

## Triclosan-Isatin Hybrids as Potent Anti-proliferative Agents Inducing S-Phase Arrest via DNA Gyrase Inhibition in Triple-Negative Breast Cancer

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**Table S1:** Physicochemical and ADMET properties of compound 10m, 10n and 10o.

	10m	10n	10o
<b>Absorption</b>			
Water solubility (log mol/L)	-5.74	-5.88	-5.99
Caco2 permeability (log Papp in 10 <sup>-6</sup> cm/s)	1.109	1.119	1.08
Intestinal absorption (human) (% Absorbed)	91.146	91.06	90.49
Skin permeability (log Kp)	-2.736	-2.736	-2.73
P-glycoprotein substrate	No	No	No

P-glycoprotein I inhibitor	Yes	Yes	Yes
P-glycoprotein II inhibitor	Yes	Yes	Yes
<b>Metabolism</b>			
CYP2D6 substrate	No	No	No
CYP3A4 substrate	Yes	Yes	Yes
CYP1A2 inhibitor	No	No	No
CYP2C19 Inhibitor	Yes	Yes	Yes
CYP2C9 inhibitor	Yes	Yes	Yes
CYP2D6 inhibitor	No	No	No
CYP3A4 inhibitor	Yes	Yes	Yes
<b>Excretion</b>			
Total Clearance (log ml/min/kg)	-0.072	-0.192	-0.223
Renal OCT2 substrate	No	No	No
<b>Distribution</b>			
VDss (human) (log L/kg)	-0.183	-0.136	-0.068
BBB permeability (log BB)	-2.016	-2.037	-2.067
Fraction unbound (human) (Fu)	0.119	0.111	0.11
CNS permeability (log PS)	-2.796	-2.757	-2.692
<b>Toxicity</b>			
Oral Rat Acute Toxicity (LD50) (mol/kg)	2.868	2.832	2.829
Hepatotoxicity	No	No	No

Skin Sensitisation	No	No	No
<i>T. Pyriformis</i> toxicity (log ug/L)	0.286	0.286	0.286
Minnow toxicity (log mM)	-3.961	-4.139	-4.467
LogP	5.70	6.10	6.40
TPSA (Å)	86.55	86.55	86.55
No. of HBA	6	6	6
No. of HBD	0	0	0
Molar refractivity	154.15	158.96	163.77

*1-(2-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)ethyl)indoline-2,3-dione (10a)*

Tangerine solid (yield 87%); m.p.: 123-125 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.55 (d, *J* = 7.4 Hz, 1H, Ar-H), 7.49 – 7.44 (m, 1H+1 triazole-H), 7.43 (d, *J* = 2.5 Hz, 1H, Ar-H), 7.12 (dt, *J* = 5.6, 2.7 Hz, 2H, Ar-H), 7.05 (t, *J* = 7.5 Hz, 1H, Ar-H), 6.96 (dd, *J* = 8.6, 2.2 Hz, 1H, Ar-H), 6.89 (d, *J* = 8.6 Hz, 1H, Ar-H), 6.68 (d, *J* = 8.7 Hz, 1H, Ar-H), 6.59 (d, *J* = 8.0 Hz, 1H, Ar-H), 5.19 (s, 2H, CH<sub>2</sub>), 4.71 (t, *J* = 5.8 Hz, 2H, CH<sub>2</sub>), 4.25 (t, *J* = 5.9 Hz, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 182.21, 158.52, 152.00, 149.85, 149.71, 143.51, 138.70, 130.45, 130.19, 128.33, 127.88, 125.65, 124.66, 124.23, 122.18, 121.56, 118.64, 117.38, 115.95, 109.45, 63.25, 48.09, 22.68. C<sub>25</sub>H<sub>17</sub>Cl<sub>3</sub>N<sub>4</sub>O<sub>4</sub> [M+H]<sup>+</sup> 543.0349, [M+H+2]<sup>+</sup> 545.0319, [M+H+4]<sup>+</sup> 547.0290 and found 543.0363, 545.0332 and 547.0274.

*1-(3-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)propyl)indoline-2,3-dione (10b)*

Yellow solid (yield 85%); m.p.: 137-140 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.74 (dd, *J* = 7.2, 0.7 Hz, 1H, Ar-H), 7.59 (s, 1H, triazole-H), 7.57 (dt, *J* = 5.6, 1.0 Hz, 2H, Ar-H), 7.33 (d, *J* = 1.3 Hz, 1H, Ar-H), 7.30 – 7.26 (m, 1H, Ar-H), 7.14 (d, *J* = 7.5, 1.4 Hz 1H, Ar-H), 6.96 (d, *J* = 1.4 Hz, 1H, Ar-H), 6.92 (dd, *J* = 7.3, 1.4 Hz, 1H, Ar-H), 6.86 (t, *J* = 8.3 Hz, 2H, Ar-H), 5.19 (s, 2H, CH<sub>2</sub>), 4.14 (t, *J* = 5.3 Hz, 2H, CH<sub>2</sub>), 3.72 (t, *J* = 5.4 Hz, 2H, CH<sub>2</sub>), 2.26 – 2.21 (m, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 184.52, 164.13, 151.51, 150.72, 149.69, 147.48, 141.44, 136.24, 132.27, 130.15, 129.79, 128.39, 127.18, 126.79, 124.29, 123.54, 122.07, 121.90,

121.81, 120.69, 117.90, 112.77, 57.94, 47.96, 40.69, 23.41. C<sub>26</sub>H<sub>19</sub>Cl<sub>3</sub>N<sub>4</sub>O<sub>4</sub> [M+H]<sup>+</sup> 557.0505, [M+H+2]<sup>+</sup> 559.0476, [M+H+4]<sup>+</sup> 561.0446 and found 557.0533, 559.0508 and 561.0486.

*1-(4-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)butyl)indoline-2,3-dione (10c)*

Copper solid (yield 91%); m.p.: 142-144 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.66 – 7.59 (m, 2H, Ar-H), 7.43 (d, *J* = 2.5 Hz, 1H, Ar-H), 7.35 (s, 1H, triazole-H), 7.15 (d, *J* = 8.0 Hz, 2H, Ar-H), 7.12 (dd, *J* = 9.0, 2.8 Hz, 1H, Ar-H), 6.98 (dd, *J* = 8.5, 2.2 Hz, 1H, Ar-H), 6.94 (d, *J* = 8.6 Hz, 1H, Ar-H), 6.89 (d, *J* = 7.9 Hz, 1H, Ar-H), 6.70 (d, *J* = 9.0 Hz, 1H, Ar-H), 5.21 (s, 2H, CH<sub>2</sub>), 4.43 (t, *J* = 6.8 Hz, 2H, CH<sub>2</sub>), 3.77 (t, *J* = 7.0 Hz, 2H, CH<sub>2</sub>), 2.04 – 1.97 (m, 2H, CH<sub>2</sub>), 1.76 – 1.71 (m, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 183.15, 158.36, 152.19, 150.47, 149.88, 143.46, 138.51, 130.55, 130.11, 128.11, 127.81, 125.62, 124.52, 123.92, 122.13, 121.83, 118.41, 117.62, 116.08, 110.04, 63.64, 49.46, 39.16, 29.70, 24.08. C<sub>27</sub>H<sub>21</sub>Cl<sub>3</sub>N<sub>4</sub>O<sub>4</sub> [M+H]<sup>+</sup> 571.0662, [M+H+2]<sup>+</sup> 573.0632, [M+H+4]<sup>+</sup> 575.0603 and found 571.0678, 573.0620 and 575.0619.

*1-(2-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)ethyl)-5-fluoroindoline-2,3-dione (10d)*

Orange brown solid (yield 89%); m.p.: 148-150 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.48 (s, 1H, Ar-H), 7.43 (s, 1H, triazole-H), 7.25 (d, *J* = 5.4 Hz, 1H, Ar-H), 7.18 – 7.11 (m, 3H, Ar-H), 6.97 (d, *J* = 8.6 Hz, 1H, Ar-H), 6.89 (d, *J* = 8.6 Hz, 1H, Ar-H), 6.69 (d, *J* = 8.7 Hz, 1H, Ar-H), 6.54 (d, *J* = 5.2 Hz, 1H, Ar-H), 5.18 (s, 2H, CH<sub>2</sub>), 4.70 (t, *J* = 5.9 Hz, 2H, CH<sub>2</sub>), 4.26 (t, *J* = 5.7 Hz, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 181.66, 160.31, 158.35, 151.96, 149.65, 145.97, 143.55, 130.40, 130.20, 128.38, 127.88, 125.07, 124.88, 124.69, 122.20, 121.52, 118.67, 115.95, 112.73, 112.53, 110.85, 110.78, 63.27, 48.04, 22.67. C<sub>25</sub>H<sub>16</sub>Cl<sub>3</sub>FN<sub>4</sub>O<sub>4</sub> [M+H]<sup>+</sup> 561.0255, [M+H+2]<sup>+</sup> 563.0225, [M+H+4]<sup>+</sup> 565.0196 and found 561.0268, 563.0210 and 565.0181.

*1-(3-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)propyl)-5-fluoroindoline-2,3-dione (10e)*

Dark orange solid (yield 87%); m.p.: 143-145 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.54 (s, 1H, triazole-H), 7.41 (d, *J* = 2.5 Hz, 1H, Ar-H), 7.34 (dd, *J* = 6.6, 4.0 Hz, 2H, Ar-H), 7.18 – 7.16 (m, 2H, Ar-H), 7.13 (dd, *J* = 8.8, 2.6 Hz, 1H, Ar-H), 6.99 (dd, *J* = 8.6, 2.1 Hz, 1H, Ar-H), 6.93 (d, *J* = 8.6 Hz, 1H, Ar-H), 6.73 (d, *J* = 8.7 Hz, 1H, Ar-H), 5.31 (s, 2H, CH<sub>2</sub>), 4.46 – 4.41 (m,

2H, CH<sub>2</sub>), 3.82 – 3.77 (m, 2H, CH<sub>2</sub>), 2.41 – 2.38 (m, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 182.56, 179.32, 152.34, 150.86, 148.55, 144.77, 141.65, 131.47, 130.33, 129.38, 127.78, 126.17, 125.78, 124.59, 122.31, 121.42, 119.62, 114.89, 112.63, 112.45, 110.77, 109.68, 64.37, 47.14, 41.35, 23.69. C<sub>26</sub>H<sub>18</sub>Cl<sub>3</sub>FN<sub>4</sub>O<sub>4</sub> [M+H]<sup>+</sup> 575.0411, [M+H+2]<sup>+</sup> 577.0382, [M+H+4]<sup>+</sup> 579.0352 and found 575.0426, 577.0398 and 579.0368.

*1-(4-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)butyl)-5-fluoroindoline-2,3-dione (10f)*

Orange solid (yield 85%); m.p.: 132-135 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.68 (s, 1H, triazole-H), 7.48 (d, *J* = 2.6 Hz, 1H, Ar-H), 7.44 (dd, *J* = 6.8, 4.1 Hz, 2H, Ar-H), 7.17 – 7.18 (m, 2H, Ar-H), 7.18 (dd, *J* = 8.6, 2.4 Hz, 1H, Ar-H), 7.02 (dd, *J* = 8.8, 2.4 Hz, 1H, Ar-H), 6.83 (d, *J* = 8.4 Hz, 1H, Ar-H), 6.64 (d, *J* = 8.8 Hz, 1H, Ar-H), 5.35 (s, 2H, CH<sub>2</sub>), 4.48 – 4.52 (m, 2H, CH<sub>2</sub>), 3.84 – 3.75 (m, 2H, CH<sub>2</sub>), 2.39 – 2.35 (m, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 183.54, 178.31, 153.44, 151.66, 149.45, 143.67, 140.64, 132.37, 130.23, 128.48, 127.06, 126.37, 125.88, 124.89, 123.81, 122.52, 120.52, 115.79, 113.64, 113.25, 110.37, 109.58, 66.36, 45.19, 42.32, 25.78, 22.89. C<sub>27</sub>H<sub>20</sub>Cl<sub>3</sub>FN<sub>4</sub>O<sub>4</sub> [M+H]<sup>+</sup> 589.0601, [M+H+2]<sup>+</sup> 591.0538, [M+H+4]<sup>+</sup> 593.0509 and found 589.0648, 591.0588 and 593.0566.

*5-chloro-1-(2-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)ethyl)indoline-2,3-dione (10g)*

Copper solid (yield 86%); m.p.: 126-128 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.44 (m, 2H, Ar-H+ triazole-H), 7.26 (dd, *J* = 6.4, 2.7 Hz, 1H, Ar-H), 7.14 (qd, *J* = 7.1, 2.7 Hz, 3H, Ar-H), 6.97 (dd, *J* = 8.6, 2.3 Hz, 1H, Ar-H), 6.89 (d, *J* = 8.5 Hz, 1H, Ar-H), 6.69 (d, *J* = 8.6 Hz, 1H, Ar-H), 6.52 (dd, *J* = 8.8, 3.5 Hz, 1H, Ar-H), 5.16 (s, 2H, CH<sub>2</sub>), 4.70 (t, *J* = 5.9 Hz, 2H, CH<sub>2</sub>), 4.26 (t, *J* = 5.8 Hz, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 181.67, 160.30, 158.37, 151.97, 149.68, 146.01, 143.53, 130.38, 130.21, 128.36, 127.87, 125.01, 124.82, 124.70, 122.16, 121.53, 118.65, 115.89, 112.76, 112.57, 110.77, 110.71, 63.28, 47.90, 29.70. C<sub>25</sub>H<sub>16</sub>Cl<sub>4</sub>N<sub>4</sub>O<sub>4</sub> [M+H]<sup>+</sup> 576.9959, [M+H+2]<sup>+</sup> 578.9930, [M+H+4]<sup>+</sup> 580.9900 and found 576.9973, 578.9945 and 580.9918.

*5-chloro-1-(3-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)propyl)indoline-2,3-dione (10h)*

Brown solid (yield 87%); m.p.: 120-122 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.52 (s, 1H, triazole-H), 7.42 (dd, *J* = 16.9, 8.2 Hz, 3H, Ar-H), 7.13 (s, 2H, Ar-H), 6.98 (d, *J* = 8.3 Hz, 1H, Ar-H),

6.90 (d,  $J = 8.5$  Hz, 1H, Ar-H), 6.69 (d,  $J = 8.6$  Hz, 1H, Ar-H), 6.53 (d,  $J = 8.0$  Hz, 1H, Ar-H), 5.17 (s, 2H, CH<sub>2</sub>), 4.72 – 4.67 (m, 2H, CH<sub>2</sub>), 4.28 – 4.23 (m, 2H, CH<sub>2</sub>), 1.68 – 1.64 (m, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>)  $\delta$  182.67, 161.32, 157.32, 154.82, 159.62, 145.11, 142.63, 134.36, 131.24, 129.28, 127.67, 126.21, 125.62, 124.69, 121.56, 120.43, 119.75, 115.76, 113.65, 112.57, 110.85, 110.72, 64.32, 48.94, 27.72. C<sub>26</sub>H<sub>18</sub>Cl<sub>4</sub>N<sub>4</sub>O<sub>4</sub> [M+H]<sup>+</sup> 591.0116, [M+H+2]<sup>+</sup> 593.0086, [M+H+4]<sup>+</sup> 595.0057 and found 591.0129, 593.0071 and 595.0042.

*5-chloro-1-(4-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)butyl)indoline-2,3-dione (10i)*

Copper solid (yield 85%); m.p.: 133-135 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>)  $\delta$  7.58 (s, 1H, Ar-H), 7.53 (s, 1H, triazole-H), 7.35 (d,  $J = 5.6$  Hz, 1H, Ar-H), 7.28 – 7.21 (m, 3H, Ar-H), 6.84 (d,  $J = 8.4$  Hz, 1H, Ar-H), 6.72 (d,  $J = 8.6$  Hz, 1H, Ar-H), 6.70 (d,  $J = 8.6$  Hz, 1H, Ar-H), 6.56 (d,  $J = 5.1$  Hz, 1H, Ar-H), 5.20 (s, 2H, CH<sub>2</sub>), 4.69 (t,  $J = 5.8$  Hz, 2H, CH<sub>2</sub>), 4.36 (t,  $J = 5.4$  Hz, 2H, CH<sub>2</sub>), 2.02 – 1.92 (m, 2H, CH<sub>2</sub>), 1.76 – 1.72 (m, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>)  $\delta$  184.55, 163.03, 156.32, 151.75, 149.68, 148.48, 146.18, 140.44, 131.27, 130.00, 129.39, 128.28, 126.73, 124.23, 124.18, 123.47, 122.17, 121.90, 121.65, 118.90, 117.68, 114.06, 57.96, 49.72, 42.70, 25.43, 24.69. C<sub>27</sub>H<sub>20</sub>Cl<sub>4</sub>N<sub>4</sub>O<sub>4</sub> [M+H]<sup>+</sup> 605.0272, [M+H+2]<sup>+</sup> 607.0243, [M+H+4]<sup>+</sup> 609.0213 and found 605.0286, 607.0229 and 609.0227.

*5-bromo-1-(2-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)ethyl)indoline-2,3-dione (10j)*

Brown solid (yield 84%); m.p.: 97-100 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>)  $\delta$  7.65 (d,  $J = 1.7$  Hz, 1H, Ar-H), 7.55 (d,  $J = 8.0$  Hz, 1H, Ar-H), 7.48 (s, 1H, triazole-H), 7.43 (d,  $J = 2.5$  Hz, 1H, Ar-H), 7.15 – 7.10 (m, 2H, Ar-H), 6.97 (dd,  $J = 8.6, 1.9$  Hz, 1H, Ar-H), 6.90 (d,  $J = 8.6$  Hz, 1H, Ar-H), 6.69 (d,  $J = 8.8$  Hz, 1H, Ar-H), 6.51 (d,  $J = 7.7$  Hz, 1H, Ar-H), 5.18 (s, 2H, CH<sub>2</sub>), 4.72 – 4.69 (m, 2H, CH<sub>2</sub>), 4.25 (t,  $J = 5.8$  Hz, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>)  $\delta$  186.55, 164.23, 152.04, 150.65, 149.78, 147.48, 141.74, 140.34, 134.45, 131.27, 130.12, 129.29, 128.18, 126.74, 124.29, 123.83, 122.27, 121.90, 121.49, 117.92, 117.29, 114.89, 56.96, 47.42, 41.70. C<sub>25</sub>H<sub>16</sub>BrCl<sub>3</sub>N<sub>4</sub>O<sub>4</sub> [M+H]<sup>+</sup> 620.9454, [M+H+2]<sup>+</sup> 622.9434, [M+H+4]<sup>+</sup> 624.9404 and found 620.9492, 622.9469 and 624.9445.

*5-bromo-1-(3-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)propyl)indoline-2,3-dione (10k)*

Brown solid (yield 86%); m.p.: 81-83 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.45 (d, *J* = 1.9 Hz, 1H, Ar-H), 7.62 (d, *J* = 8.2 Hz, 1H, Ar-H), 7.38 (s, 1H, triazole-H), 7.40 (d, *J* = 2.4 Hz, 1H, Ar-H), 7.19 – 7.25 (m, 2H, Ar-H), 6.82 (dd, *J* = 8.2, 1.6 Hz, 1H, Ar-H), 6.75 (d, *J* = 8.4 Hz, 1H, Ar-H), 6.52 (d, *J* = 8.6 Hz, 1H, Ar-H), 6.43 (d, *J* = 7.5 Hz, 1H, Ar-H), 5.08 (s, 2H, CH<sub>2</sub>), 4.53 – 4.57 (m, 2H, CH<sub>2</sub>), 4.21 (t, *J* = 5.6 Hz, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 184.45, 164.03, 152.14, 150.65, 149.64, 148.28, 141.64, 140.34, 135.65, 132.27, 130.25, 129.19, 129.18, 125.73, 124.29, 123.71, 122.27, 121.91, 120.69, 118.90, 117.29, 114.89, 58.96, 47.78, 41.54, 24.23. C<sub>25</sub>H<sub>16</sub>BrCl<sub>3</sub>N<sub>4</sub>O<sub>4</sub> [M+H]<sup>+</sup> 620.9454, [M+H+2]<sup>+</sup> 622.9434, [M+H+4]<sup>+</sup> 624.9404 and found 620.9467, 622.9419 and 624.9417.

