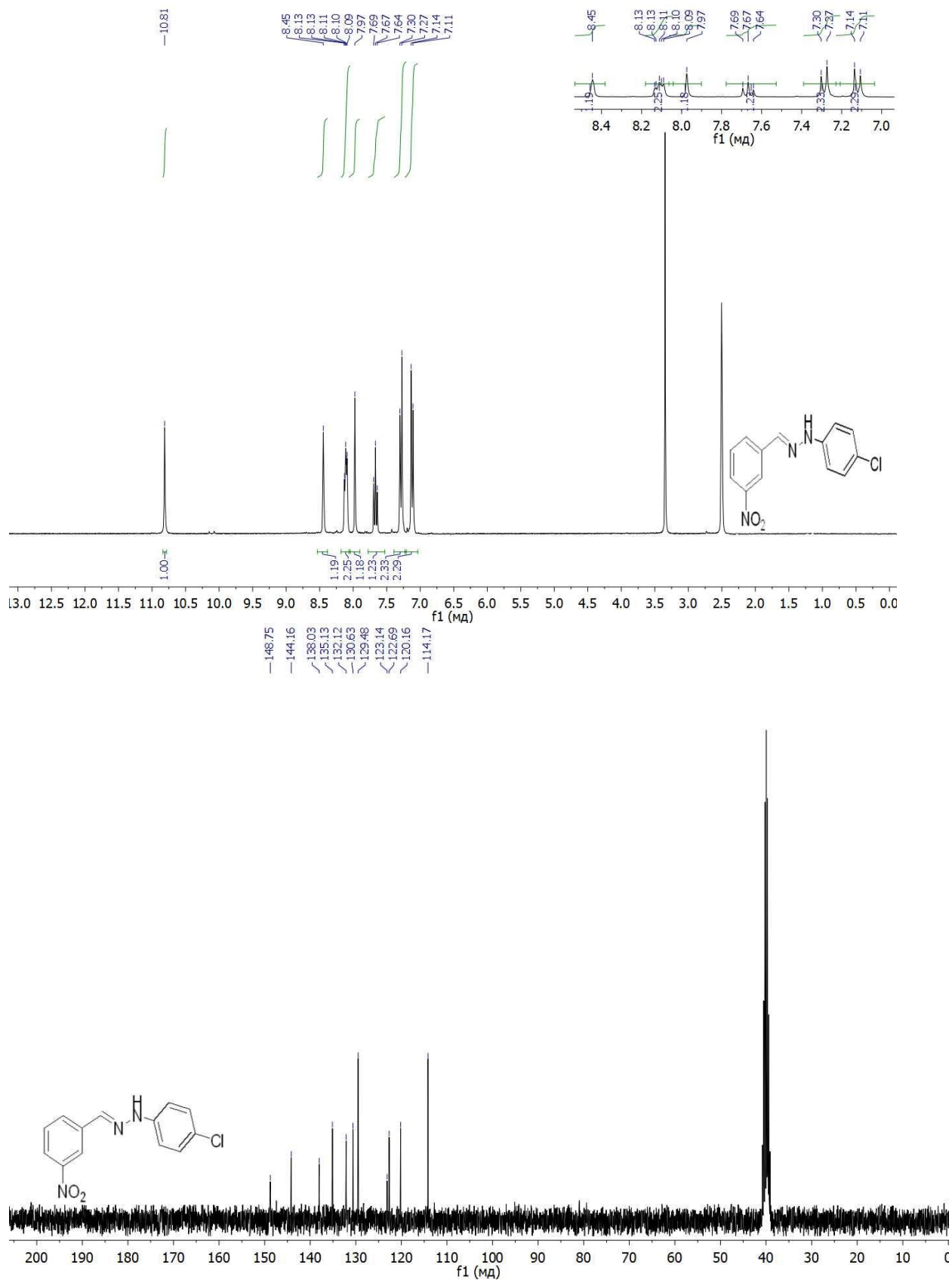
<sup>1</sup>H and <sup>13</sup>C spectra for compound 2



