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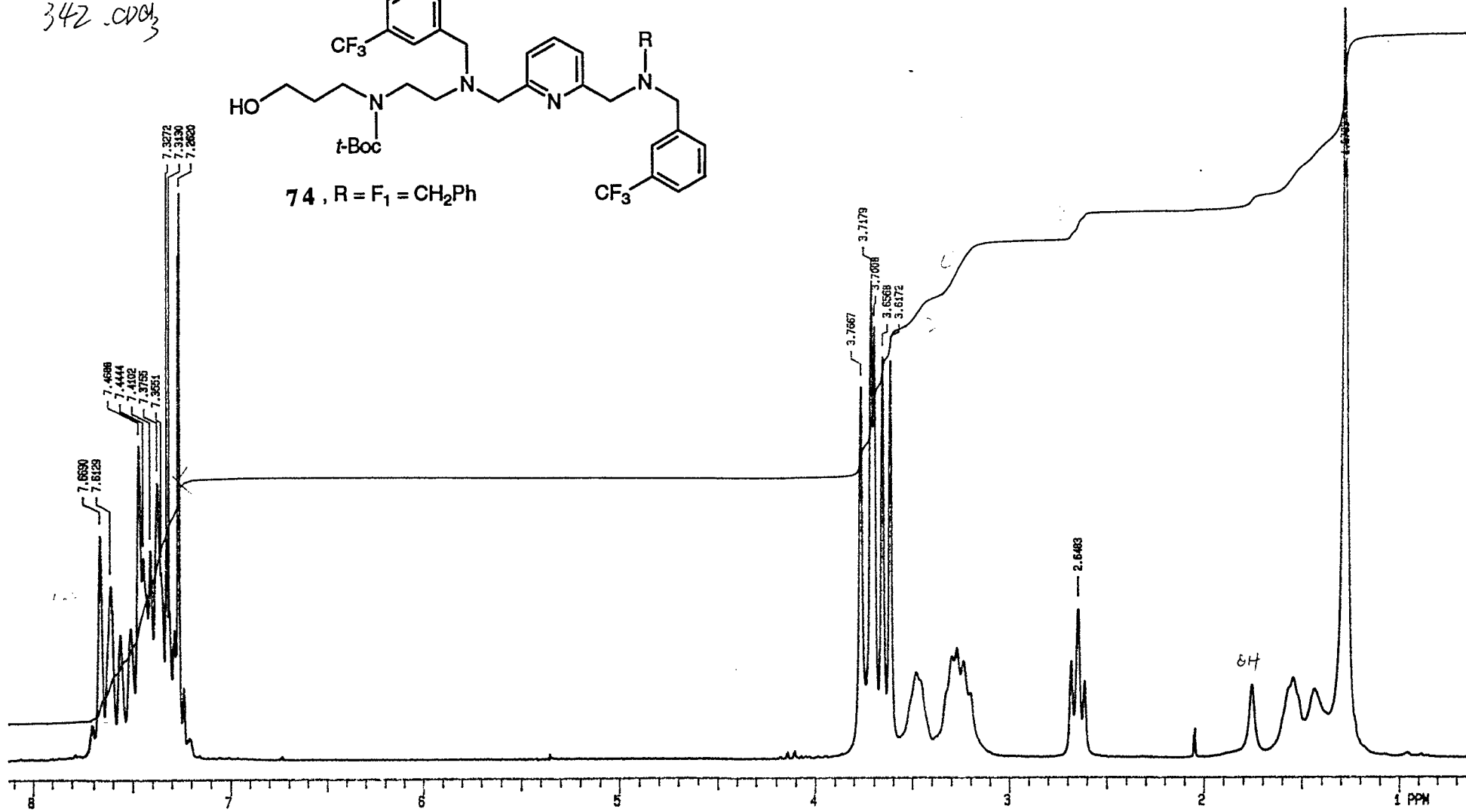
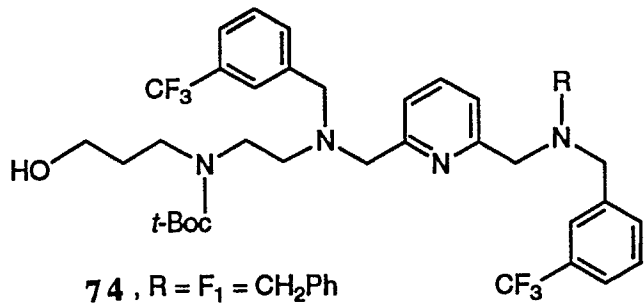