*5-bromo-1-(4-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)butyl)indoline-2,3-dione (10l)*

Orange brown (yield 87%); m.p.: 83-85 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.75 (d, *J* = 1.7 Hz, 1H, Ar-H), 7.65 (d, *J* = 8.0 Hz, 1H, Ar-H), 7.52 (s, 1H, triazole-H), 7.41 (d, *J* = 2.5 Hz, 1H, Ar-H), 7.09 – 7.14 (m, 2H, Ar-H), 6.92 (dd, *J* = 8.6, 1.9 Hz, 1H, Ar-H), 6.87 (d, *J* = 8.6 Hz, 1H, Ar-H), 6.62 (d, *J* = 8.8 Hz, 1H, Ar-H), 6.48 (d, *J* = 7.7 Hz, 1H, Ar-H), 5.20 (s, 2H, CH<sub>2</sub>), 4.63 – 4.59 (m, 2H, CH<sub>2</sub>), 4.28 (t, *J* = 5.8 Hz, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 185.55, 165.13, 153.24, 151.65, 149.58, 147.48, 141.74, 140.34, 134.65, 131.37, 130.45, 129.39, 129.18, 126.53, 124.09, 123.84, 122.53, 121.91, 121.49, 117.97, 117.29, 115.69, 57.96, 52.72, 45.70, 27.43, 24.79. C<sub>27</sub>H<sub>20</sub>BrCl<sub>3</sub>N<sub>4</sub>O<sub>4</sub> [M+H]<sup>+</sup> 648.9767, [M+H+2]<sup>+</sup> 650.9747, [M+H+4]<sup>+</sup> 652.9717 and found 648.9797, 650.9775 and 652.9751.

*5,7-dibromo-1-(2-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)ethyl)indoline-2,3-dione (10m)*

Yellow solid (yield 84%); m.p.: 183-185 °C; <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) δ 7.84 (dd, *J* = 2.0, 0.9 Hz, 1H, Ar-H), 7.69 (t, *J* = 1.7 Hz, 1H, Ar-H), 7.43 (d, *J* = 2.5 Hz, 1H, Ar-H), 7.40 (s, 1H, triazole-H), 7.12 (d, *J* = 2.3 Hz, 1H, Ar-H), 7.10 (dd, *J* = 8.8, 2.5 Hz, 1H, Ar-H), 6.95 (dd, *J* = 8.6, 2.3 Hz, 1H, Ar-H), 6.90 (d, *J* = 8.6 Hz, 1H, Ar-H), 6.67 (d, *J* = 8.8 Hz, 1H, Ar-H), 5.17 (s, 2H, CH<sub>2</sub>), 4.69 (t, *J* = 5.8 Hz, 2H, CH<sub>2</sub>), 4.63 (t, *J* = 4.5 Hz, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) δ 180.29, 158.08, 152.27, 149.93, 145.83, 145.14, 144.19, 143.42, 130.70, 130.24, 128.20, 128.00, 127.95, 124.60, 123.25, 122.18, 121.88, 121.57, 118.49, 117.69, 115.98, 104.84, 63.54, 48.42, 41.12. C<sub>25</sub>H<sub>15</sub>Br<sub>2</sub>Cl<sub>3</sub>N<sub>4</sub>O<sub>4</sub> [M+H]<sup>+</sup> 698.8559, [M+H+2]<sup>+</sup> 700.8531, [M+H+4]<sup>+</sup> 702.8509 and found 698.8572, 700.85 19 and 702.8520.

*5,7-dibromo-1-(3-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)propyl)indoline-2,3-dione (10n)*

Orange solid (yield 85%); m.p.: 147-150 °C; <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) δ 7.79 (d, *J* = 2.1 Hz, 1H, Ar-H), 7.66 (d, *J* = 2.0 Hz, 1H, Ar-H), 7.43 (s, 1H, triazole-H), 7.38 (d, *J* = 2.5 Hz, 1H, Ar-H), 7.14 (d, *J* = 2.2 Hz, 1H, Ar-H), 7.09 (dd, *J* = 8.8, 2.5 Hz, 1H, Ar-H), 6.95 (dd, *J* = 8.5, 2.3 Hz, 1H, Ar-H), 6.90 (d, *J* = 8.6 Hz, 1H, Ar-H), 6.68 (d, *J* = 8.8 Hz, 1H, Ar-H), 5.17 (s, 2H, CH<sub>2</sub>), 4.43 (t, *J* = 6.7 Hz, 2H, CH<sub>2</sub>), 4.18 (t, *J* = 6.92 Hz, 2H, CH<sub>2</sub>), 2.41 – 2.33 (m, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 180.93, 158.25, 152.19, 150.03, 146.09, 145.18, 143.57, 143.43, 130.60, 130.13, 128.09, 127.85, 127.67, 124.56, 123.28, 122.13, 121.82, 121.36, 118.45, 117.32, 115.96, 104.65, 63.51, 47.77, 38.96, 30.04. C<sub>26</sub>H<sub>17</sub>Br<sub>2</sub>Cl<sub>3</sub>N<sub>4</sub>O<sub>4</sub> [M+H]<sup>+</sup> 712.8716, [M+H+2]<sup>+</sup> 714.8695, [M+H+4]<sup>+</sup> 716.8666 and found 712.8728, 714.8683 and 716.8679.

*5,7-dibromo-1-(4-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)butyl)indoline-2,3-dione (10o)*

Orange solid (yield 86%); m.p.: 128-130 °C; <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) δ 7.81 (d, *J* = 2.0 Hz, 1H, Ar-H), 7.66 (d, *J* = 2.0 Hz, 1H, Ar-H), 7.40 (d, *J* = 2.5 Hz, 1H, Ar-H), 7.30 (s, 1H, triazole-H), 7.13 (d, *J* = 2.2 Hz, 1H, Ar-H), 7.09 (dd, *J* = 8.8, 2.5 Hz, 1H, Ar-H), 6.94 (dd, *J* = 8.6, 2.2 Hz, 1H, Ar-H), 6.90 (d, *J* = 8.5 Hz, 1H, Ar-H), 6.67 (d, *J* = 8.8 Hz, 1H, Ar-H), 5.18 (s, 2H, CH<sub>2</sub>), 4.39 (t, *J* = 6.9 Hz, 2H, CH<sub>2</sub>), 4.12 (t, *J* = 7.4 Hz, 2H, CH<sub>2</sub>), 2.01 – 1.93 (m, 2H, CH<sub>2</sub>), 1.78 – 1.70 (m, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 181.25, 158.06, 152.20, 149.91, 146.42, 145.22, 143.65, 143.44, 130.58, 130.13, 128.13, 127.84, 127.64, 124.54, 122.55, 122.08, 121.81, 121.35, 118.45, 117.15, 115.99, 104.64, 49.65, 40.52, 27.08, 26.50. C<sub>27</sub>H<sub>19</sub>Br<sub>2</sub>Cl<sub>3</sub>N<sub>4</sub>O<sub>4</sub> [M+H]<sup>+</sup> 726.8872, [M+H+2]<sup>+</sup> 728.88521, [M+H+4]<sup>+</sup> 730.8822 and found 726.8884, 728.8865 and 730.8810.

*1-(2-(4-((5-chloro-2-(2,4-dichlorophenoxy)-4-nitrophenoxy)methyl)-1H-1,2,3-triazol-1-yl)ethyl)indoline-2,3-dione (11a)*

Orange solid (yield 51%); m.p.: 100-103 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.65 (s, 1H, Ar-H), 7.54 (d, *J* = 7.4 Hz, 1H, Ar-H), 7.48 (d, *J* = 2.6 Hz, 1H, Ar-H), 7.46 (dd, *J* = 2.0 Hz, 2H, Ar-H), 7.32 (s, 1H, triazole-H), 7.24 (dd, *J* = 8.7, 2.5 Hz, 1H, Ar-H), 7.04 (t, *J* = 7.5 Hz, 1H, Ar-H), 6.87 (d, *J* = 8.8 Hz, 1H, Ar-H), 6.63 (d, *J* = 8.0 Hz, 1H, Ar-H), 5.29 (s, 2H, CH<sub>2</sub>), 4.75 (t, *J* = 6.0 Hz, 2H, CH<sub>2</sub>), 4.27 (t, *J* = 6.0 Hz, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 182.14, 158.51, 152.24, 150.11, 149.84, 144.11, 142.60, 140.54, 138.54, 130.79, 130.46, 128.40,

126.12, 125.68, 124.43, 124.23, 124.19, 120.80, 117.41, 116.84, 116.11, 109.39, 63.24, 47.80, 40.53. C<sub>25</sub>H<sub>16</sub>Cl<sub>3</sub>N<sub>5</sub>O<sub>6</sub> [M+H]<sup>+</sup> 588.0200, [M+H+2]<sup>+</sup> 590.0170, [M+H+4]<sup>+</sup> 592.0141 and found 588.0218, 590.0185 and 592.0155.

*1-(3-(4-((5-chloro-2-(2,4-dichlorophenoxy)-4-nitrophenoxy)methyl)-1H-1,2,3-triazol-1-yl)propyl)indoline-2,3-dione (11b)*

Copper solid (yield 53%); m.p.: 140-142 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.76 (s, 1H, Ar-H), 7.67 – 7.61 (m, 2H, Ar-H), 7.51 (d, *J* = 2.5 Hz, 1H, Ar-H), 7.47 (t, *J* = 2.4 Hz, 1H, Ar-H), 7.39 (s, 1H, triazole-H), 7.24 (d, *J* = 8.8 Hz, 1H, Ar-H), 7.18 (t, *J* = 7.6 Hz, 1H, Ar-H), 6.92 (d, *J* = 8.8 Hz, 2H, Ar-H), 5.37 (s, 2H, CH<sub>2</sub>), 4.45 (t, *J* = 5.6 Hz, 2H, CH<sub>2</sub>), 3.82 (t, *J* = 6.1 Hz, 2H, CH<sub>2</sub>), 2.47 – 2.41 (m, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 182.76, 158.63, 152.47, 150.21, 150.07, 144.08, 142.08, 140.48, 138.64, 130.74, 130.30, 128.38, 126.05, 125.80, 124.37, 124.28, 120.72, 117.66, 116.98, 116.36, 110.01, 63.50, 47.80, 37.35, 27.71. C<sub>26</sub>H<sub>18</sub>Cl<sub>3</sub>N<sub>5</sub>O<sub>6</sub> [M+H]<sup>+</sup> 602.0356, [M+H+2]<sup>+</sup> 604.0327, [M+H+4]<sup>+</sup> 606.0297 and found 602.0312, 604.0368 and 606.0354.

*1-(2-(4-((5-chloro-2-(2,4-dichlorophenoxy)-4-nitrophenoxy)methyl)-1H-1,2,3-triazol-1-yl)ethyl)-5-fluoroindoline-2,3-dione (11c)*

Orange solid (yield 52%); m.p.: 148-150 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.65 (s, 1H, Ar-H), 7.49 (d, *J* = 2.5 Hz, 1H, Ar-H), 7.47 (s, 1H, Ar-H), 7.29 (s, 1H, triazole-H), 7.27 – 7.23 (m, 2H, Ar-H), 7.18 (td, *J* = 8.6, 2.7 Hz, 1H, Ar-H), 6.90 (d, *J* = 8.8 Hz, 1H, Ar-H), 6.60 (dd, *J* = 8.7, 3.5 Hz, 1H, Ar-H), 5.29 (s, 2H, CH<sub>2</sub>), 4.75 (t, *J* = 5.9 Hz, 2H, CH<sub>2</sub>), 4.28 (t, *J* = 5.9 Hz, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 181.60, 158.28, 152.20, 150.03, 145.92, 144.11, 142.68, 140.50, 130.93, 130.81, 130.52, 128.84, 128.43, 126.14, 124.99, 124.48, 124.20, 120.89, 116.78, 116.07, 112.63, 110.73, 63.23, 47.80, 40.67. C<sub>25</sub>H<sub>15</sub>Cl<sub>3</sub>FN<sub>5</sub>O<sub>6</sub> [M+H]<sup>+</sup> 606.0105, [M+H+2]<sup>+</sup> 608.0076, [M+H+4]<sup>+</sup> 610.0046 and found 606.0119, 608.0062 and 610.0062.

*1-(3-(4-((5-chloro-2-(2,4-dichlorophenoxy)-4-nitrophenoxy)methyl)-1H-1,2,3-triazol-1-yl)propyl)-5-fluoroindoline-2,3-dione (11d)*

Brown solid (yield 56%); m.p.: 113-115 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.55 (s, 1H, Ar-H), 7.48 (d, *J* = 2.6 Hz, 1H, Ar-H), 7.39 (s, 1H, triazole-H), 7.22 (s, 1H, Ar-H), 7.22 – 7.19 (m, 2H, Ar-H), 7.05 (td, *J* = 8.8, 2.6 Hz, 1H, Ar-H), 6.86 (d, *J* = 8.4 Hz, 1H, Ar-H), 6.64 (dd, *J* = 8.5, 3.6 Hz, 1H, Ar-H), 5.25 (s, 2H, CH<sub>2</sub>), 4.68 (t, *J* = 5.8 Hz, 2H, CH<sub>2</sub>), 4.32 (t, *J* = 5.8 Hz,

2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 182.58, 159.30, 153.25, 151.45, 145.42, 141.21, 143.59, 142.52, 135.58, 132.78, 130.63, 128.64, 127.42, 125.21, 124.92, 124.32, 123.28, 121.82, 117.78, 116.17, 113.59, 110.83, 64.33, 48.89, 41.58, 26.69. C<sub>26</sub>H<sub>17</sub>Cl<sub>3</sub>FN<sub>5</sub>O<sub>6</sub> [M+H]<sup>+</sup> 620.0262, [M+H+2]<sup>+</sup> 622.0232, [M+H+4]<sup>+</sup> 624.0203 and found 620.0275, 622.0219 and 624.0218.

*5-chloro-1-(2-(4-((5-chloro-2-(2,4-dichlorophenoxy)-4-nitrophenoxy)methyl)-1H-1,2,3-triazol-1-yl)ethyl)indoline-2,3-dione (11e)*

Brown solid (yield 53%); m.p.: 100-102 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.62 (s, 1H, Ar-H), 7.53 (d, *J* = 2.3 Hz, 1H, Ar-H), 7.49 (d, *J* = 3.2 Hz, 2H, Ar-H), 7.43 (dd, *J* = 8.3, 2.1 Hz, 1H, Ar-H), 7.33 (s, 1H, triazole-H), 7.25 (dd, *J* = 8.7, 2.4 Hz, 1H, Ar-H), 6.90 (d, *J* = 8.8 Hz, 1H, Ar-H), 6.61 (d, *J* = 8.5 Hz, 1H, Ar-H), 5.30 (s, 2H, CH<sub>2</sub>), 4.74 (t, *J* = 5.8 Hz, 2H, CH<sub>2</sub>), 4.29 (t, *J* = 5.8 Hz, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 181.20, 157.98, 152.23, 150.04, 148.12, 144.06, 142.79, 140.49, 137.89, 130.81, 130.50, 130.16, 128.43, 126.11, 125.62, 124.44, 124.27, 120.86, 118.23, 116.80, 116.15, 110.82, 63.29, 47.78, 40.69. C<sub>25</sub>H<sub>15</sub>Cl<sub>4</sub>N<sub>5</sub>O<sub>6</sub> [M+H]<sup>+</sup> 621.9810, [M+H+2]<sup>+</sup> 623.9780, [M+H+4]<sup>+</sup> 625.9751 and found 621.9823, 623.9795 and 625.9763.

*5-chloro-1-(3-(4-((5-chloro-2-(2,4-dichlorophenoxy)-4-nitrophenoxy)methyl)-1H-1,2,3-triazol-1-yl)propyl)indoline-2,3-dione (11f)*

Brown solid (yield 57%); m.p.: 110-112 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.64 (s, 1H, Ar-H), 7.52 (t, *J* = 2.6 Hz, 1H, Ar-H), 7.49 (d, *J* = 2.4 Hz, 1H, Ar-H), 7.42 (s, 1H, triazole-H), 7.38 (d, *J* = 2.5 Hz, 1H, Ar-H), 7.29 (s, 1H, Ar-H), 7.15 (dd, *J* = 8.8, 2.5 Hz, 1H, Ar-H), 6.82 (dd, *J* = 8.5, 5.8 Hz, 2H, Ar-H), 5.27 (s, 2H, CH<sub>2</sub>), 4.36 (t, *J* = 6.4 Hz, 2H, CH<sub>2</sub>), 3.72 (t, *J* = 6.5 Hz, 2H, CH<sub>2</sub>), 2.37 – 2.32 (m, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 181.20, 157.98, 152.23, 150.04, 148.12, 144.06, 142.73, 140.49, 137.89, 130.81, 130.50, 130.16, 128.43, 126.11, 125.62, 124.43, 124.27, 120.86, 118.23, 116.80, 116.15, 110.82, 63.29, 47.78, 40.69, 29.71. C<sub>26</sub>H<sub>17</sub>Cl<sub>4</sub>N<sub>5</sub>O<sub>6</sub> [M+H]<sup>+</sup> 635.9966, [M+H+2]<sup>+</sup> 637.9937, [M+H+4]<sup>+</sup> 639.9907 and found 635.9979, 637.9924 and 625.9763.

*5-bromo-1-(2-(4-((5-chloro-2-(2,4-dichlorophenoxy)-4-nitrophenoxy)methyl)-1H-1,2,3-triazol-1-yl)ethyl)indoline-2,3-dione (11g)*

Brown solid (yield 61%); m.p.: 115-117 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.81 (d, *J* = 8.4 Hz, 3H, Ar-H), 7.52 (d, *J* = 20.6 Hz, 2H, Ar-H), 7.45 (s, 1H, triazole-H), 7.26 (d, *J* = 8.86 Hz, 1H,

Ar-H), 7.03 (d,  $J = 8.9$  Hz, 1H, Ar-H), 6.72 (d,  $J = 8.4$  Hz, 1H, Ar-H), 5.28(s, 2H, CH<sub>2</sub>), 4.56 (t,  $J = 6.7$  Hz, 2H, CH<sub>2</sub>), 3.84 (t,  $J = 6.5$  Hz, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 182.73, 158.79, 154.35, 151.24, 147.79, 145.16, 143.28, 141.74, 140.48, 132.82, 130.42, 129.52, 128.36, 126.31, 124.52, 124.25, 121.62, 119.81, 118.23, 117.86, 116.47, 111.78, 64.42, 47.72, 42.52. C<sub>25</sub>H<sub>15</sub>BrCl<sub>3</sub>N<sub>5</sub>O<sub>6</sub> [M+H]<sup>+</sup> 665.9305, [M+H+2]<sup>+</sup> 667.9284, [M+H+4]<sup>+</sup> 669.9255 and found 665.9318, 667.9298 and 669.9241.

*5-bromo-1-(3-(4-((5-chloro-2-(2,4-dichlorophenoxy)-4-nitrophenoxy)methyl)-1H-1,2,3-triazol-1-yl)propyl)indoline-2,3-dione (11h)*

Brown solid (yield 58%); m.p.: 123-125 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.73 (d,  $J = 8.2$  Hz, 3H, Ar-H), 7.49 (d,  $J = 20.7$  Hz, 2H, Ar-H), 7.39 (s, 1H, triazole-H), 7.24 (d,  $J = 8.8$  Hz, 1H, Ar-H), 6.92 (d,  $J = 8.7$  Hz, 1H, Ar-H), 6.86 (d,  $J = 8.5$  Hz, 1H, Ar-H), 5.36 (s, 2H, CH<sub>2</sub>), 4.45 (t,  $J = 6.5$  Hz, 2H, CH<sub>2</sub>), 3.81 (t,  $J = 6.7$  Hz, 2H, CH<sub>2</sub>), 2.45 – 2.40 (m, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 181.65, 157.89, 152.44, 150.20, 148.81, 144.06, 142.18, 140.84, 140.50, 130.74, 130.31, 128.51, 128.40, 126.03, 124.40, 124.37, 120.72, 118.80, 117.13, 116.96, 116.37, 111.77, 63.48, 47.75, 37.58, 27.51. C<sub>26</sub>H<sub>17</sub>BrCl<sub>3</sub>N<sub>5</sub>O<sub>6</sub> [M+H]<sup>+</sup> 679.9461, [M+H+2]<sup>+</sup> 681.9441, [M+H+4]<sup>+</sup> 683.9411 and found 679.9473, 681.9455 and 683.9425.