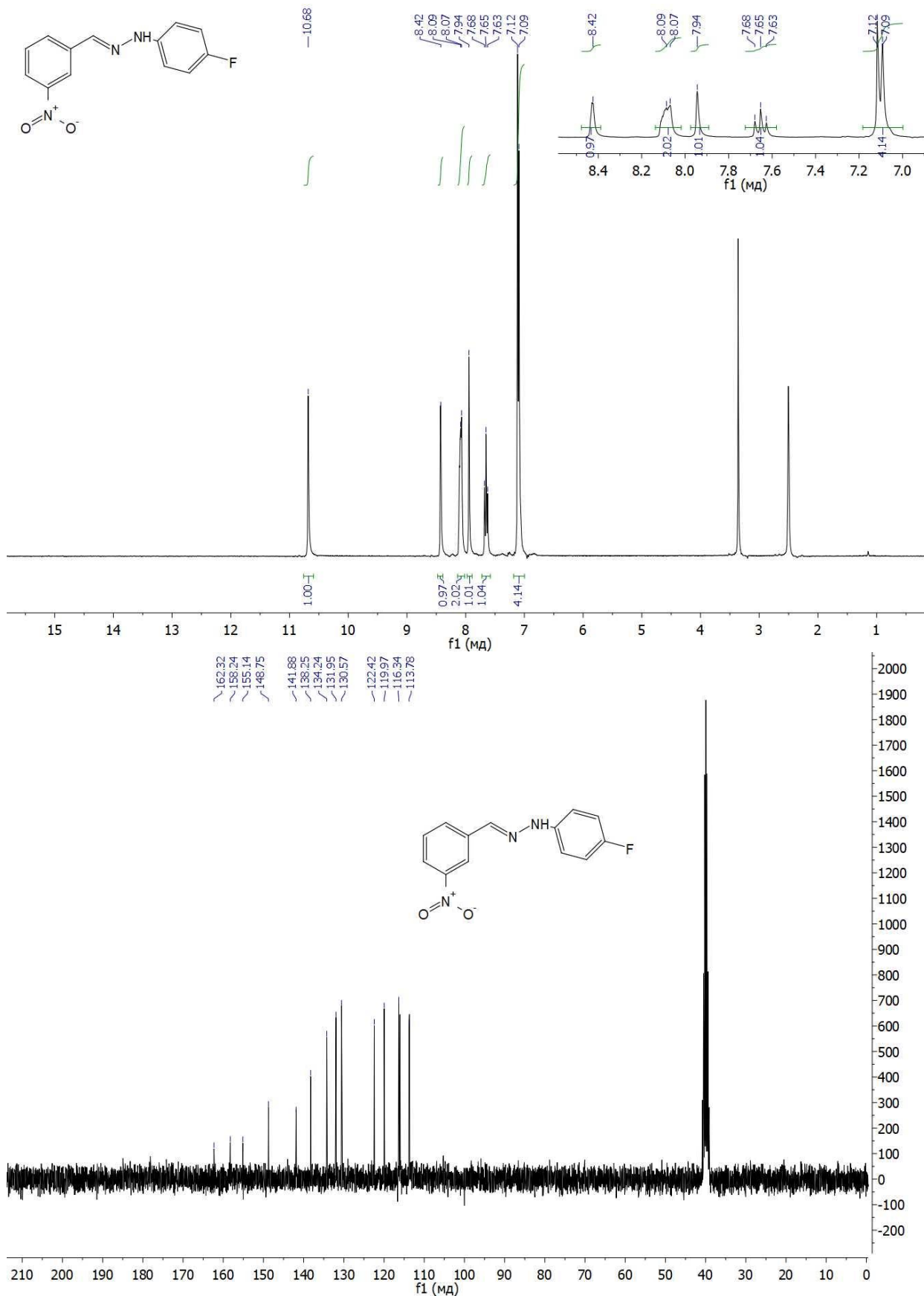
<sup>1</sup>H and <sup>13</sup>C spectra for compound 3