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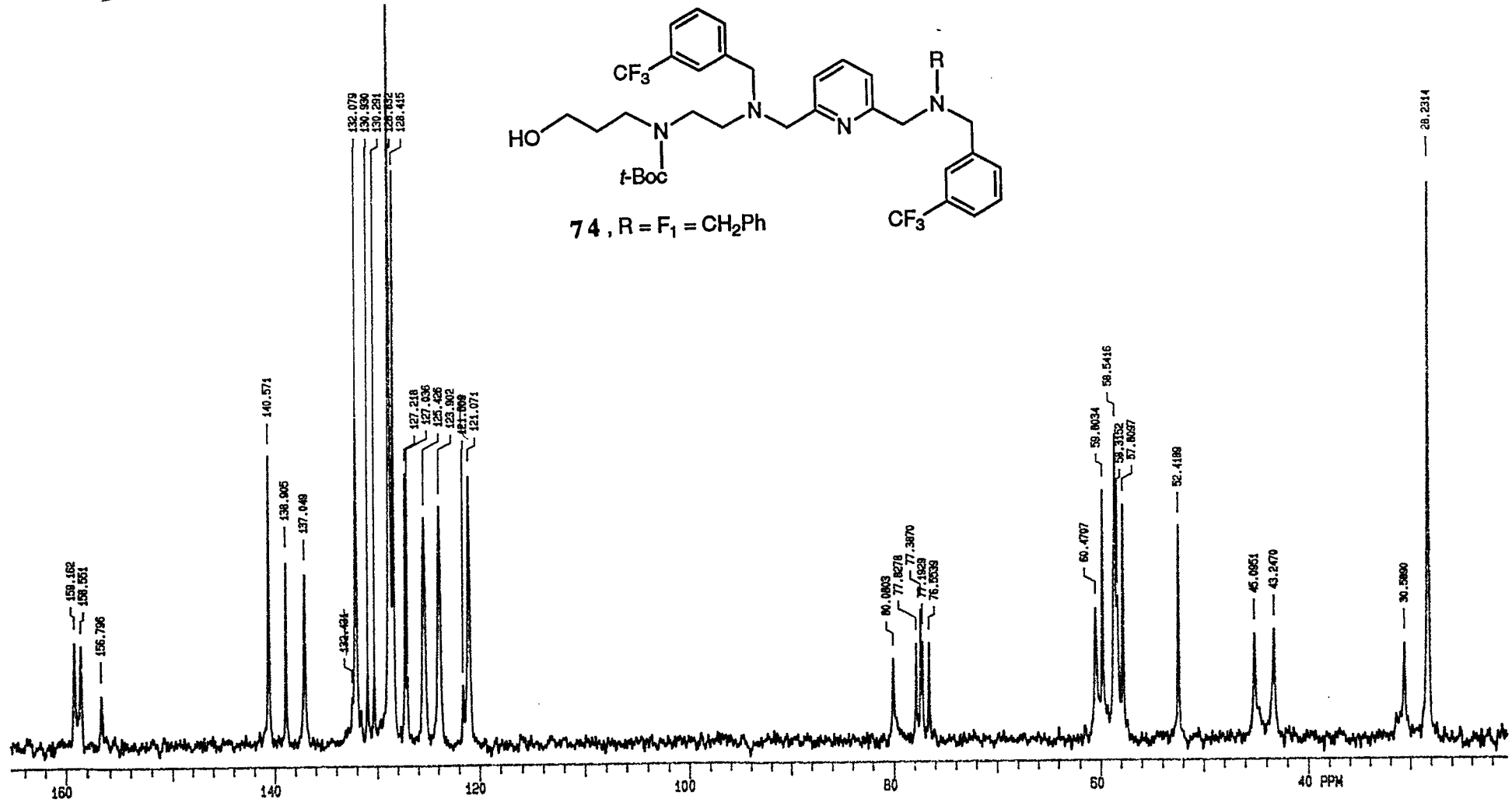
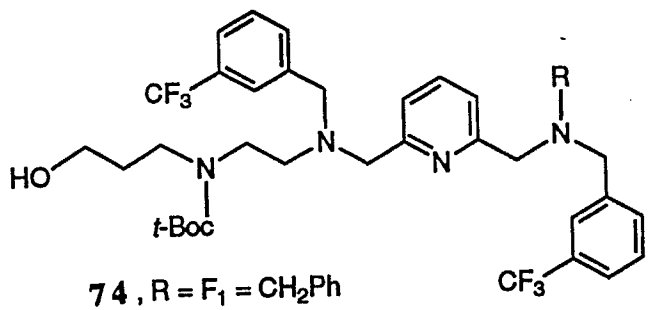
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342 CDCl<sub>3</sub>