*1-(2-(4-(((2-chloro-5-(2,4-dichlorophenoxy)-4-hydroxyphenyl)amino)methyl)-1H-1,2,3-triazol-1-yl)ethyl)indoline-2,3-dione (12a)*

Brown solid (yield 56%); m.p.: 140-143 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 9.87 (s, 1H, Ar-H), 7.74 (s, 1H, Ar-H), 7.62 (s, 1H, Ar-H), 7.55 (d,  $J = 7.8$  Hz, 2H, Ar-H), 7.49 (d,  $J = 2.5$  Hz, 2H, Ar-H), 7.46 (s, 1H, Ar-H), 7.32 (s, 1H, triazole-H), 7.24 (dd,  $J = 8.8, 2.6$  Hz, 1H, Ar-H), 6.88 (d,  $J = 8.8$  Hz, 1H, Ar-H), 6.63 (d,  $J = 8.2$  Hz, 1H, Ar-H), 5.29 (s, 2H, Ar-H), 4.76 (t,  $J = 6.0$  Hz, 2H, CH<sub>2</sub>), 4.28 (t,  $J = 5.9$  Hz, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) δ 158.47, 152.50, 150.24, 146.19, 144.14, 142.21, 140.55, 130.82, 130.40, 128.48, 126.12, 125.17, 124.93, 124.44, 120.84, 118.39, 118.32, 116.99, 116.39, 113.09, 112.84, 111.41, 63.54, 47.83, 37.61, 27.58. C<sub>25</sub>H<sub>18</sub>Cl<sub>3</sub>N<sub>5</sub>O<sub>4</sub> [M+H]<sup>+</sup> 558.0458, [M+H+2]<sup>+</sup> 560.0428, [M+H+4]<sup>+</sup> 562.0399 and found 558.0471, 560.0415 and 562.0385.

*1-(3-(4-(((2-chloro-5-(2,4-dichlorophenoxy)-4-hydroxyphenyl)amino)methyl)-1H-1,2,3-triazol-1-yl)propyl)indoline-2,3-dione (12b)*

Brown solid (yield 52%); m.p.: 116-118 °C; <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) δ 7.70 (s, 1H, Ar-H), 7.47 (s, 1H, Ar-H), 7.43 (d,  $J = 2.5$  Hz, 1H, Ar-H), 7.34 (s, 1H, triazole-H), 7.31 (ddd,  $J = 6.7,$

5.5, 3.0 Hz, 3H, Ar-H), 7.20 (dd,  $J = 8.8, 2.5$  Hz, 1H, Ar-H), 6.89 (t,  $J = 1.6$  Hz, 1H, Ar-H), 6.87 (d,  $J = 2.4$  Hz, 1H, Ar-H), 5.32 (s, 2H, CH<sub>2</sub>), 4.42 (t,  $J = 6.4$  Hz, 2H, CH<sub>2</sub>), 3.78 (t,  $J = 6.6$  Hz, 2H, CH<sub>2</sub>), 2.43 – 2.37 (m, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>)  $\delta$  158.47, 152.50, 150.24, 146.19, 144.14, 142.21, 140.55, 130.82, 130.40, 128.48, 126.12, 125.17, 124.93, 124.44, 120.84, 118.39, 118.32, 116.99, 116.39, 113.09, 112.84, 111.41, 63.54, 47.83, 37.61, 27.58. C<sub>26</sub>H<sub>20</sub>Cl<sub>3</sub>N<sub>5</sub>O<sub>4</sub> [M+H]<sup>+</sup> 572.0614, [M+H+2]<sup>+</sup> 574.0585, [M+H+4]<sup>+</sup> 576.0555 and found 572.0627, 574.0572 and 576.0568.

*1-(2-(4-(((2-chloro-5-(2,4-dichlorophenoxy)-4-hydroxyphenyl)amino)methyl)-1H-1,2,3-triazol-1-yl)ethyl)-6-fluoroindoline-2,3-dione (12c)*

Brown solid (yield 55%); m.p.: 108-110 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>)  $\delta$  7.84 (s, 1H, Ar-H), 7.63 (s, 1H, Ar-H), 7.52 (d,  $J = 2.4$  Hz, 1H, Ar-H), 7.48 (s, 1H, triazole-H), 7.32 (ddt,  $J = 9.6, 5.6, 2.6$  Hz, 2H, Ar-H), 7.27 (dd,  $J = 8.6, 2.6$  Hz, 1H, Ar-H), 6.89 (dd,  $J = 8.7, 2.6$  Hz, 2H, Ar-H), 5.42 (s, 2H, CH<sub>2</sub>), 4.54 (t,  $J = 6.4$  Hz, 2H, CH<sub>2</sub>), 3.83 (t,  $J = 6.8$  Hz, 2H, CH<sub>2</sub>), 2.42 – 2.48 (m, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>)  $\delta$  181.18, 161.48, 157.48, 154.26, 152.46, 150.42, 147.22, 145.18, 143.23, 141.43, 131.68, 130.25, 128.45, 125.12, 124.66, 124.32, 121.87, 118.86, 117.23, 116.45, 114.62, 111.28, 64.53, 47.86, 36.46. C<sub>25</sub>H<sub>17</sub>Cl<sub>3</sub>FN<sub>5</sub>O<sub>4</sub> [M+H]<sup>+</sup> 576.0364, [M+H+2]<sup>+</sup> 578.0334, [M+H+4]<sup>+</sup> 580.0305 and found 576.0352, 578.0347 and 580.0321.

*1-(3-(4-(((2-chloro-5-(2,4-dichlorophenoxy)-4-hydroxyphenyl)amino)methyl)-1H-1,2,3-triazol-1-yl)propyl)-6-fluoroindoline-2,3-dione (12d)*

Orange solid (yield 56%); m.p.: 103-105 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>)  $\delta$  7.72 (s, 1H, Ar-H), 7.51 (s, 1H, triazole-H), 7.47 (d,  $J = 2.5$  Hz, 1H, Ar-H), 7.38 (s, 1H, Ar-H), 7.35 (ddt,  $J = 9.4, 5.5, 2.7$  Hz, 2H, Ar-H), 7.23 (dd,  $J = 8.8, 2.5$  Hz, 1H, Ar-H), 6.91 (dd,  $J = 8.9, 2.7$  Hz, 2H, Ar-H), 5.36 (s, 2H, CH<sub>2</sub>), 4.46 (t,  $J = 6.5$  Hz, 2H, CH<sub>2</sub>), 3.81 (t,  $J = 6.6$  Hz, 2H, CH<sub>2</sub>), 2.47 – 2.40 (m, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>)  $\delta$  182.19, 160.49, 158.53, 158.37, 152.44, 150.22, 146.13, 144.08, 142.16, 140.53, 130.73, 130.30, 128.38, 126.02, 124.83, 124.30, 120.69, 118.28, 117.00, 116.38, 112.75, 111.24, 63.43, 47.76, 37.56, 27.51. C<sub>26</sub>H<sub>19</sub>Cl<sub>3</sub>FN<sub>5</sub>O<sub>4</sub> [M+H]<sup>+</sup> 590.0520, [M+H+2]<sup>+</sup> 592.0491, [M+H+4]<sup>+</sup> 594.0461 and found 590.0533, 592.0478 and 594.0474.

*6-chloro-1-(2-(4-(((2-chloro-5-(2,4-dichlorophenoxy)-4-hydroxyphenyl)amino)methyl)-1H-1,2,3-triazol-1-yl)ethyl)indoline-2,3-dione (12e)*

Orange solid (yield 52%); m.p.: 93-95 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.81 (s, 1H, Ar-H), 7.62 (q, *J* = 2.4 Hz, 2H, Ar-H), 7.62 (d, *J* = 2.4 Hz, 1H, Ar-H), 7.53 (s, 1H, Ar-H), 7.49 (d, *J* = 2.6 Hz, 1H, Ar-H), 7.41 (s, 1H, triazole-H), 7.29 (dd, *J* = 8.9, 2.4 Hz, 1H, Ar-H), 6.98 (dd, *J* = 8.6, 4.8 Hz, 2H, Ar-H), 5.41 (s, 2H, CH<sub>2</sub>), 4.43 (t, *J* = 6.7 Hz, 2H, CH<sub>2</sub>), 3.83 (t, *J* = 6.5 Hz, 2H, CH<sub>2</sub>), 2.49 – 2.42 (m, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 182.75, 159.16, 153.46, 150.12, 149.26, 144.17, 141.42, 138.69, 131.72, 130.26, 130.12, 128.28, 127.11, 125.54, 124.26, 121.79, 118.46, 117.13, 115.36, 111.37, 64.53, 47.79, 41.36. C<sub>25</sub>H<sub>17</sub>Cl<sub>4</sub>N<sub>5</sub>O<sub>4</sub> [M+H]<sup>+</sup> 592.0068, [M+H+2]<sup>+</sup> 594.9976, [M+H+4]<sup>+</sup> 596.0009 and found 592.0054, 594.9990 and 596.0021.

*6-chloro-1-(3-(4-(((2-chloro-5-(2,4-dichlorophenoxy)-4-hydroxyphenyl)amino)methyl)-1H-1,2,3-triazol-1-yl)propyl)indoline-2,3-dione (12f)*

Orange solid (yield 57 %); m.p.: 85-87 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.72 (s, 1H, Ar-H), 7.60 (q, *J* = 2.1 Hz, 2H, Ar-H), 7.58 (d, *J* = 2.2 Hz, 1H, Ar-H), 7.51 (s, 1H, Ar-H), 7.47 (d, *J* = 2.5 Hz, 1H, Ar-H), 7.38 (s, 1H, triazole-H), 7.23 (dd, *J* = 8.7, 2.5 Hz, 1H, Ar-H), 6.91 (dd, *J* = 8.5, 4.7 Hz, 2H, Ar-H), 5.36 (s, 2H, CH<sub>2</sub>), 4.45 (t, *J* = 6.5 Hz, 2H, CH<sub>2</sub>), 3.81 (t, *J* = 6.6 Hz, 2H, CH<sub>2</sub>), 2.46 – 2.40 (m, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 181.79, 158.06, 152.45, 150.22, 148.36, 144.07, 140.53, 137.96, 130.73, 130.29, 130.14, 128.38, 126.01, 125.64, 124.36, 120.69, 118.47, 117.00, 116.39, 111.35, 63.51, 47.75, 40.95, 27.52. C<sub>26</sub>H<sub>19</sub>Cl<sub>4</sub>N<sub>5</sub>O<sub>4</sub> [M+H]<sup>+</sup> 606.0225, [M+H+2]<sup>+</sup> 608.0195, [M+H+4]<sup>+</sup> 610.0166 and found 606.0237, 608.0182 and 610.0179.

*6-bromo-1-(2-(4-(((2-chloro-5-(2,4-dichlorophenoxy)-4-hydroxyphenyl)amino)methyl)-1H-1,2,3-triazol-1-yl)ethyl)indoline-2,3-dione (12g)*

Orange solid (yield 52%); m.p.: 82-96 °C; <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) δ 7.76 (s, 1H, Ar-H), 7.65 (q, *J* = 2.2 Hz, 2H, Ar-H), 7.63 (d, *J* = 2.6 Hz, 1H, Ar-H), 7.58 (s, 1H, Ar-H), 7.52 (d, *J* = 2.1 Hz, 1H, Ar-H), 7.42 (s, 1H, triazole-H), 7.26 (dd, *J* = 8.9, 2.6 Hz, 1H, Ar-H), 6.89 (dd, *J* = 8.4, 4.6 Hz, 2H, Ar-H), 5.41 (s, 2H, CH<sub>2</sub>), 4.41 (t, *J* = 6.6 Hz, 2H, CH<sub>2</sub>), 3.79 (t, *J* = 6.4 Hz, 2H, CH<sub>2</sub>), 2.47 – 2.41 (m, 2H, CH<sub>2</sub>). <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) δ 182.89, 157.16, 153.65, 151.42, 149.26, 145.27, 141.63, 138.86, 132.63, 130.59, 130.24, 128.45, 127.11, 125.54, 124.25, 121.79, 118.36, 117.19, 116.49, 112.36, 64.54, 46.65, 41.83. C<sub>25</sub>H<sub>17</sub>BrCl<sub>3</sub>N<sub>5</sub>O<sub>4</sub>

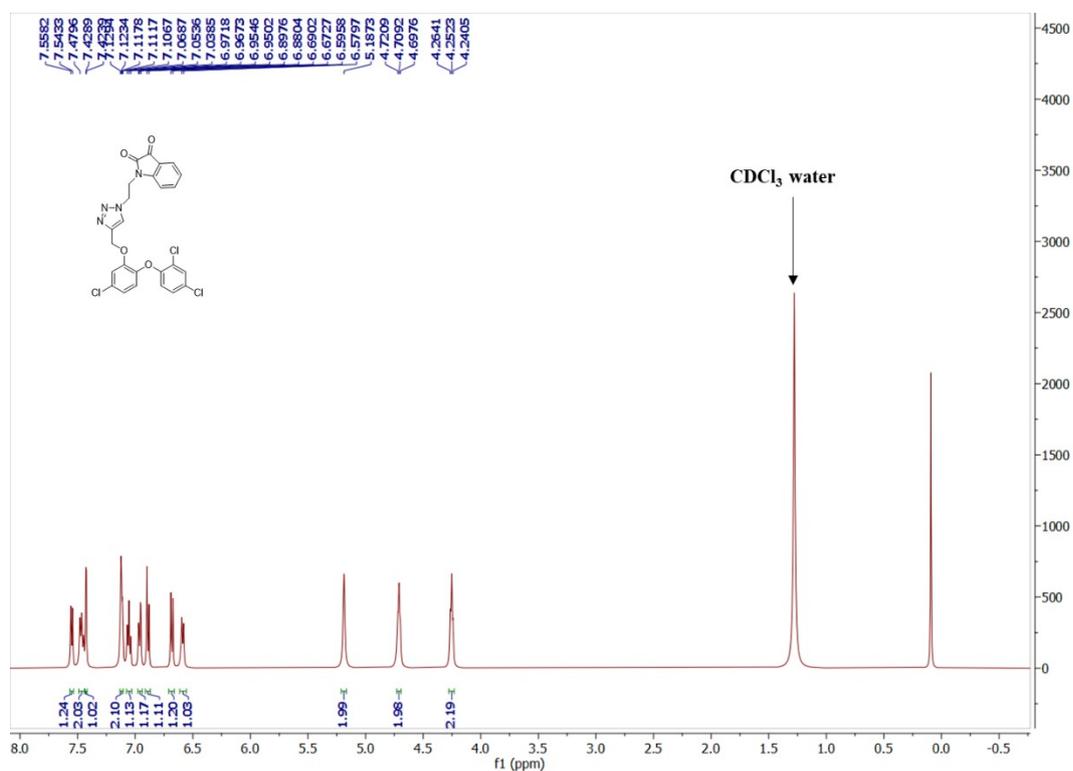
$[M+H]^+$  635.9563,  $[M+H+2]^+$  637.9543,  $[M+H+4]^+$  639.9513 and found 635.9551, 637.9557 and 639.9525.

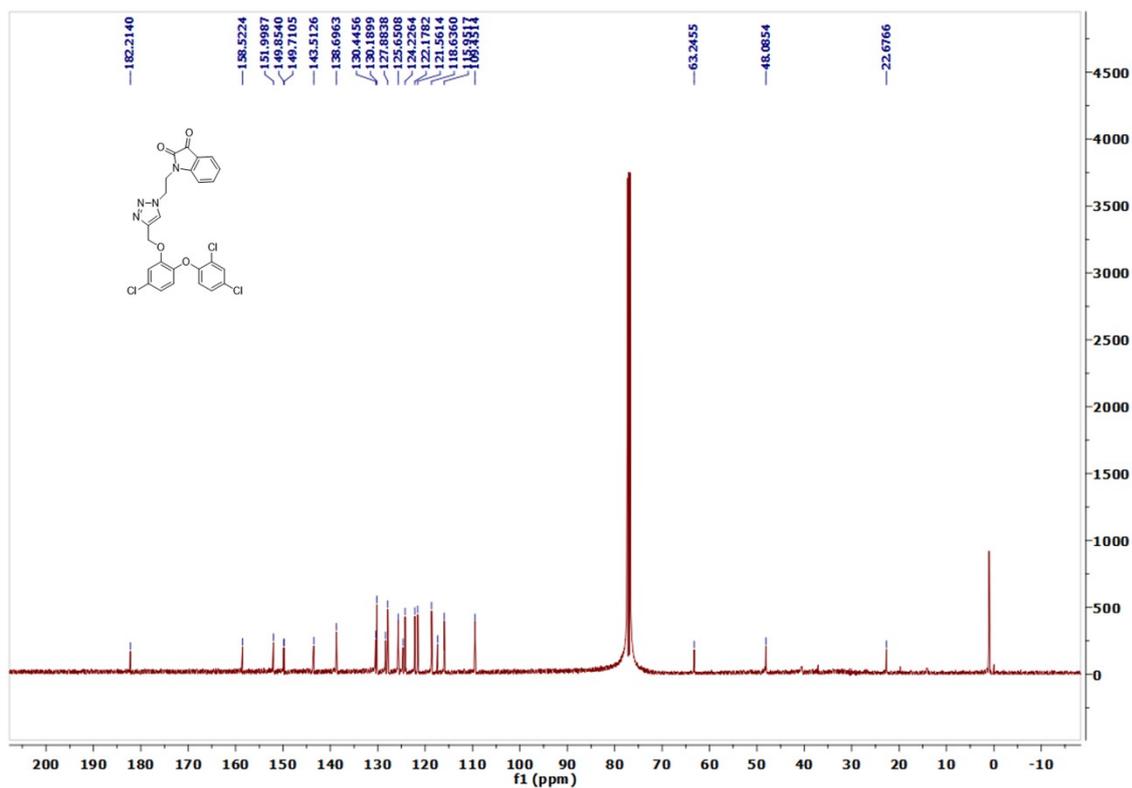
*6-bromo-1-(3-(4-(((2-chloro-5-(2,4-dichlorophenoxy)-4-hydroxyphenyl)amino)methyl)-1H-1,2,3-triazol-1-yl)propyl)indoline-2,3-dione (12h)*

Orange solid (yield 56%); m.p.: 76-84 °C;  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ )  $\delta$  7.70 (s, 1H, Ar-H), 7.47 (s, 1H, Ar-H), 7.43 (d,  $J = 2.5$  Hz, 1H, Ar-H), 7.34 (s, 1H, triazole-H), 7.33 – 7.29 (m, 2H, Ar-H), 7.20 (dd,  $J = 8.8, 2.5$  Hz, 1H, Ar-H), 6.90 – 6.89 (m, 1H, Ar-H), 6.87 (d,  $J = 2.4$  Hz, 1H, Ar-H), 5.32 (s, 2H,  $\text{CH}_2$ ), 4.42 (t,  $J = 6.4$  Hz, 2H,  $\text{CH}_2$ ), 3.78 (t,  $J = 6.6$  Hz, 2H,  $\text{CH}_2$ ), 2.43 – 2.36 (m, 2H,  $\text{CH}_2$ ).  $^{13}\text{C}$  NMR (125 MHz,  $\text{CDCl}_3$ )  $\delta$  181.31, 157.88, 151.31, 150.14, 147.63, 144.26, 141.63, 140.59, 136.49, 131.92, 130.40, 130.06, 127.83, 126.41, 125.36, 124.63, 124.17, 120.63, 118.35, 116.81, 117.25, 111.52, 64.39, 46.78, 41.79, 29.46.  $\text{C}_{26}\text{H}_{19}\text{BrCl}_3\text{N}_5\text{O}_4$   $[M+H]^+$  649.9720,  $[M+H+2]^+$  651.9699,  $[M+H+4]^+$  653.9670 and found 649.9733, 651.9684 and 653.9687.

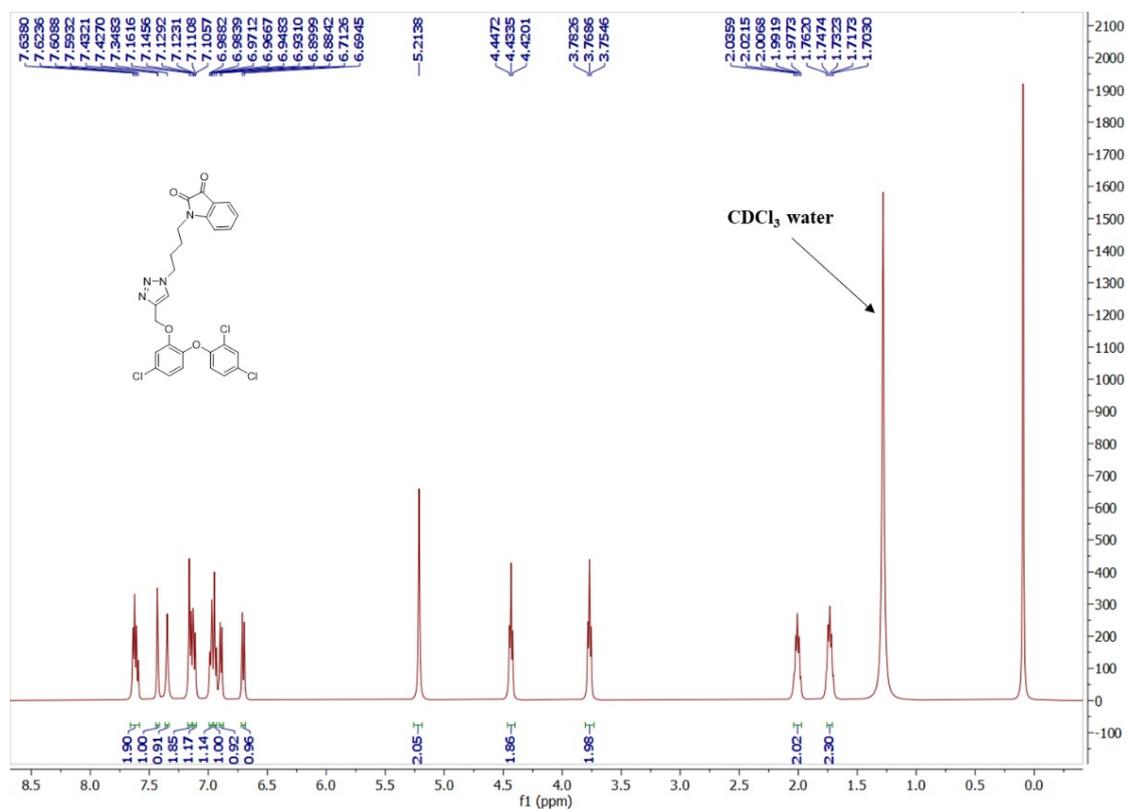
## 8. Scanned copies of NMR of synthesized compounds.