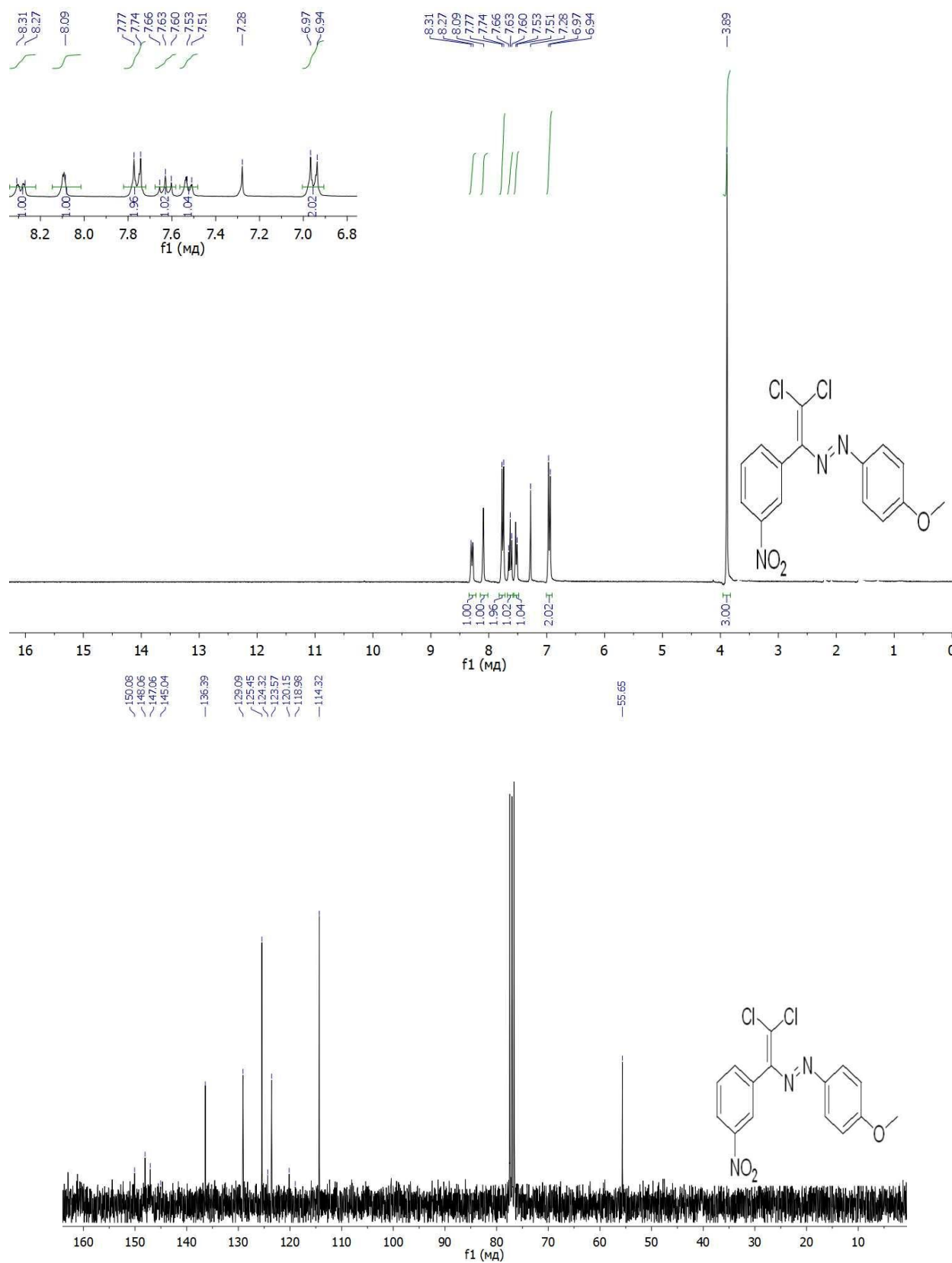
<sup>1</sup>H and <sup>13</sup>C spectra for compound 4