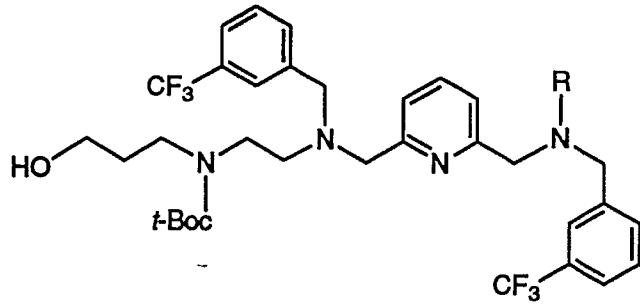


342.0003

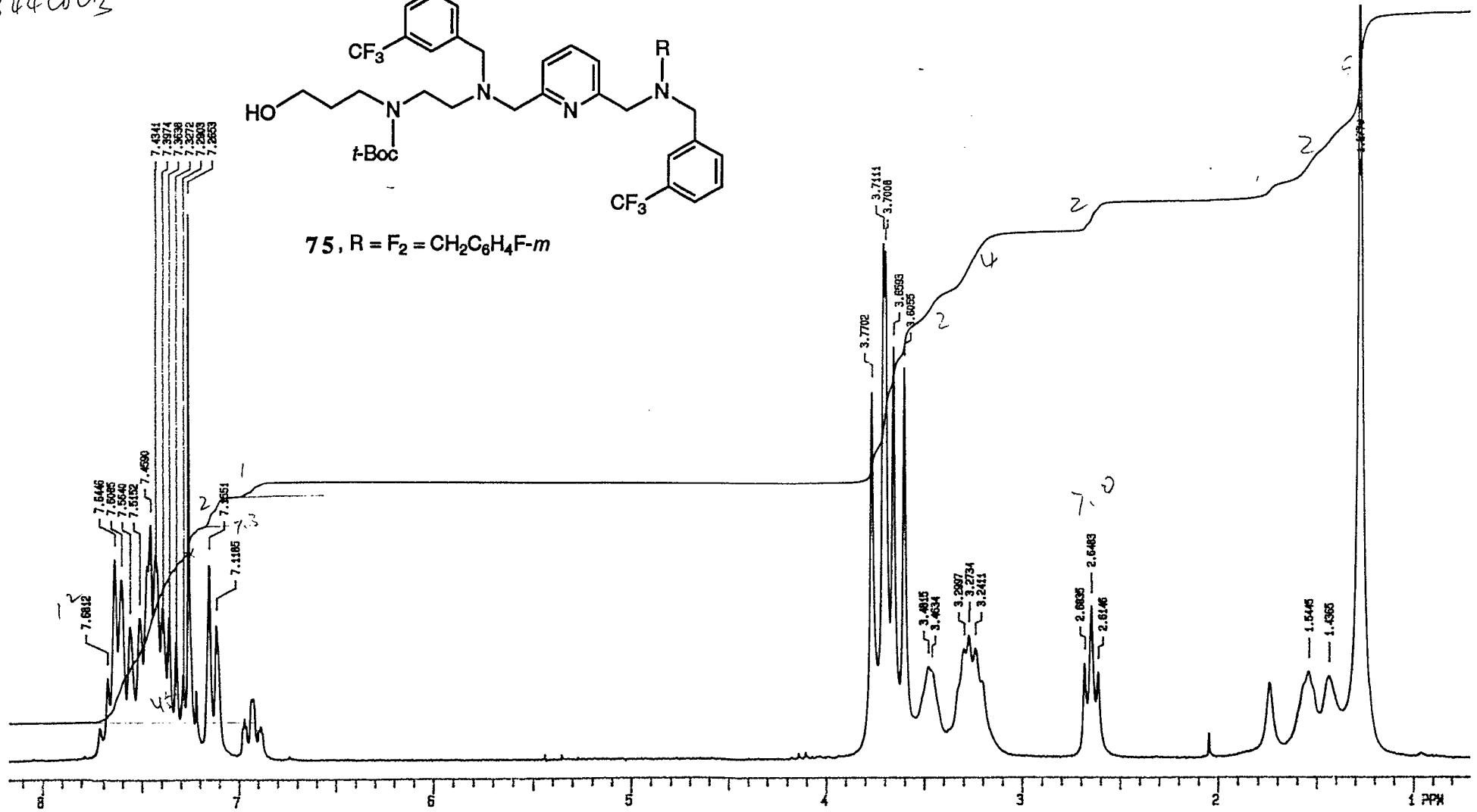


45

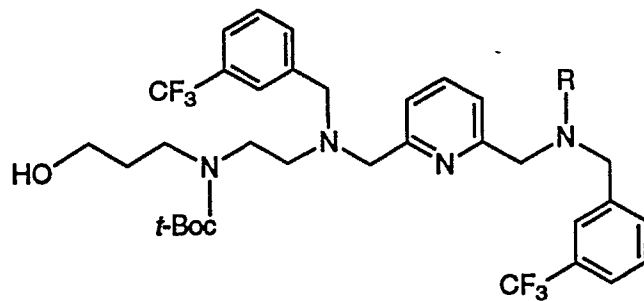
3440013