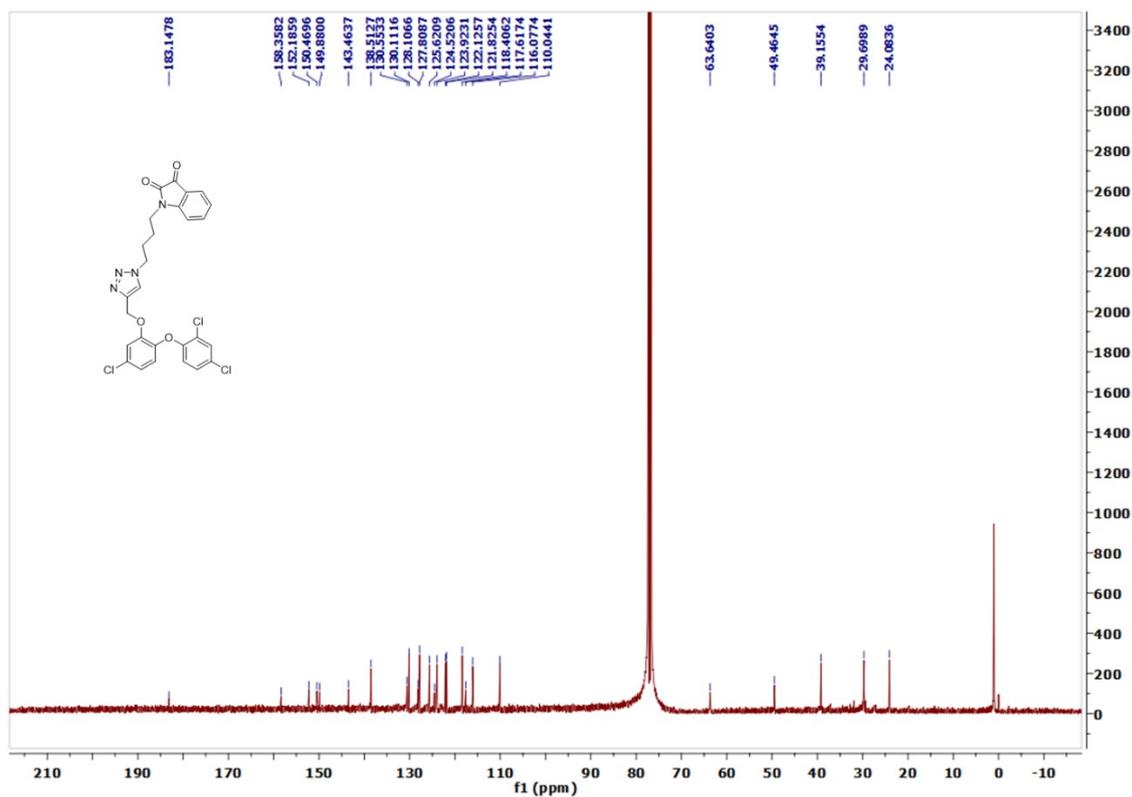
*1-(2-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)ethyl)indoline-2,3-dione (10a)*



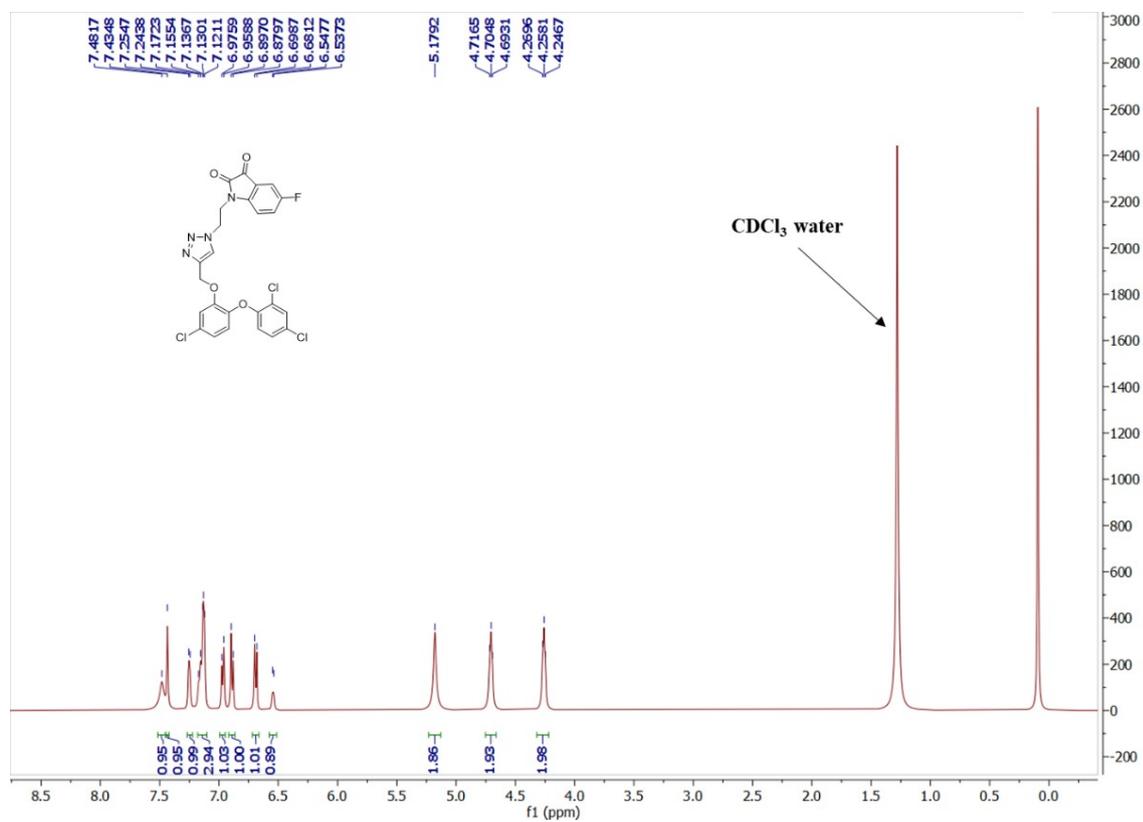


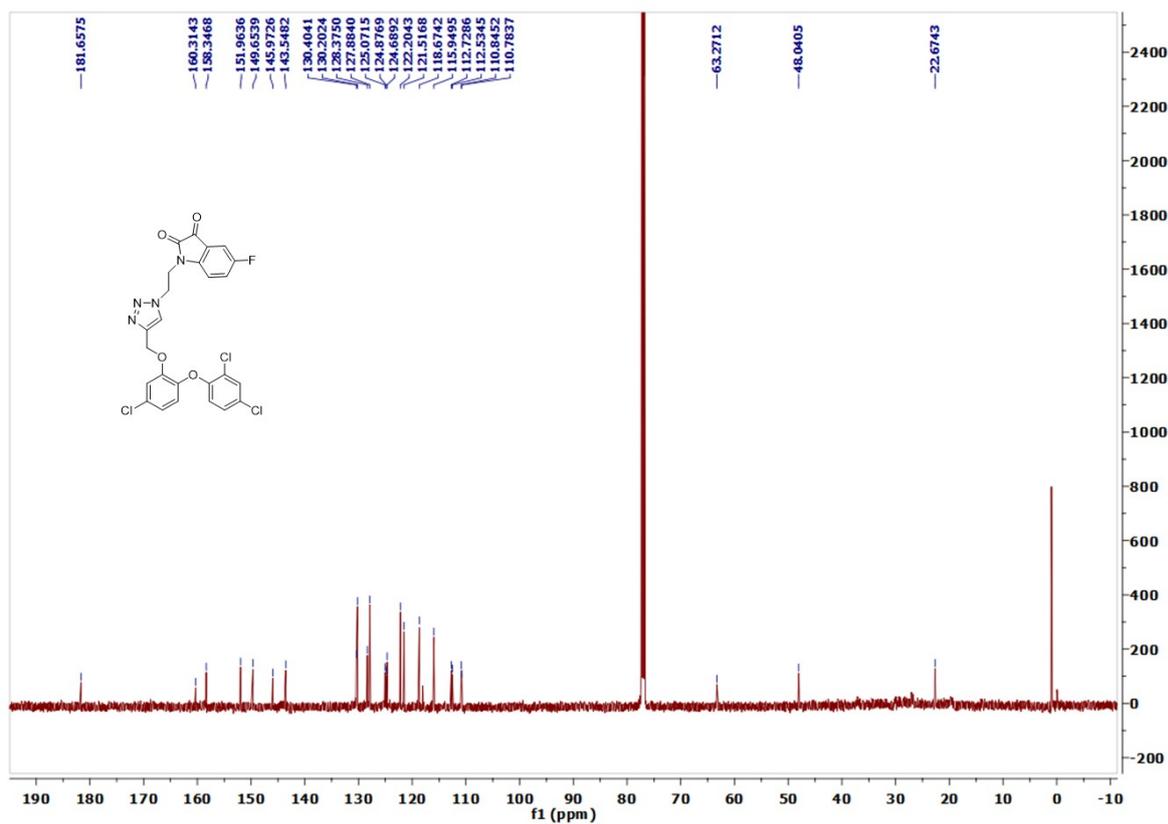
1-(4-(4-((5-chloro-2-(2,4-dichlorophenoxy)methyl)-1H-1,2,3-triazol-1-yl)butyl)indoline-2,3-dione (10c)



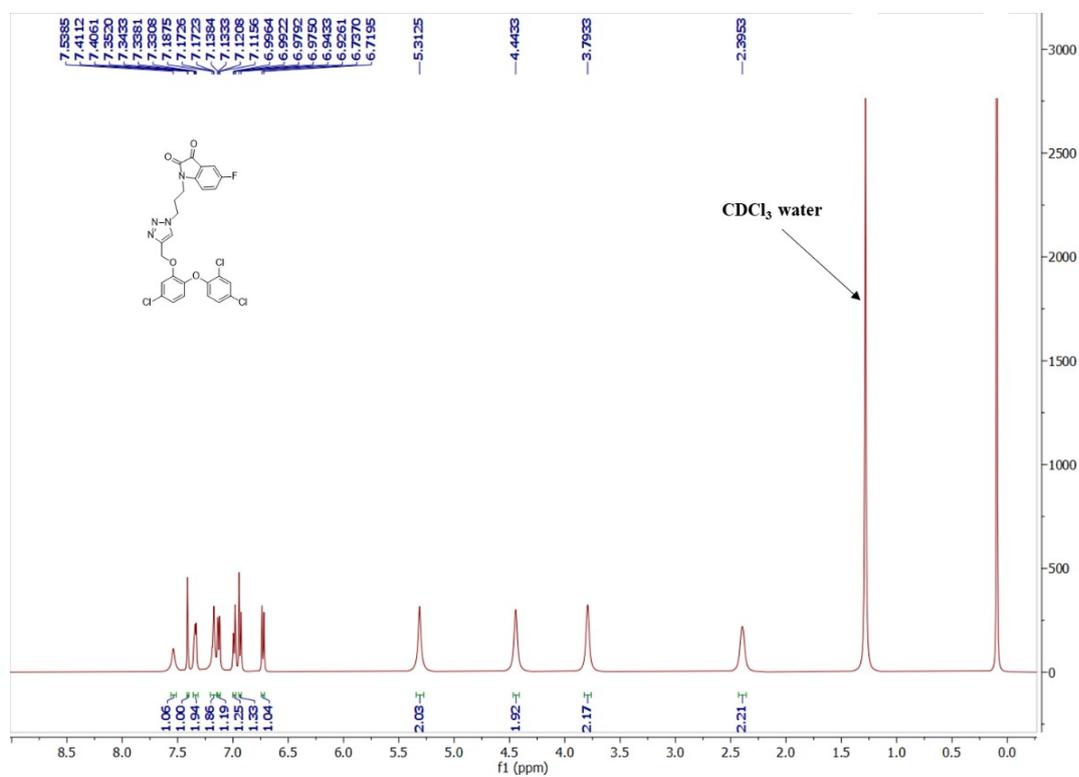


*1-(2-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)ethyl)-5-fluorindoline-2,3-dione (10d)*

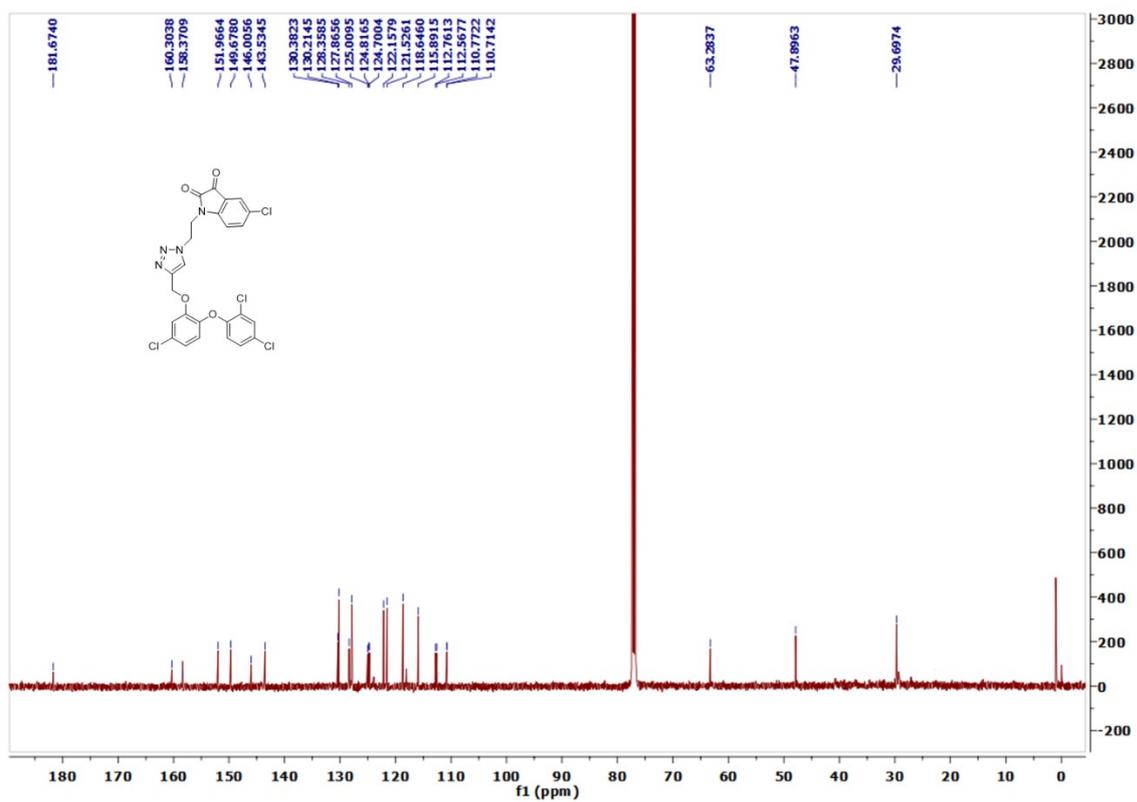
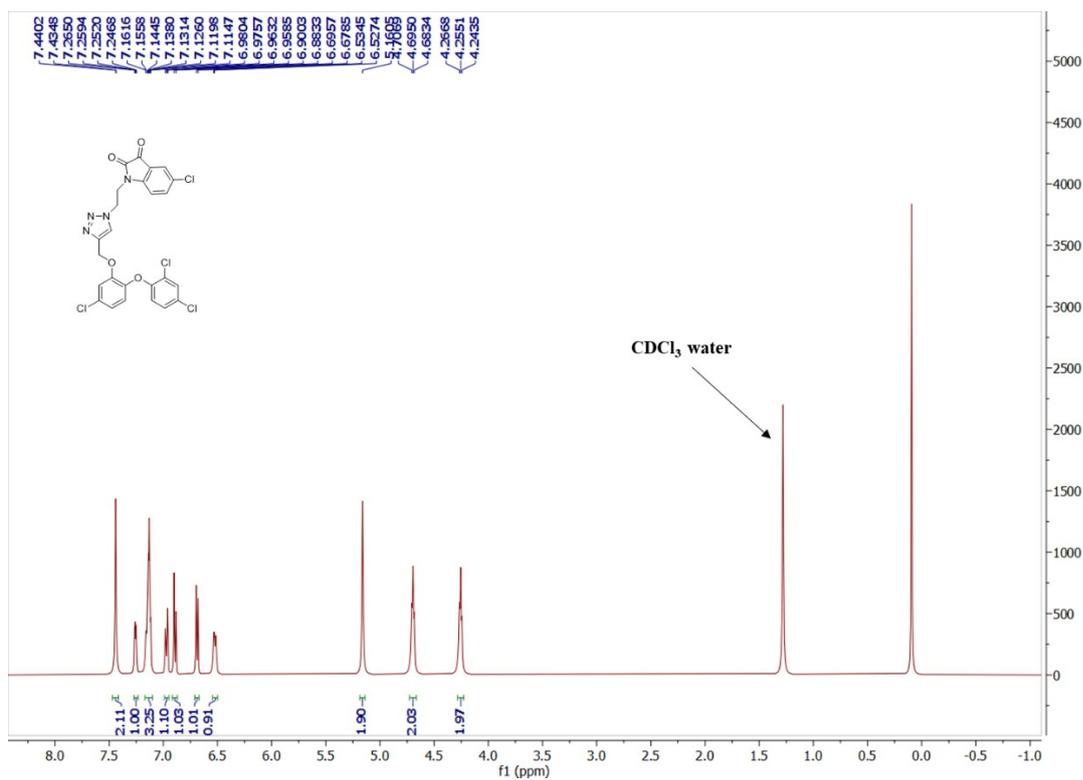




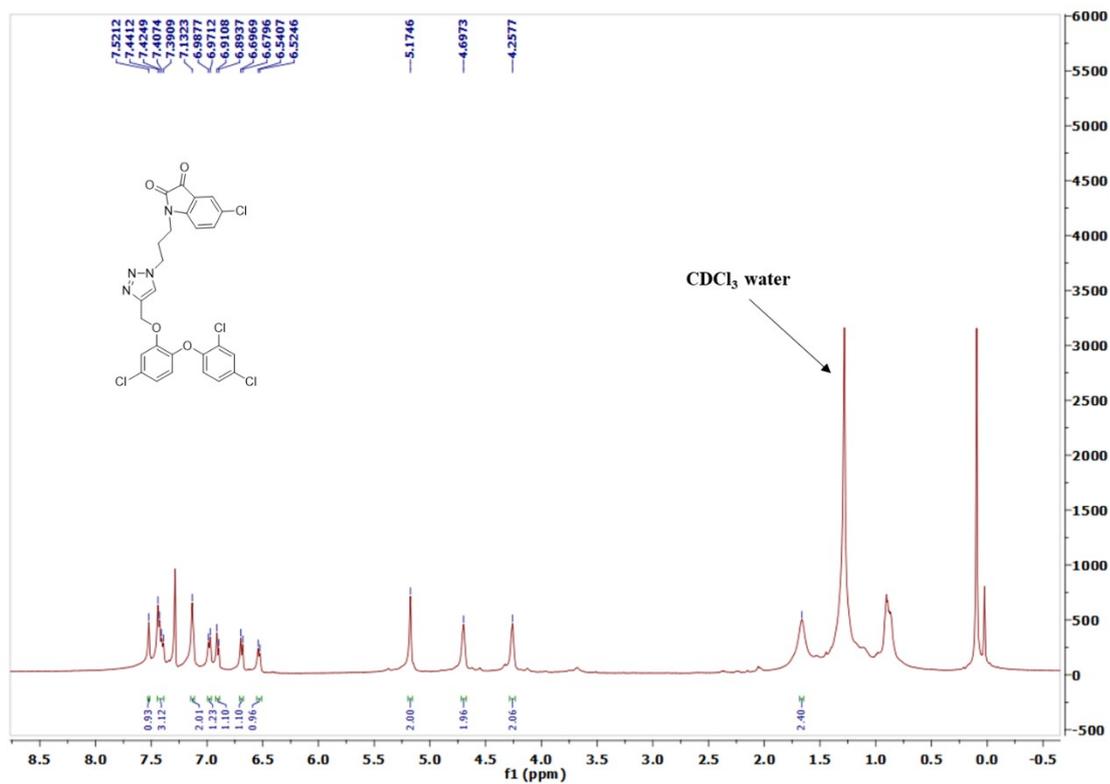
1-(3-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)propyl)-5-fluoroindoline-2,3-dione (**10e**)