$^1\text{H}$  and  $^{13}\text{C}$  spectra for compound 5

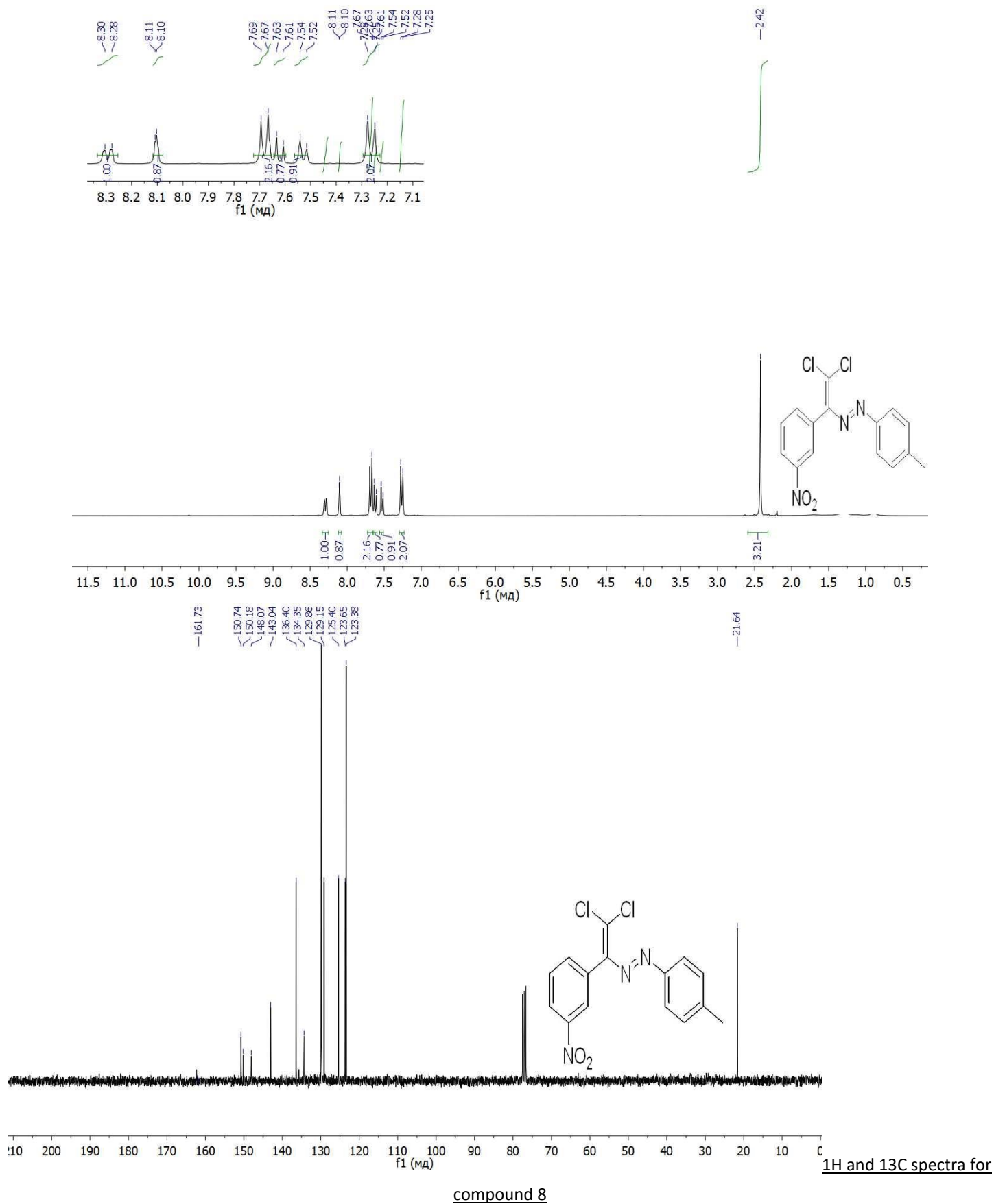