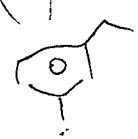
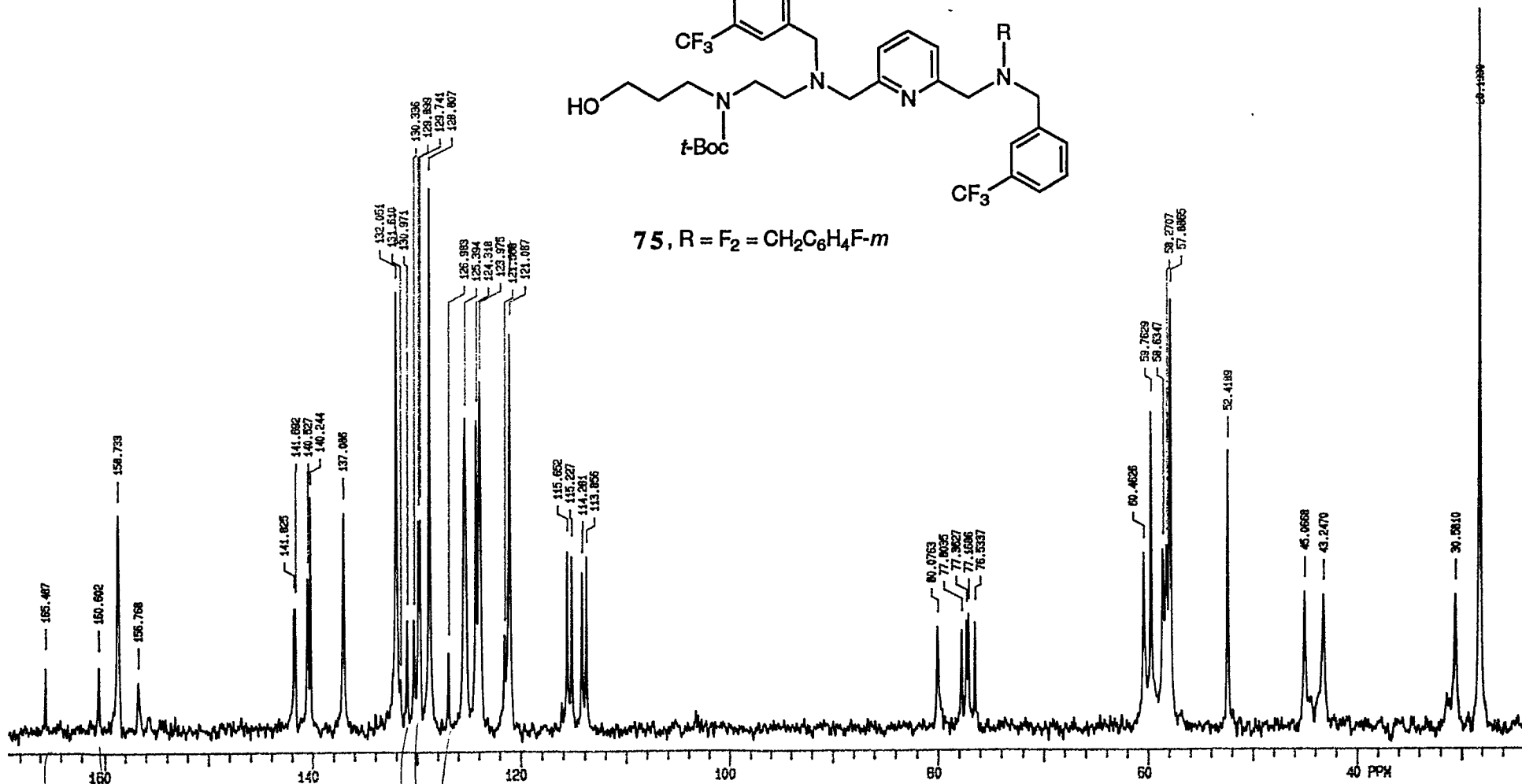
75, R = F<sub>2</sub>-CH<sub>2</sub>-C<sub>6</sub>H<sub>4</sub>-F-m



344.0003

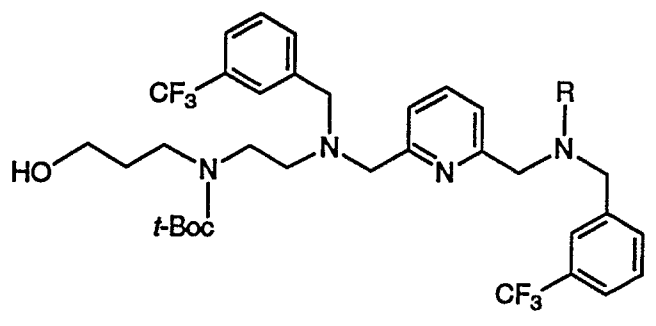


75, R = F<sub>2</sub> = CH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>F-m