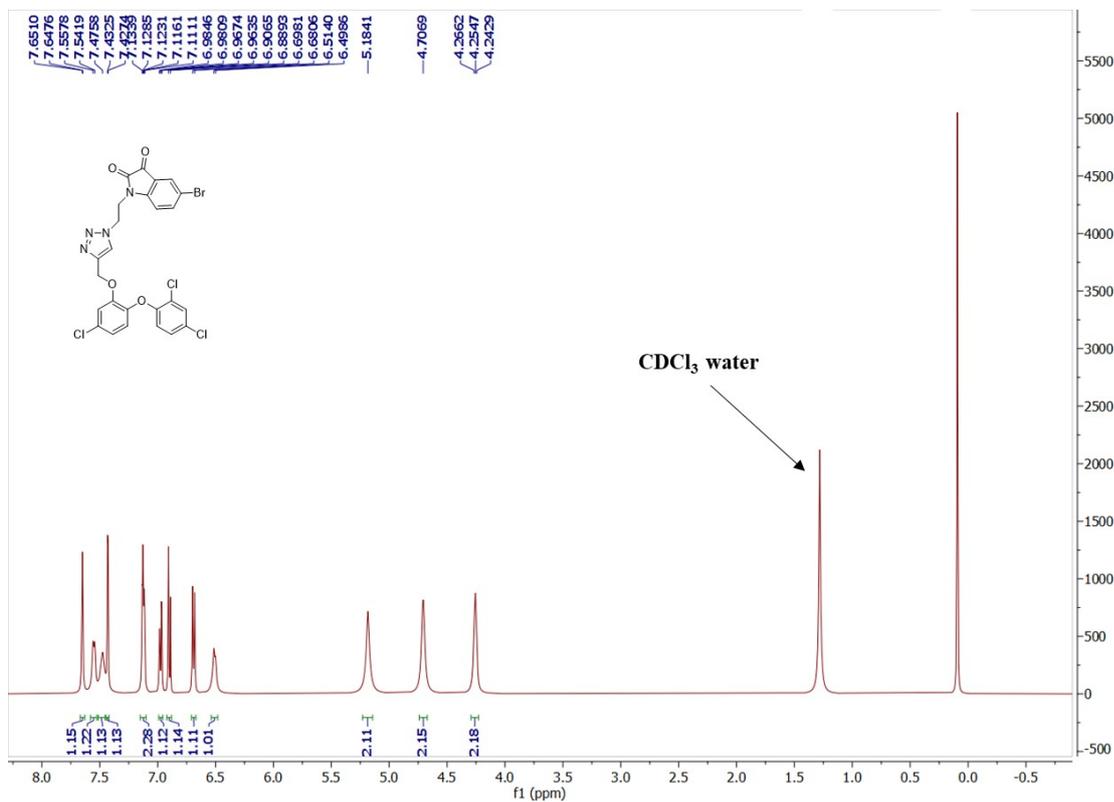
5-chloro-1-(2-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)ethyl)indoline-2,3-dione (**10g**)



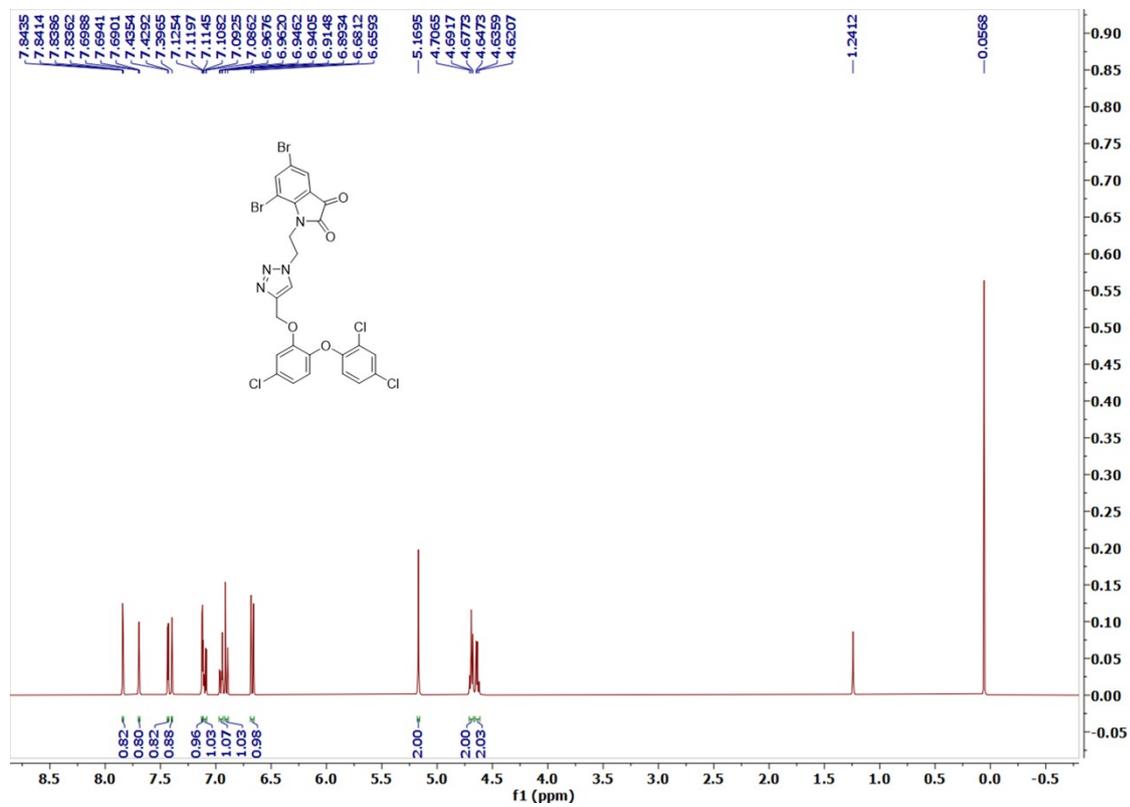
5-chloro-1-(3-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)propyl)indoline-2,3-dione (**10h**)



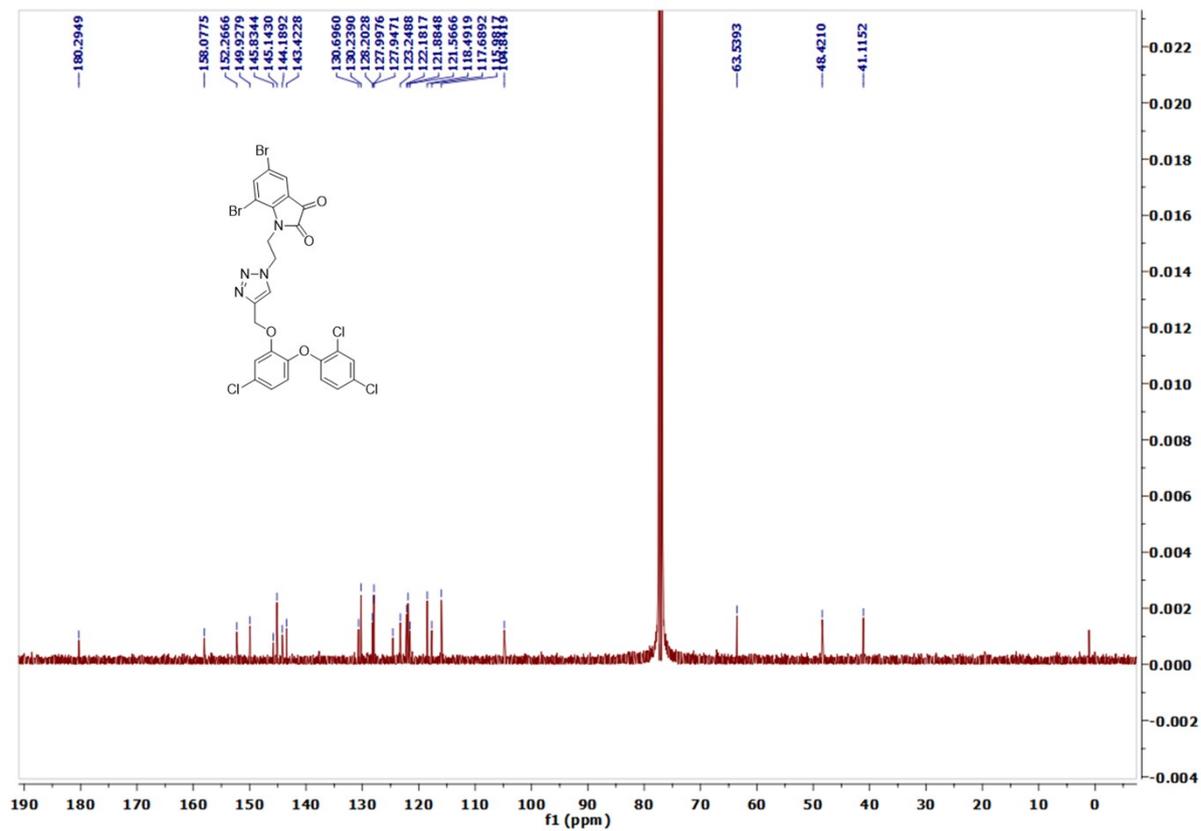
5-bromo-1-(2-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)ethyl)indoline-2,3-dione (**10j**)



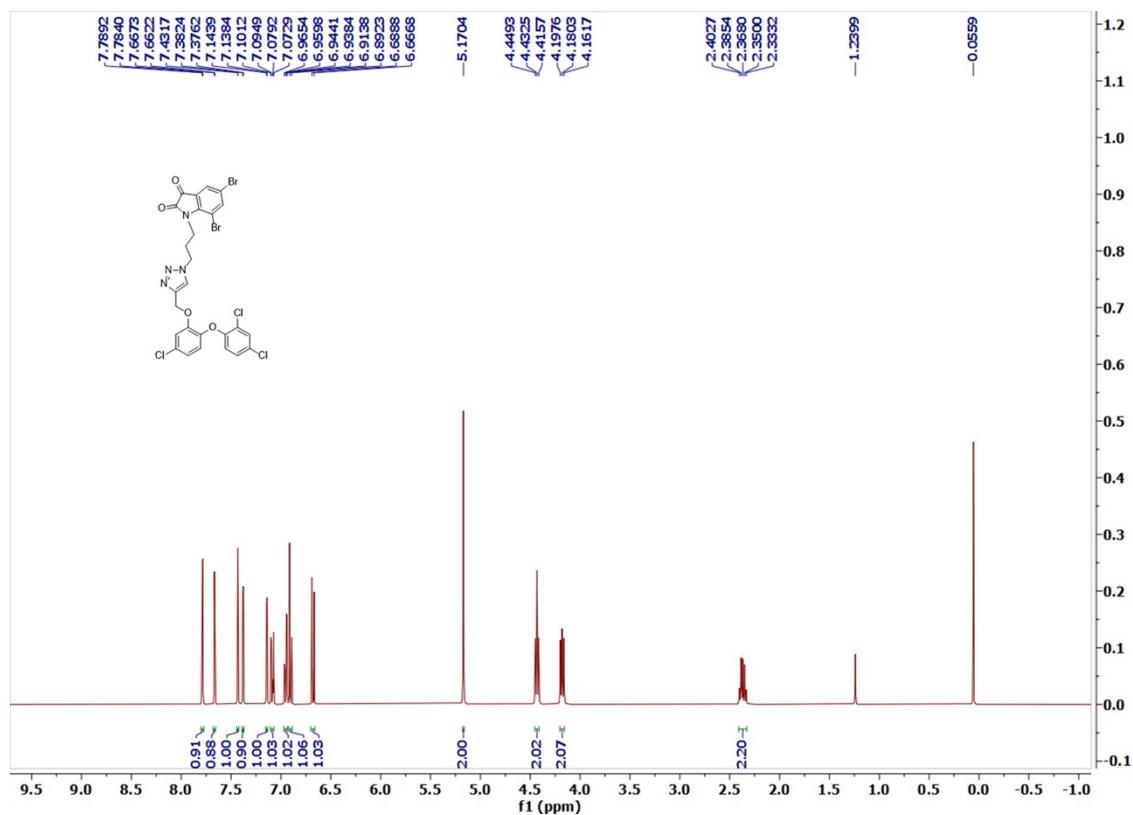
5,7-dibromo-1-(2-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-



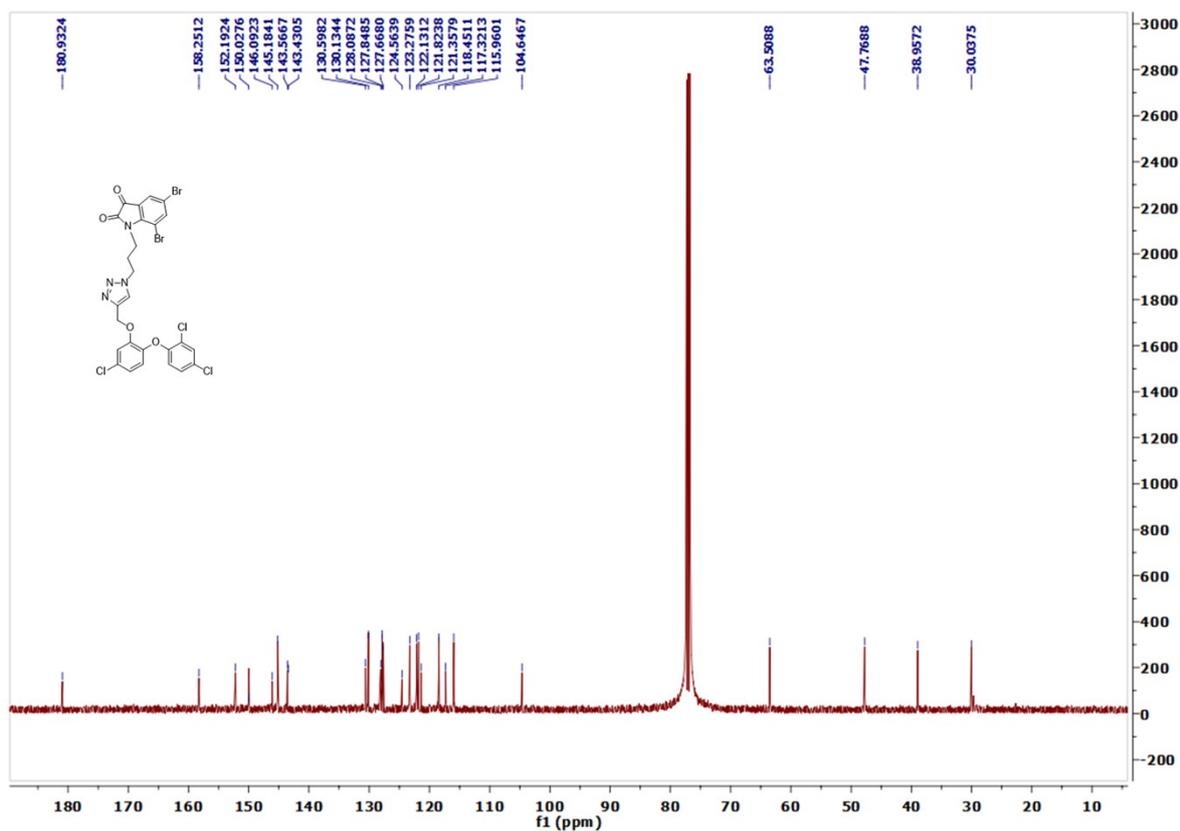
yl)ethyl)indoline-2,3-dione (10m)



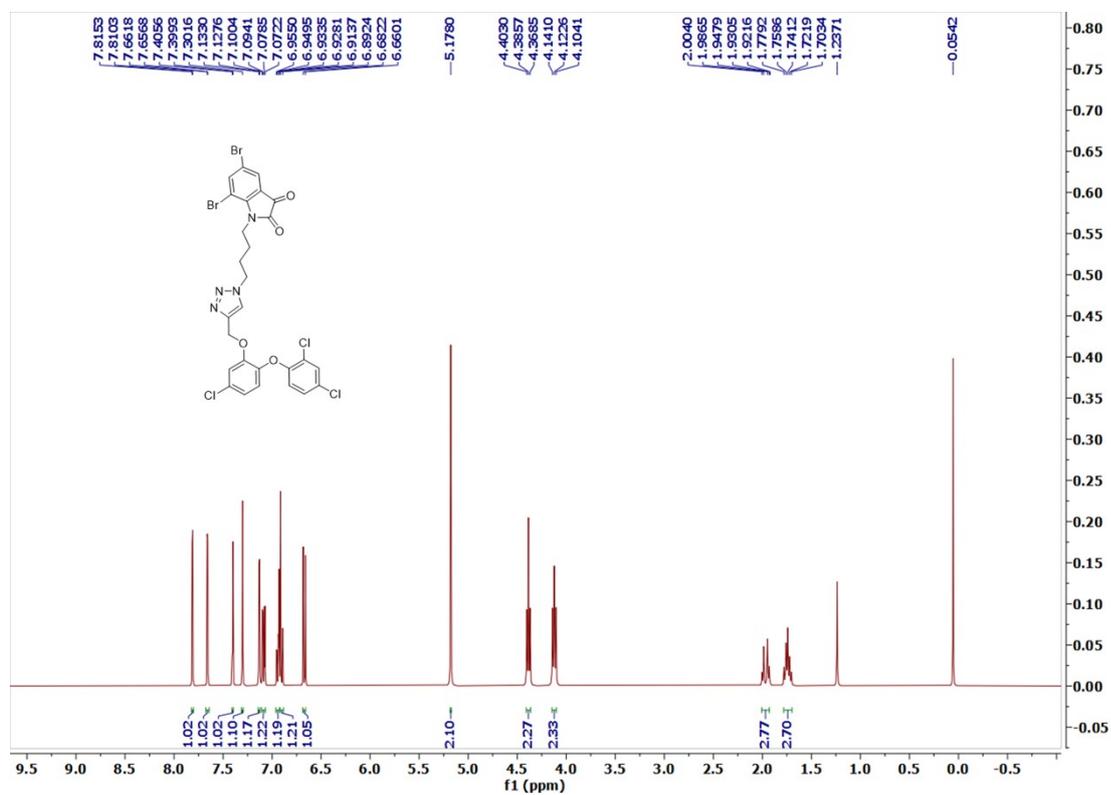
5,7-dibromo-1-(3-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-

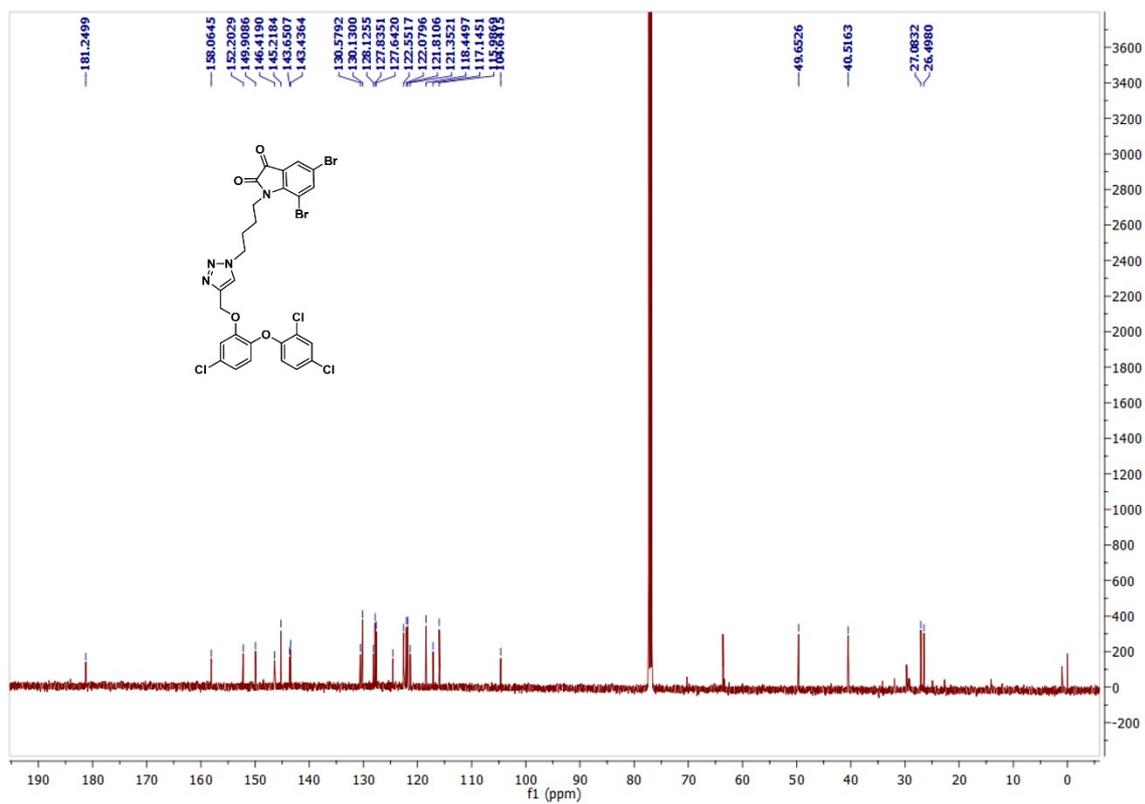


yl)propyl)indoline-2,3-dione (**10n**)