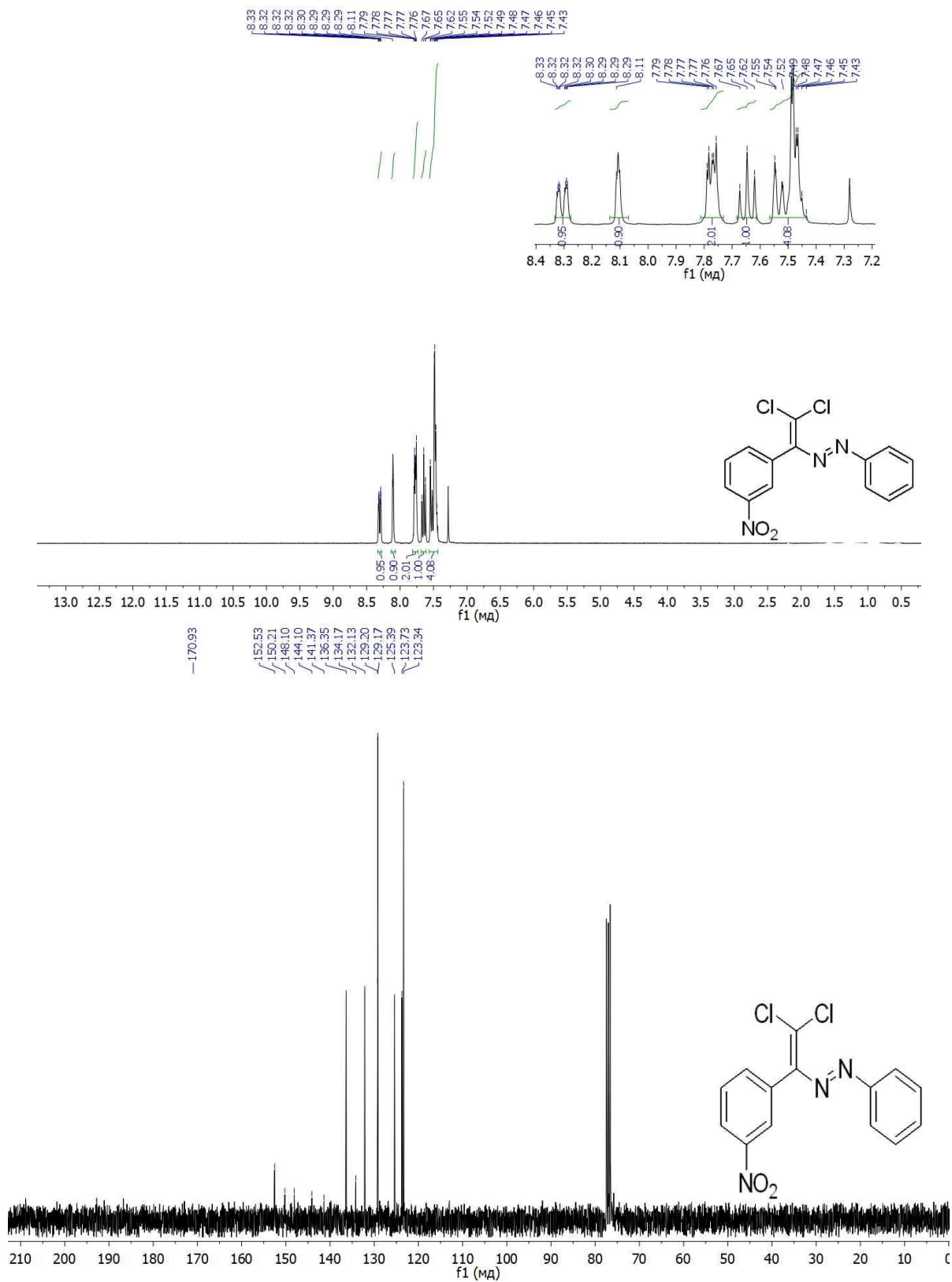
<sup>1</sup>H and <sup>13</sup>C spectra for compound 6