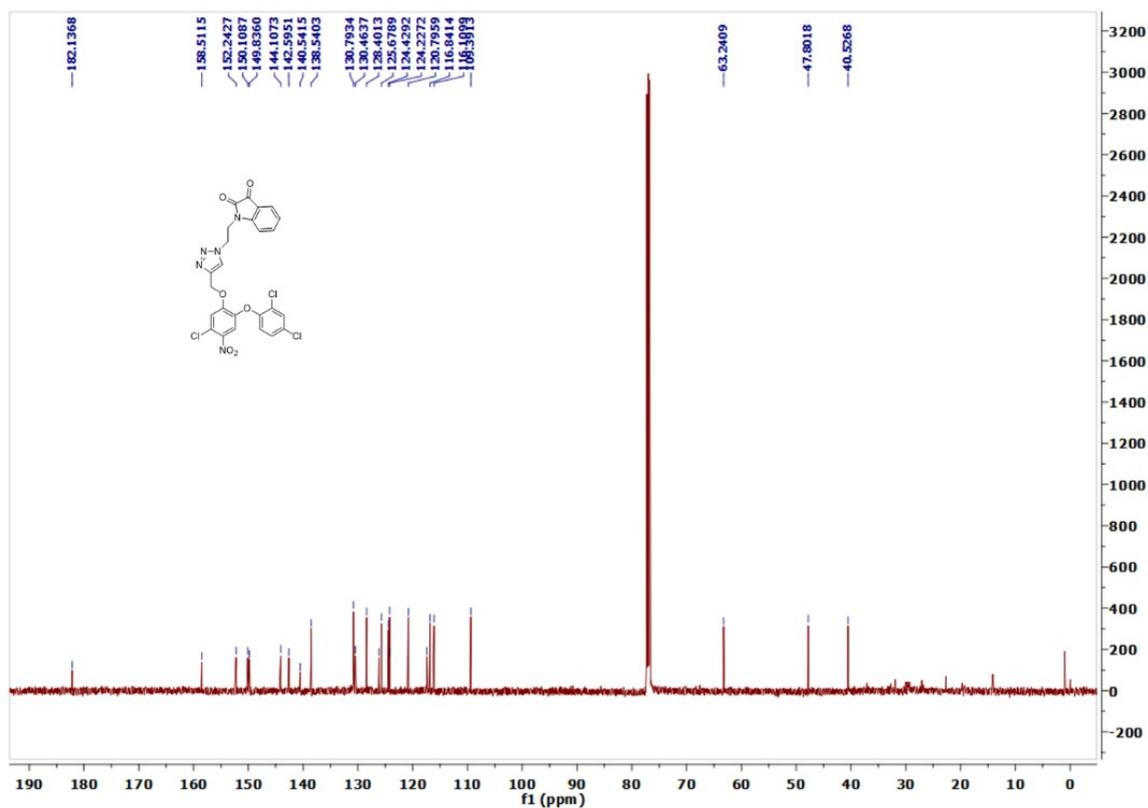
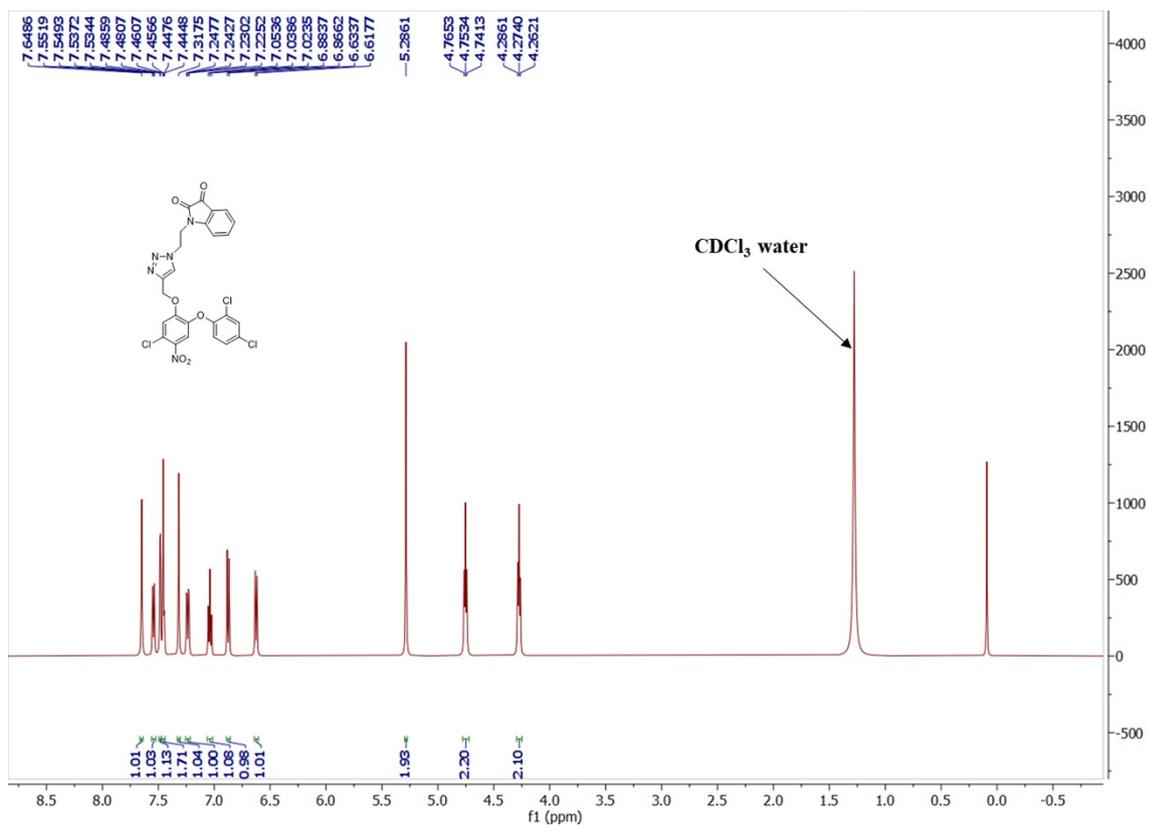


5,7-dibromo-1-(4-(4-((5-chloro-2-(2,4-dichlorophenoxy)phenoxy)methyl)-1H-1,2,3-triazol-1-yl)butyl)indoline-2,3-dione (**10o**)

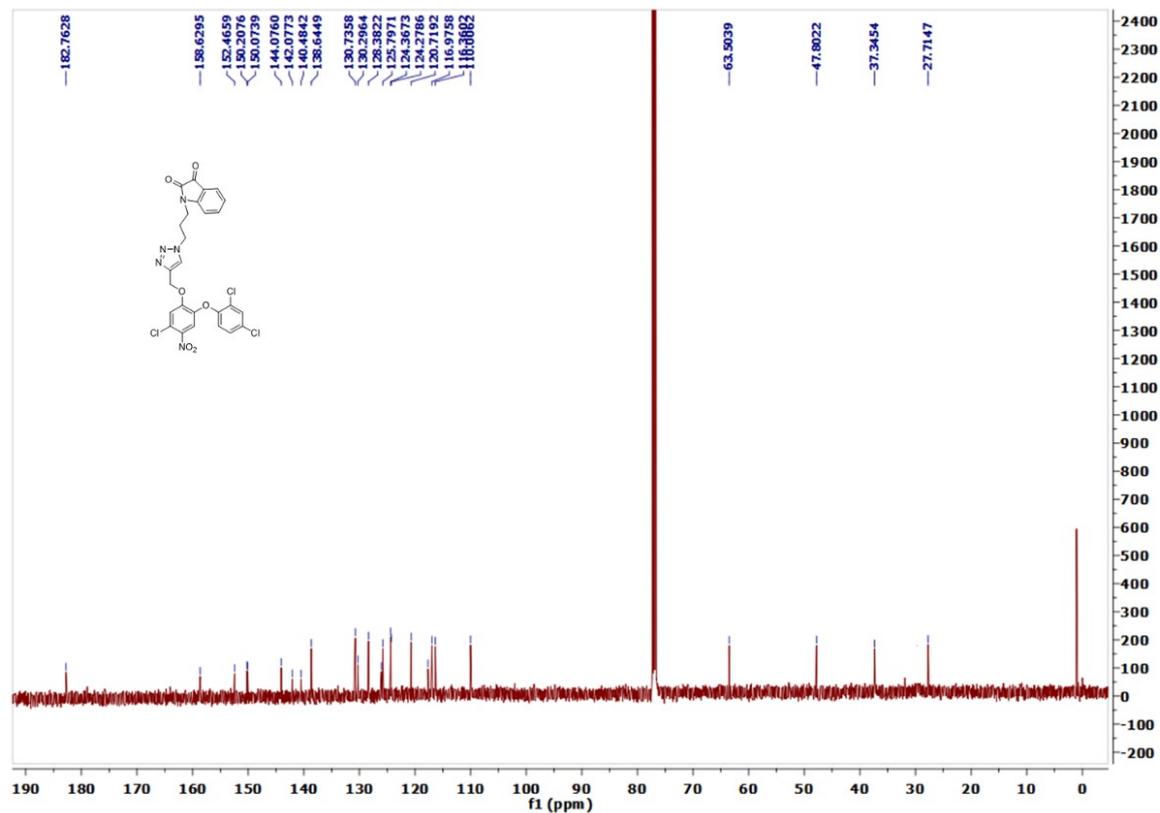
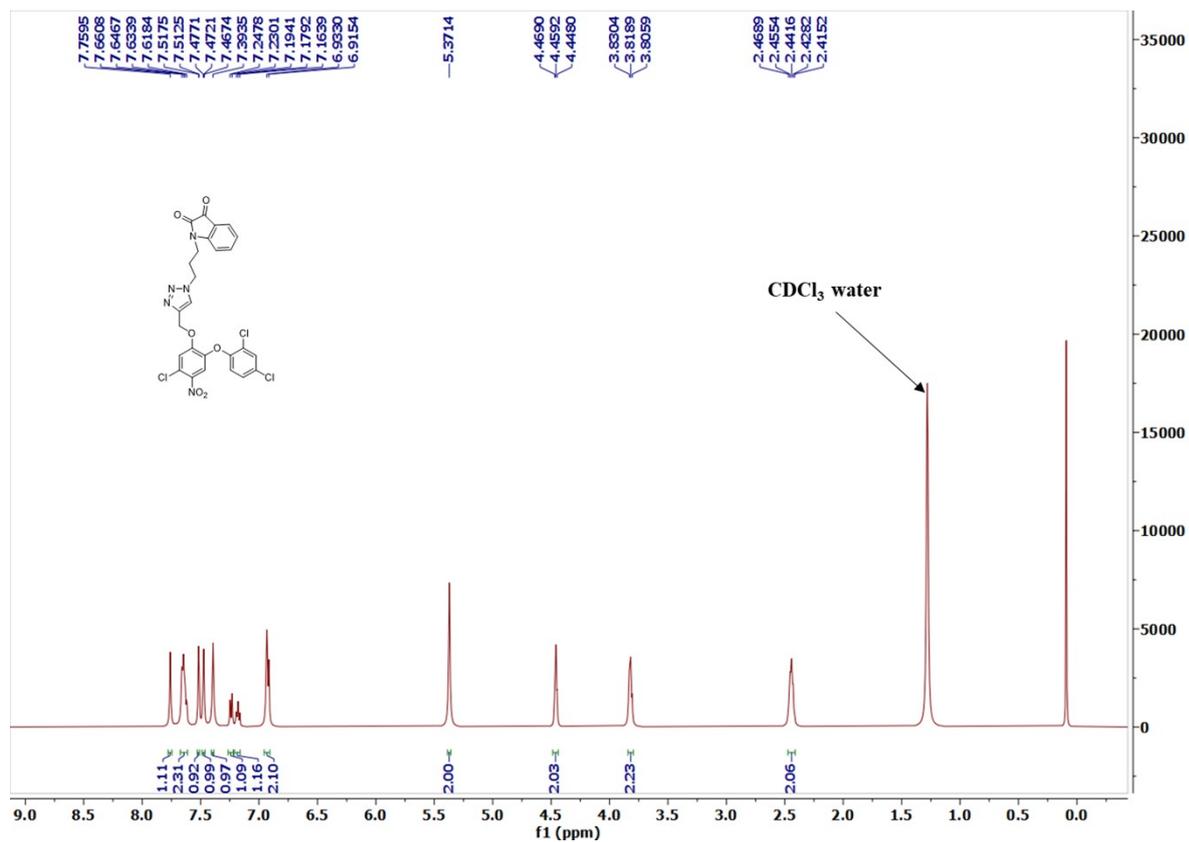




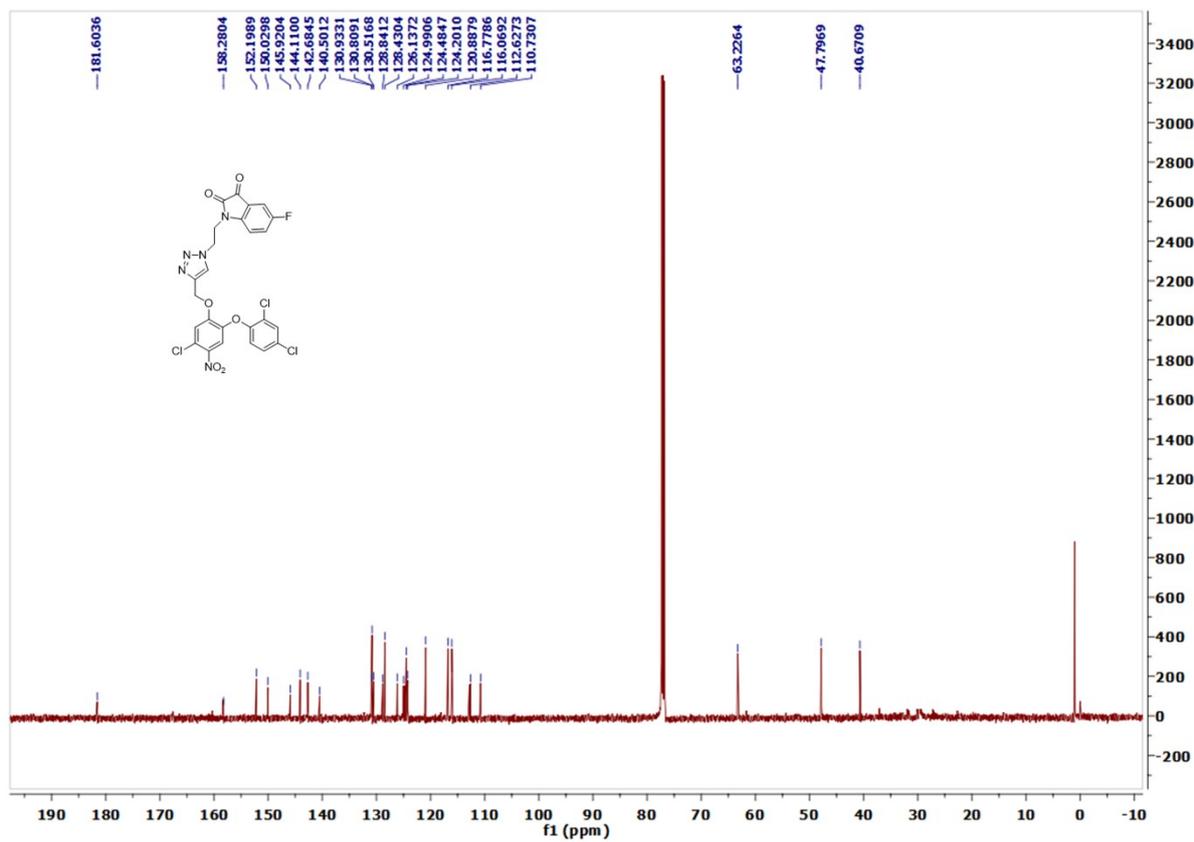
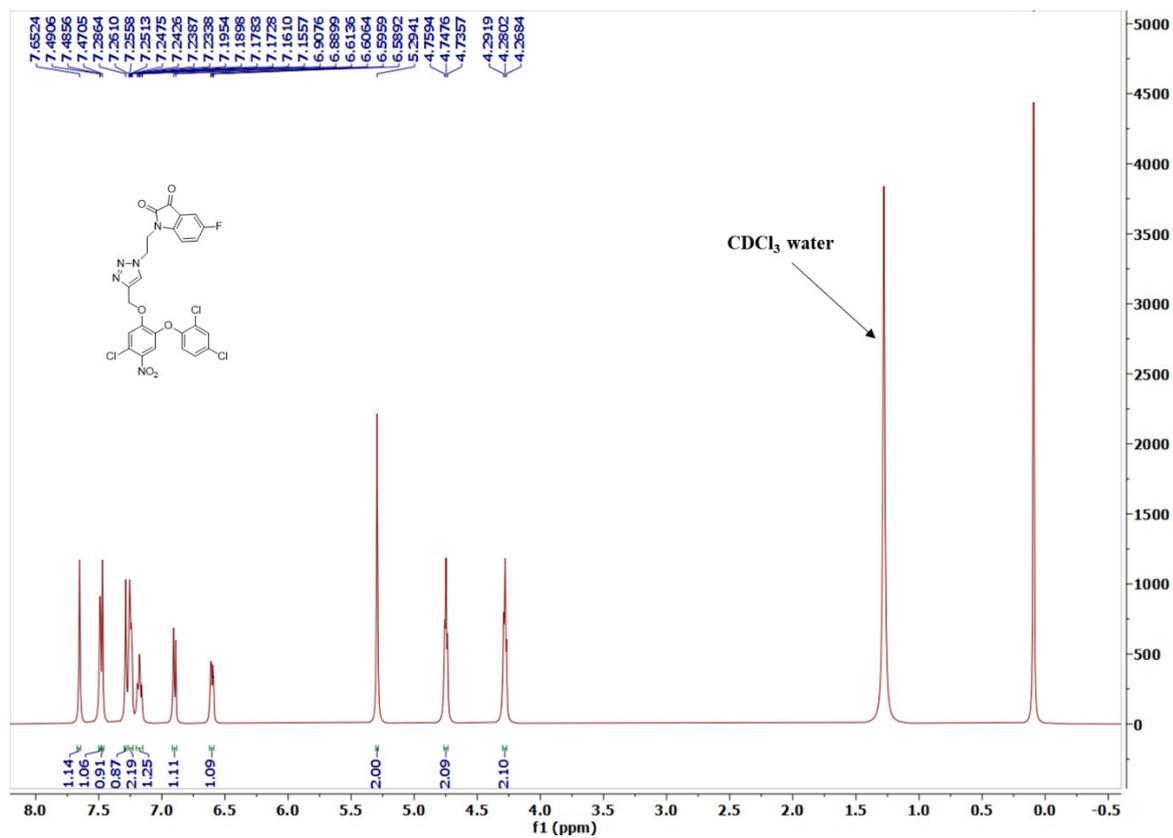
*1-(2-(4-((5-chloro-2-(2,4-dichlorophenoxy)-4-nitrophenoxy)methyl)-1H-1,2,3-triazol-1-yl)ethyl)indoline-2,3-dione (11a)*



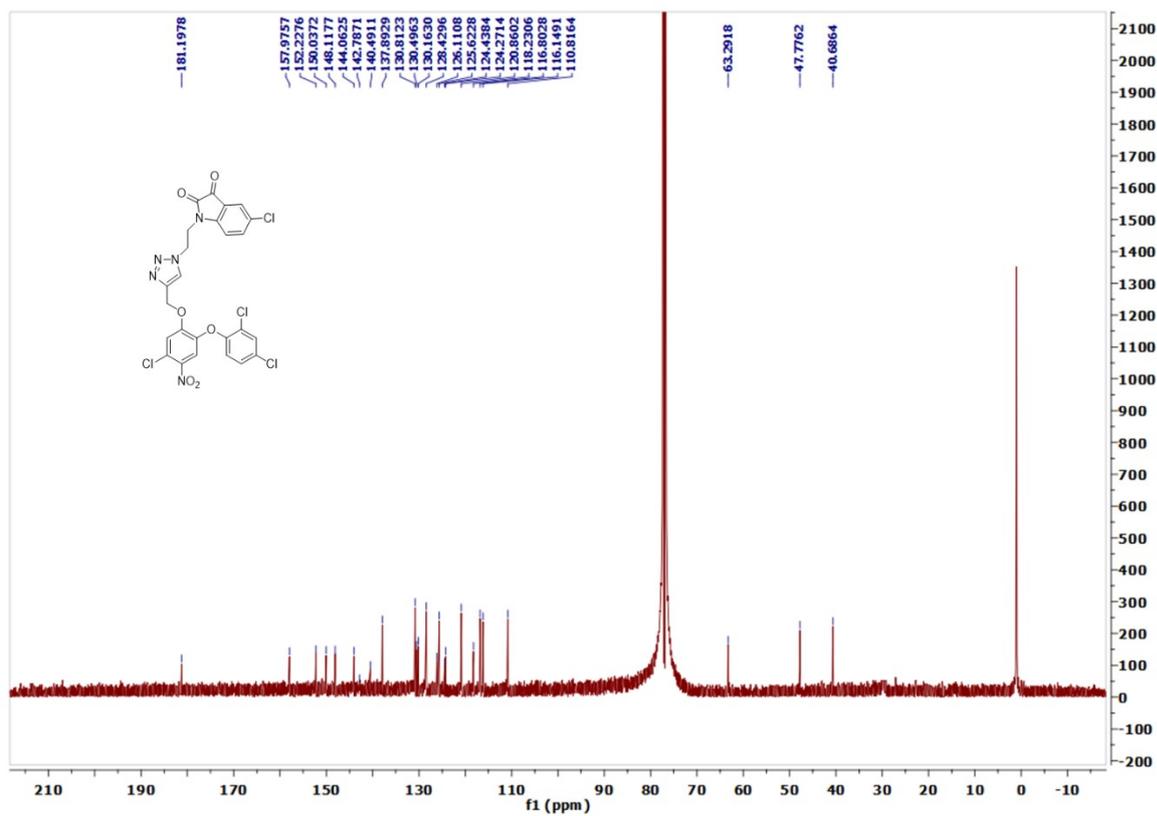
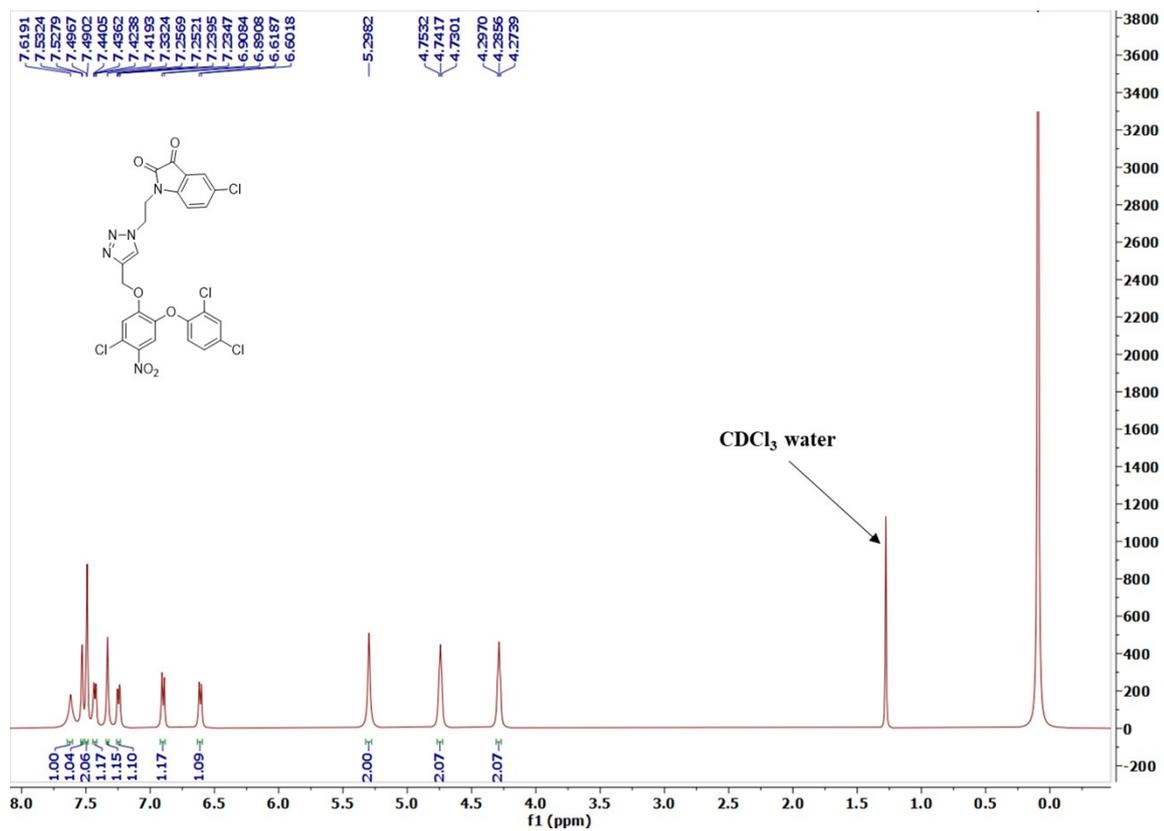
*1*-(3-(4-((5-chloro-2-(2,4-dichlorophenoxy)-4-nitrophenoxy)methyl)-1*H*-1,2,3-triazol-1-yl)propyl)indoline-2,3-dione (**11b**)



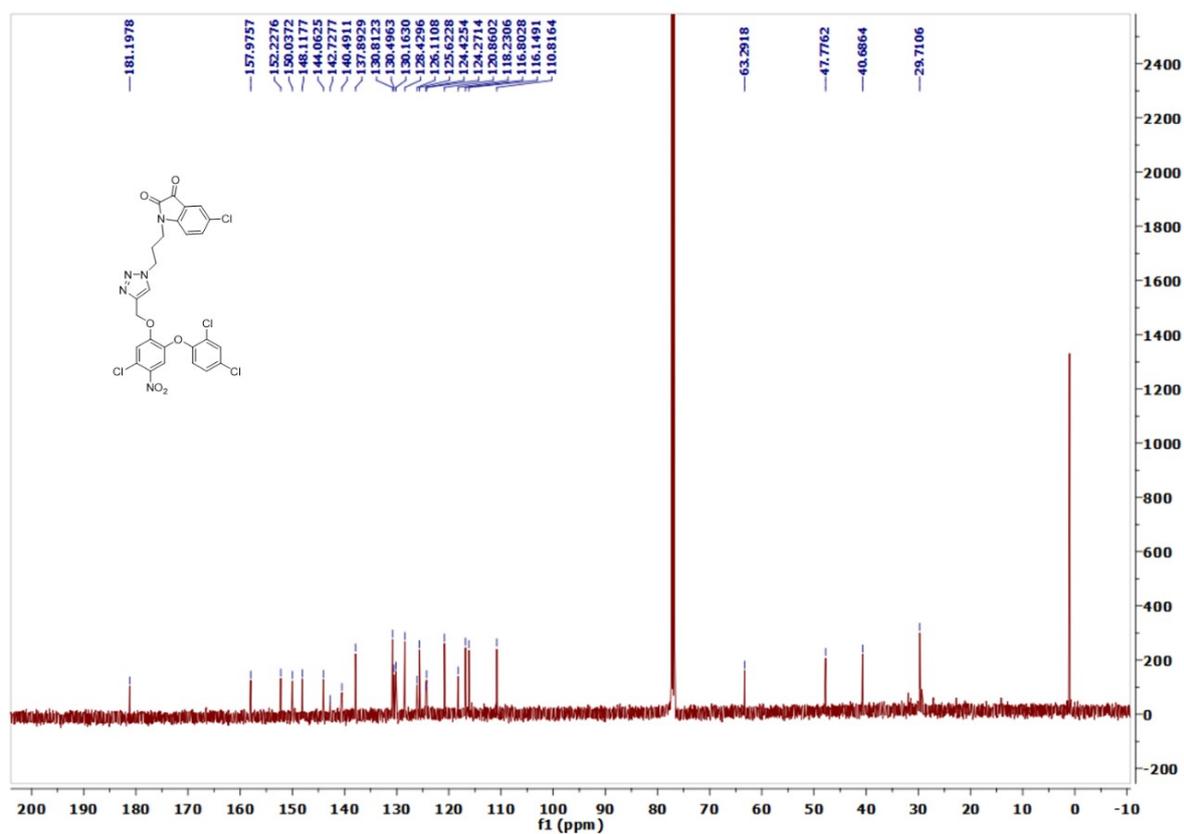
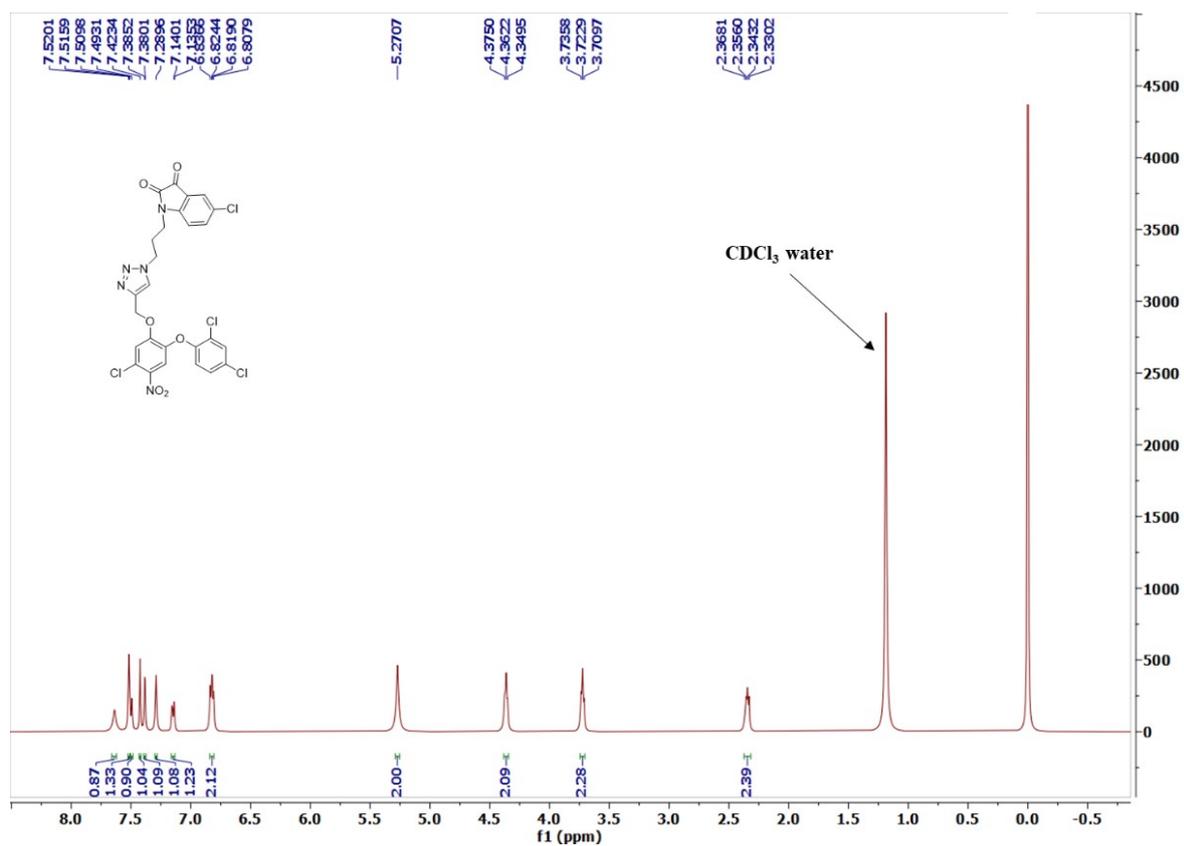
*1*-(2-(4-((5-chloro-2-(2,4-dichlorophenoxy)-4-nitrophenoxy)methyl)-1*H*-1,2,3-triazol-1-yl)ethyl)-5-fluoroindoline-2,3-dione (**11c**)



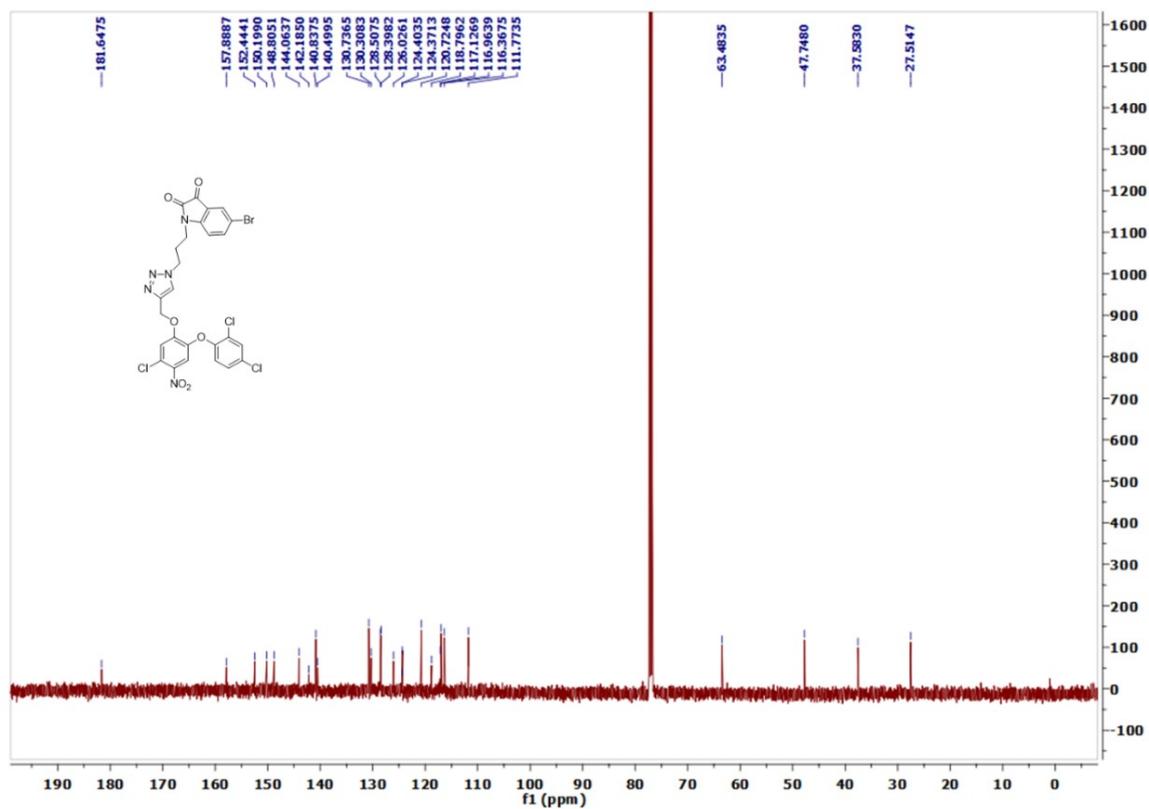
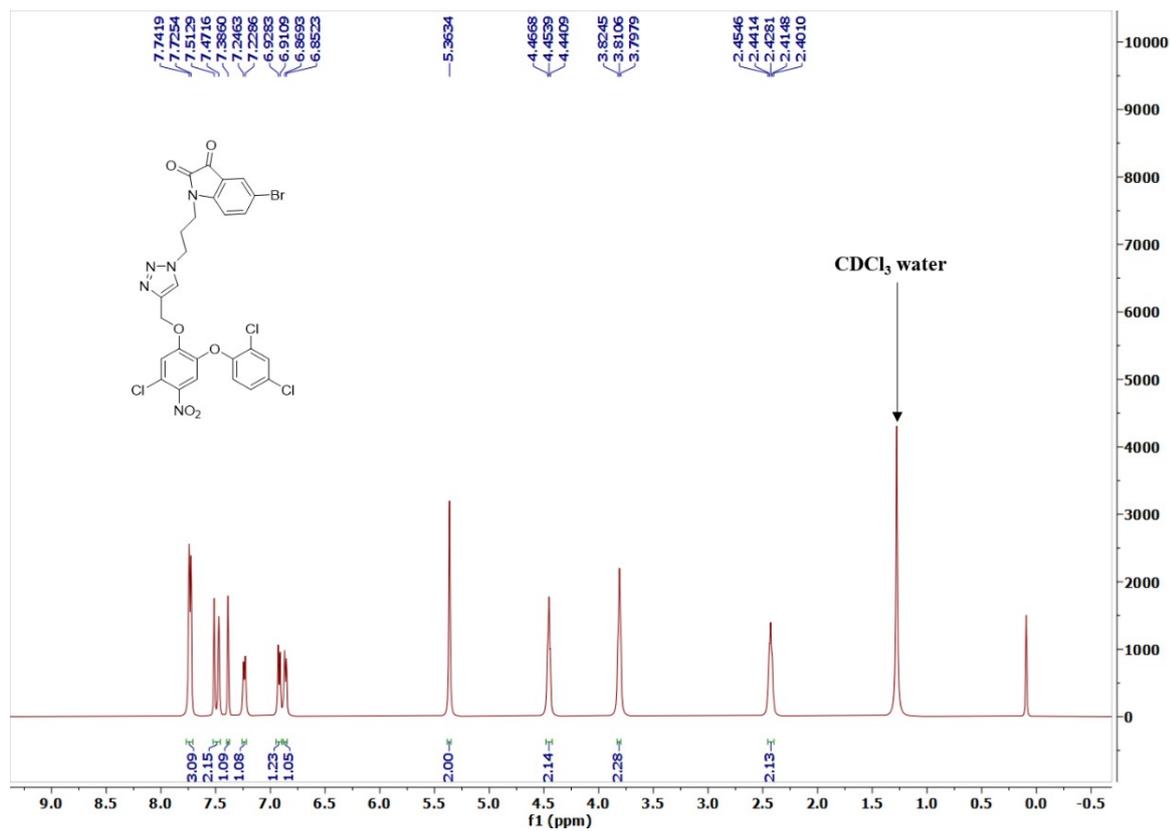
*5-chloro-1-(2-(4-((5-chloro-2-(2,4-dichlorophenoxy)-4-nitrophenoxy)methyl)-1H-1,2,3-triazol-1-yl)ethyl)indoline-2,3-dione (**11e**)*



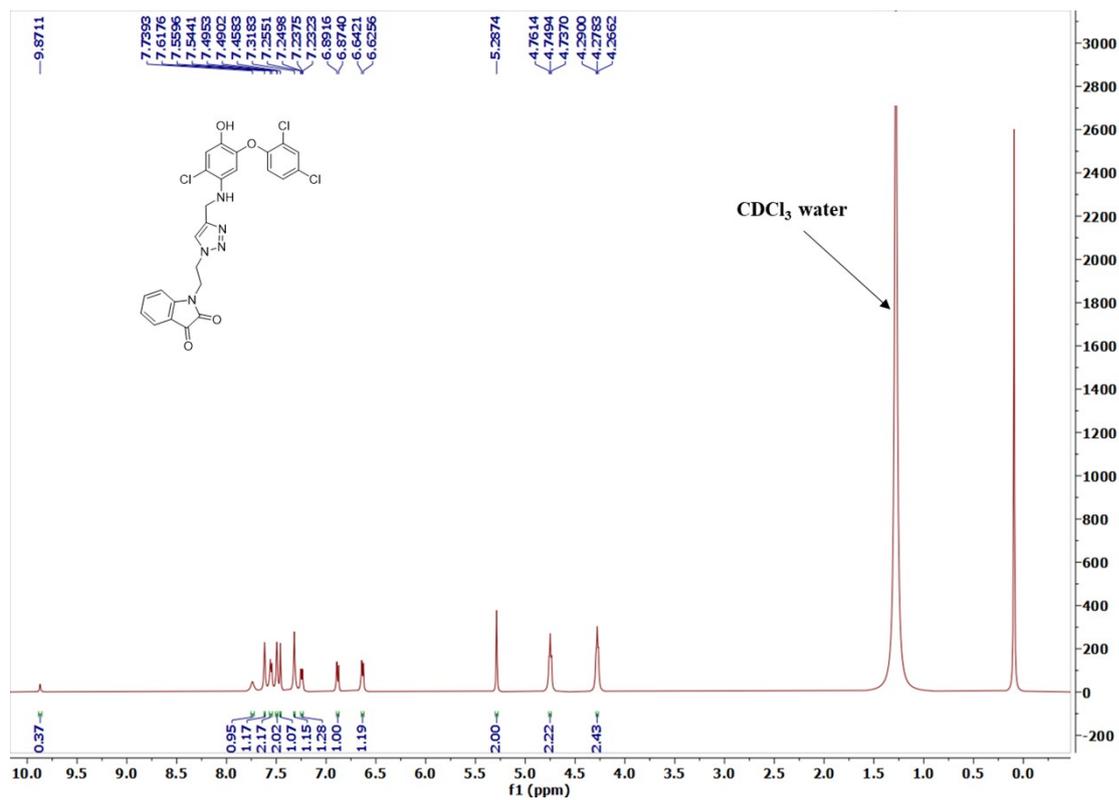
5-chloro-1-(3-(4-((5-chloro-2-(2,4-dichlorophenoxy)-4-nitrophenoxy)methyl)-1H-1,2,3-triazol-1-yl)propyl)indoline-2,3-dione (**11f**)