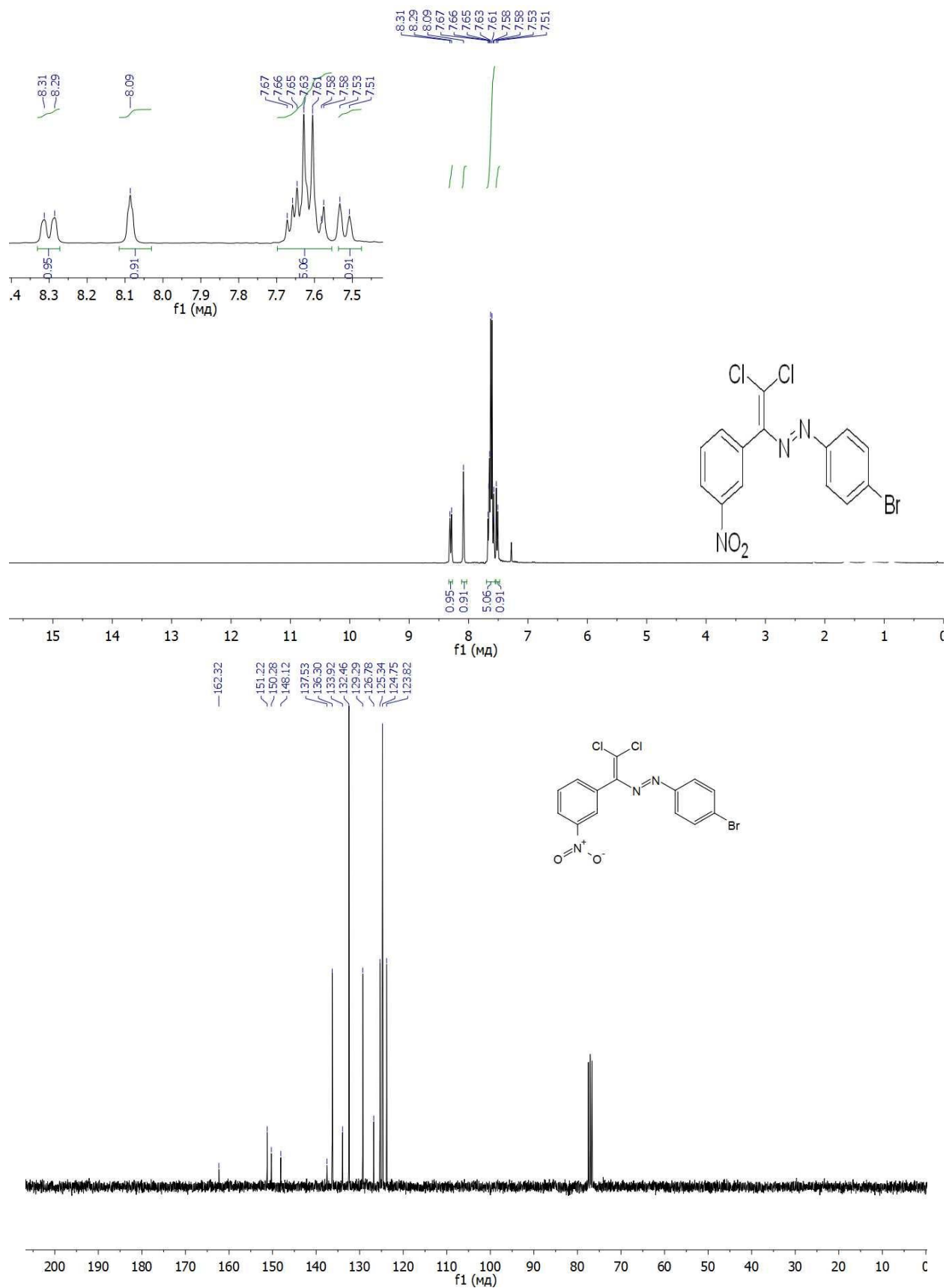
$^1\text{H}$  and  $^{13}\text{C}$  spectra for compound 7



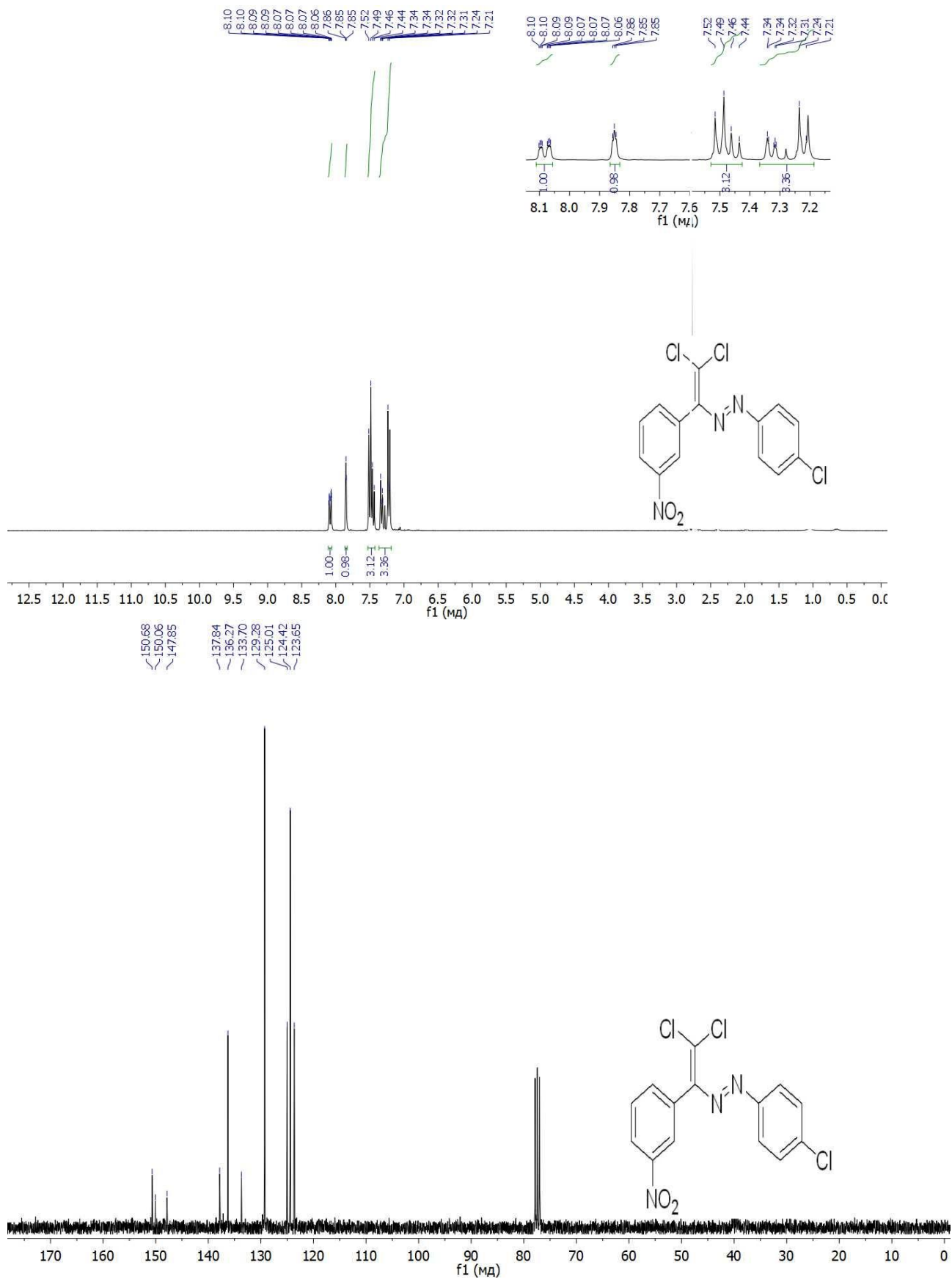




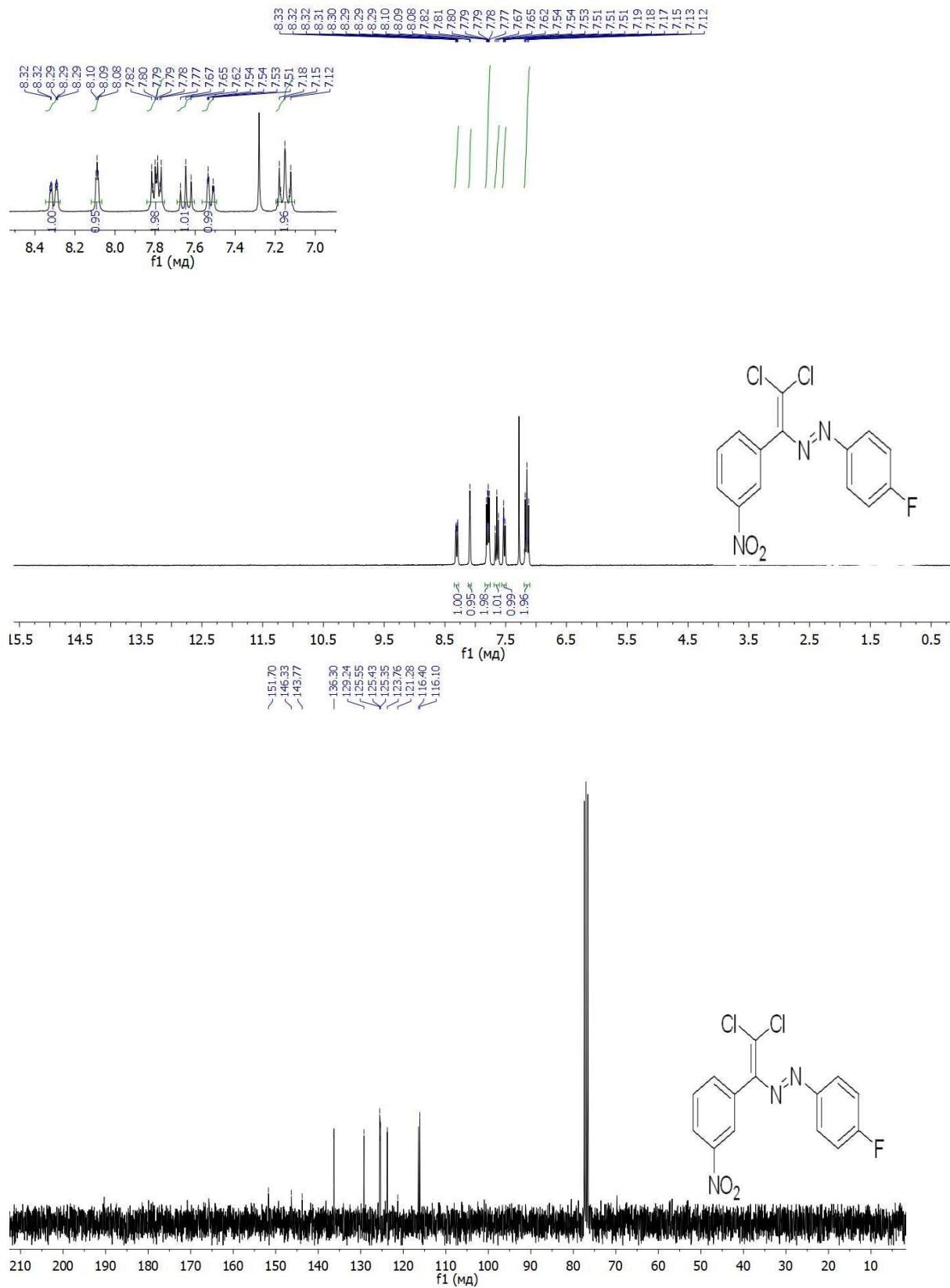
$^1\text{H}$  and  $^{13}\text{C}$  spectra for compound 9