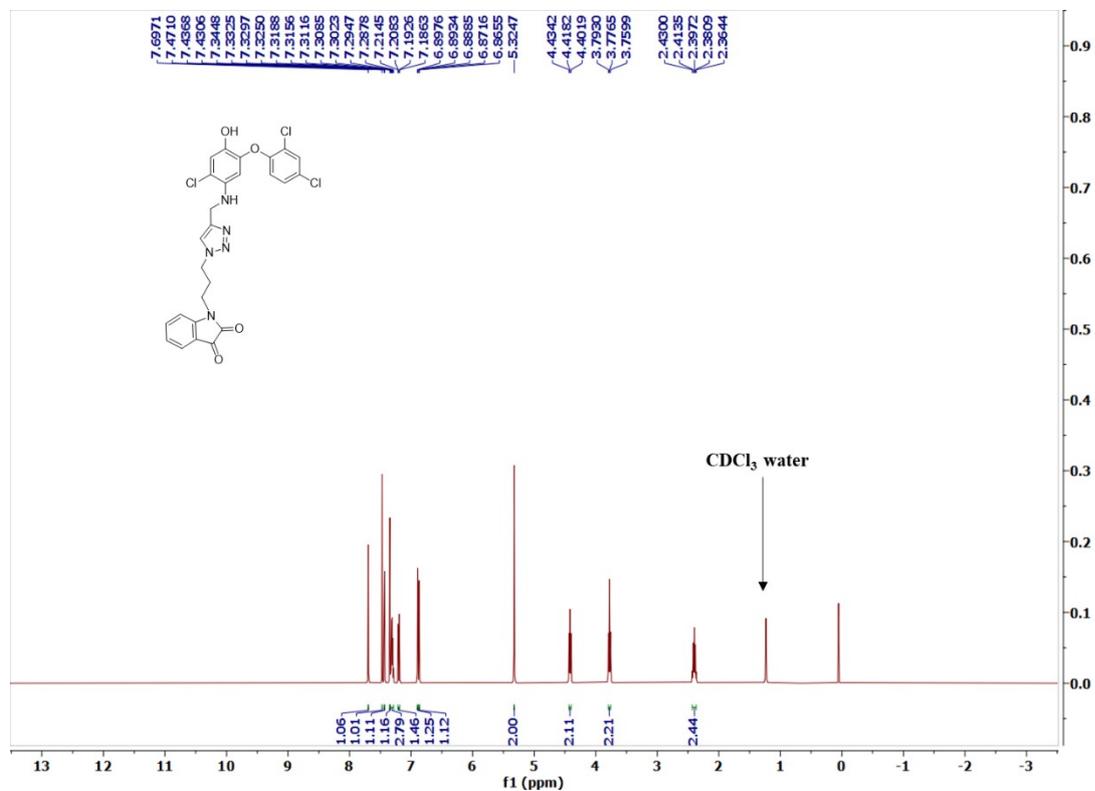
5-bromo-1-(3-(4-((5-chloro-2-(2,4-dichlorophenoxy)-4-nitrophenoxy)methyl)-1H-1,2,3-triazol-1-yl)propyl)indoline-2,3-dione (**11h**)

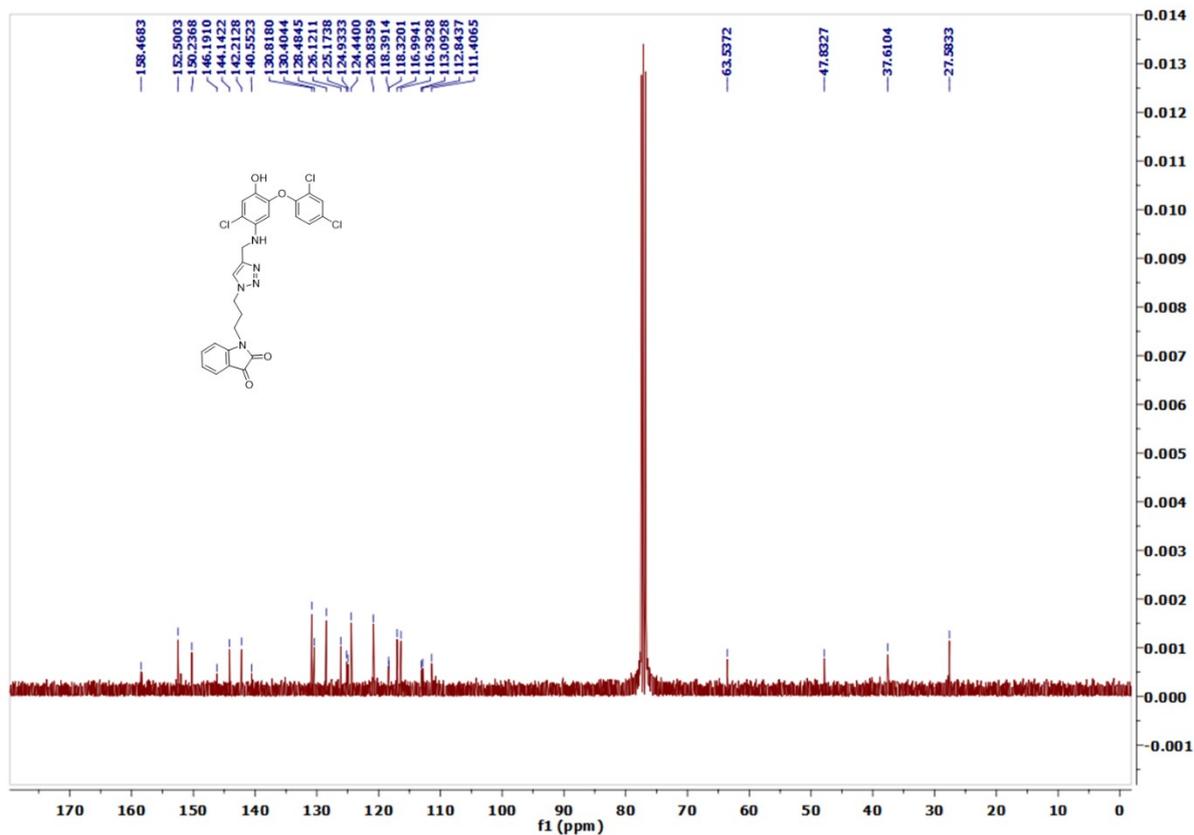


*1*-(2-(4-(((2-chloro-5-(2,4-dichlorophenoxy)-4-hydroxyphenyl)amino)methyl)-1*H*-1,2,3-triazol-1-yl)ethyl)indoline-2,3-dione (**12a**)

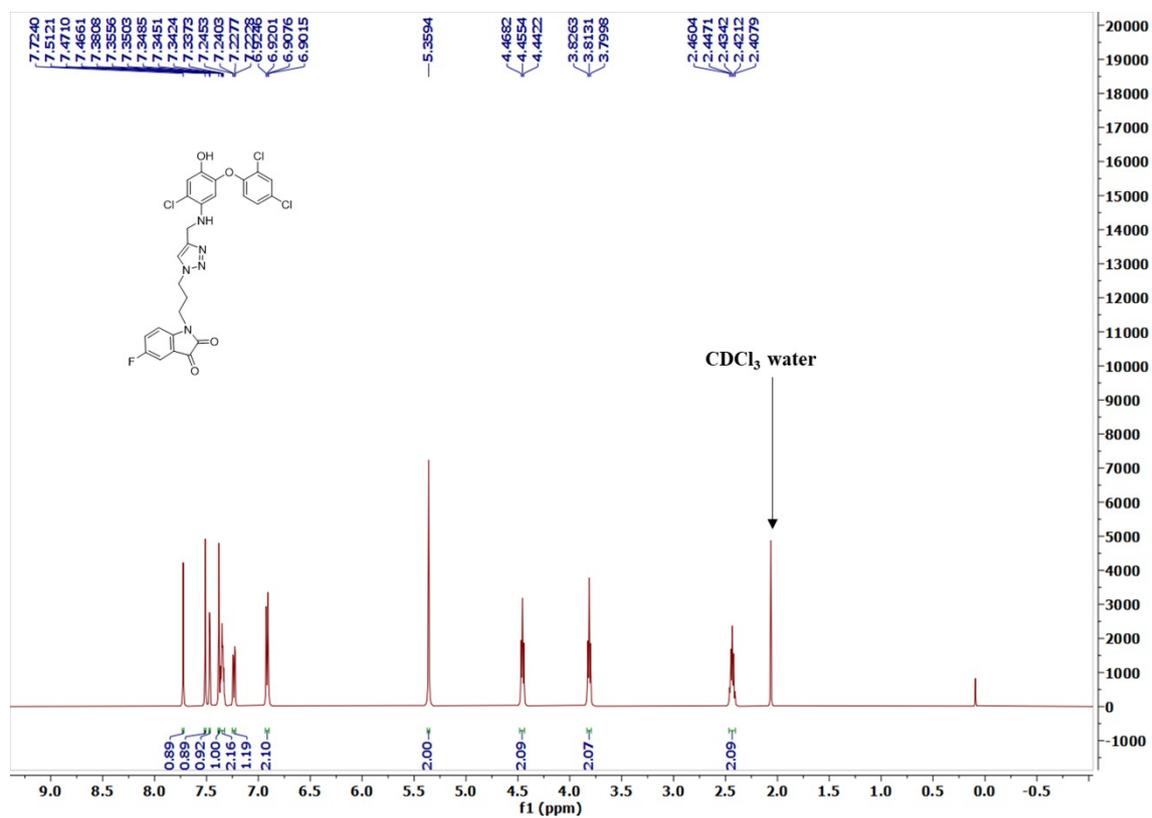


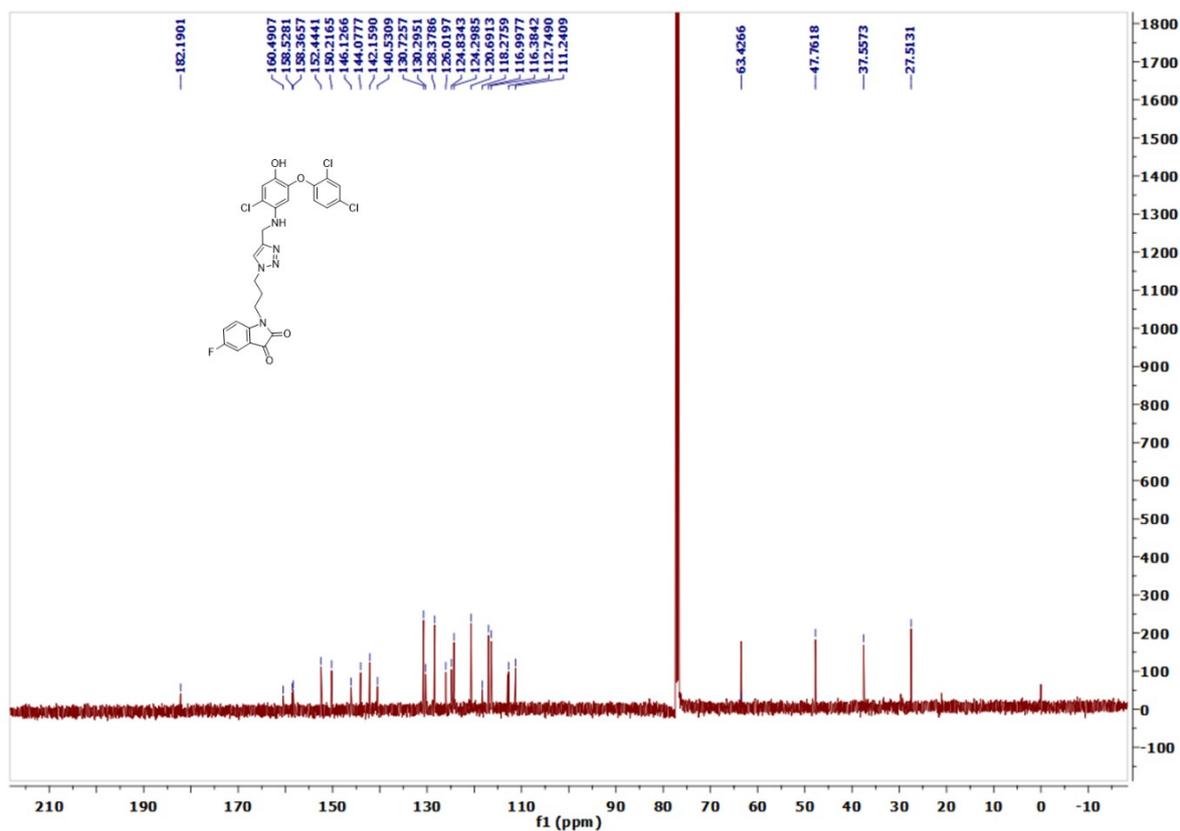
*1*-(3-(4-(((2-chloro-5-(2,4-dichlorophenoxy)-4-hydroxyphenyl)amino)methyl)-1*H*-1,2,3-triazol-1-yl)propyl)indoline-2,3-dione (**12b**)



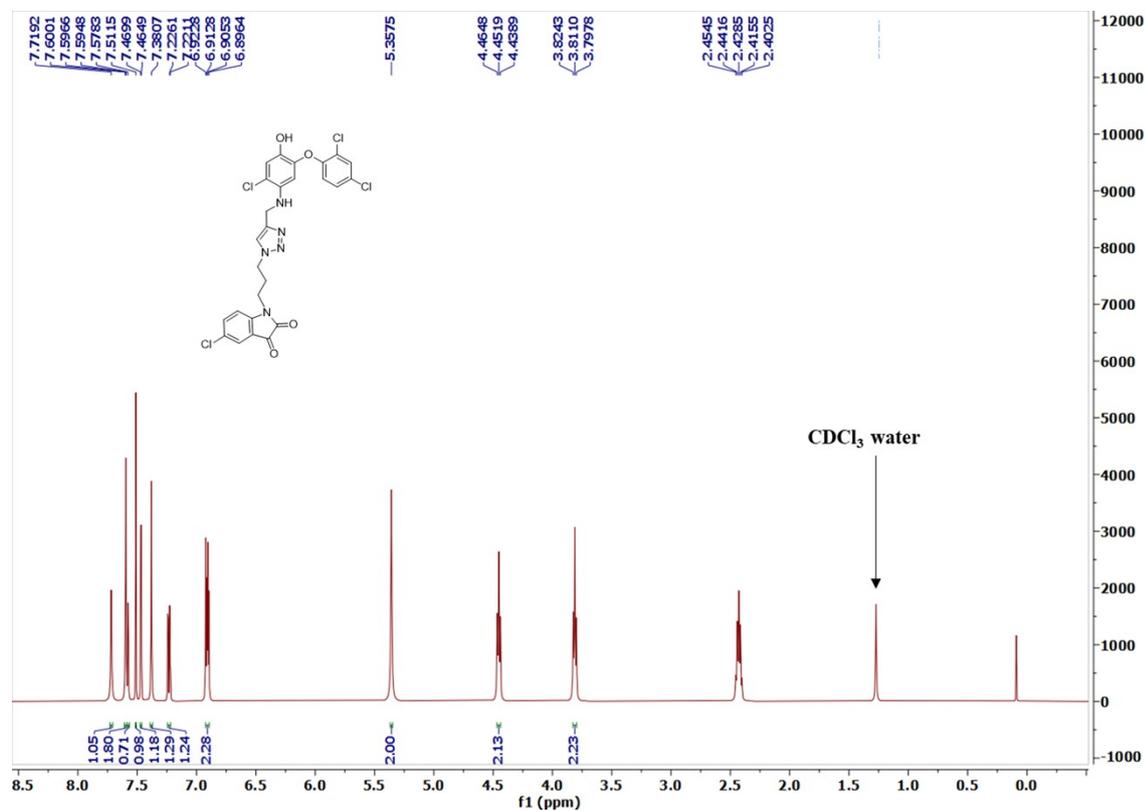


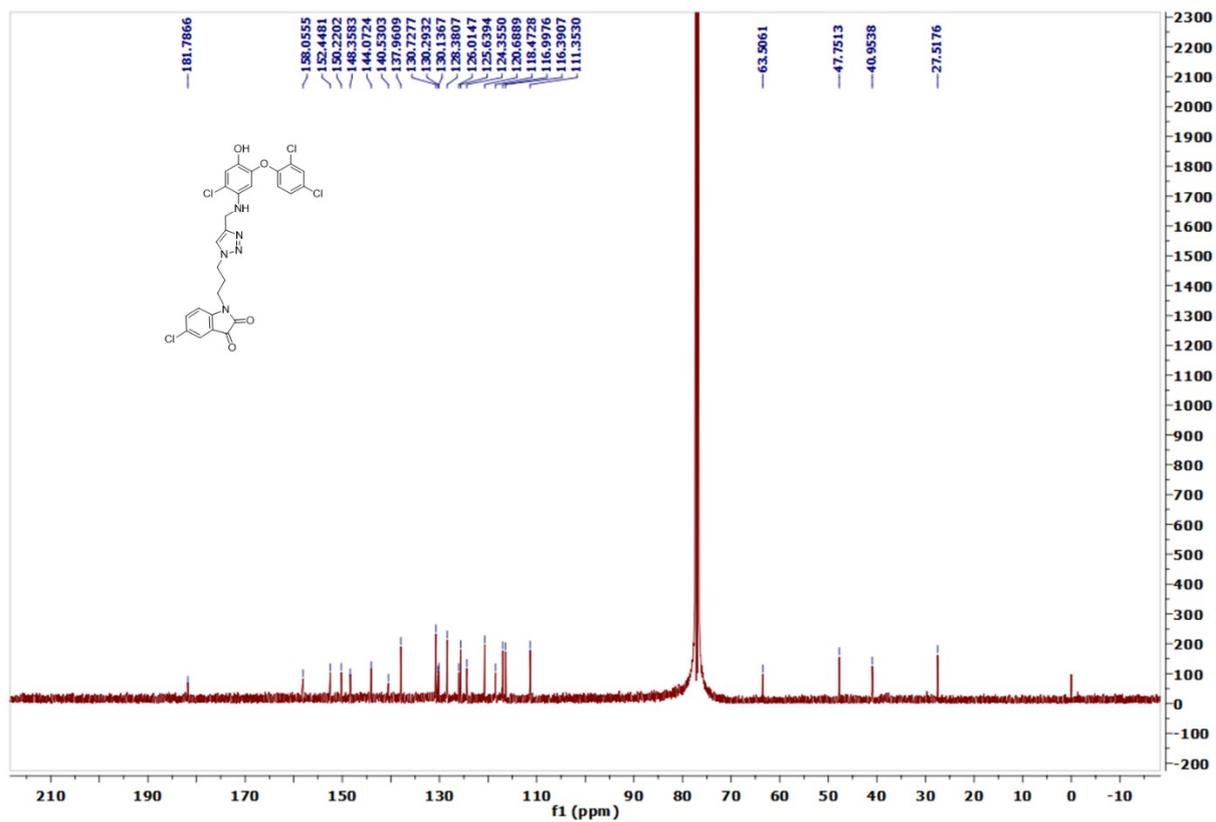
1-(3-(4-(((2-chloro-5-(2,4-dichlorophenoxy)-4-hydroxyphenyl)amino)methyl)-1H-1,2,3-triazol-1-yl)propyl)-5-fluoroindoline-2,3-dione (**12d**)





5-chloro-1-(3-(4-(((2-chloro-5-(2,4-dichlorophenoxy)-4-hydroxyphenyl)amino)methyl)-1H-1,2,3-triazol-1-yl)propyl)indoline-2,3-dione (**12f**)





5-bromo-1-(3-(4-(((2-chloro-5-(2,4-dichlorophenoxy)-4-hydroxyphenyl)amino)methyl)-1H-1,2,3-triazol-1-yl)propyl)indoline-2,3-dione (**12h**)