<sup>1</sup>H and <sup>13</sup>C spectra for compound 10



$^1\text{H}$  and  $^{13}\text{C}$  spectra for compound 11



<sup>1</sup>H and <sup>13</sup>C spectra for compound 12

**Table S1.** Crystallographic data and structure refinement details for **8**, **10** and **11**

	<b>8</b>	<b>10</b>	<b>11</b>
Empirical formula	C <sub>15</sub> H <sub>11</sub> Cl <sub>2</sub> N <sub>3</sub> O <sub>2</sub>	C <sub>14</sub> H <sub>8</sub> BrCl <sub>2</sub> N <sub>3</sub> O <sub>2</sub>	C <sub>14</sub> H <sub>8</sub> Cl <sub>3</sub> N <sub>3</sub> O <sub>2</sub>
<i>fw</i>	336.17	401.04	356.58
Temperature (K)	296(2)	296(2)	296(2)
Cryst. Syst.	Monoclinic	Triclinic	Triclinic
Space group	P2 <sub>1</sub> /c	P-1	P-1
<i>a</i> (Å)	7.971(3)	8.5664(9)	8.4857(7)
<i>b</i> (Å)	29.176(9)	9.6577(10)	9.5516(8)
<i>c</i> (Å)	7.083(2)	10.2478(10)	10.3250(9)
$\alpha$ , °	90°	68.386(4)°	68.031(3)°
$\beta$ , °	111.510(12)°	79.545(4)°	79.064(3)°
$\gamma$ , °	90°	87.299(4)°	87.923(3)°
<i>V</i> (Å <sup>3</sup> )	1532.4(8)	774.94(14)	761.45(11)
<i>Z</i>	4	2	2
$\rho_{calc}$ (g cm <sup>-3</sup> )	1.457	1.719	1.555
$\mu$ (Mo K $\alpha$ ) (mm <sup>-1</sup> )	0.433	3.006	0.610
<i>F</i> (000)	688	396	360
<i>R</i> 1 <sup>a</sup> ( <i>I</i> ≥ 2σ)	0.433	0.0349	0.0409
<i>wR</i> 2 <sup>b</sup> ( <i>I</i> ≥ 2σ)	0.1638	0.0846	0.1023
<i>GOOF</i>	1.087	1.046	1.051

$$^a R1 = \sum ||F_o| - |F_c|| / \sum |F_o|. \quad ^b wR2 = [\sum [w(F_o^2 - F_c^2)^2] / \sum [w(F_o^2)^2]]^{1/2}.$$

- [s1] SMART & SAINT Software Reference Manuals, Version 6.22, Bruker AXS Analytic X-ray Systems, Inc., Madison, WI, 2000.
- [s2] Sheldrick GM. SADABS Software for Empirical Absorption Correction, University of Göttingen, Germany, 2000.
- [s3] Sheldrick GM. SHELXTL V5.1, Software Reference Manual, Bruker AXS Inc., Madison, Wisconsin, 1997.