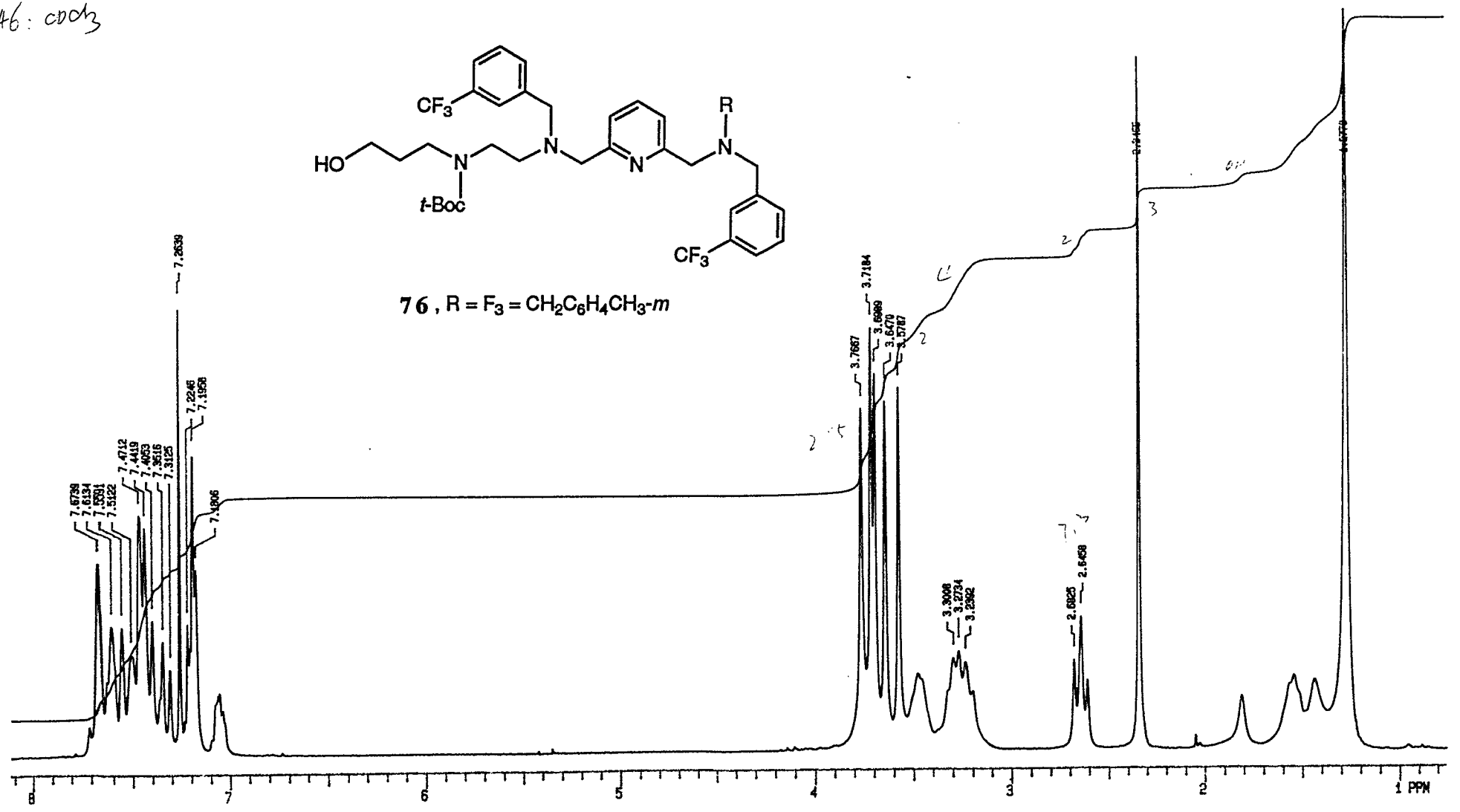


47

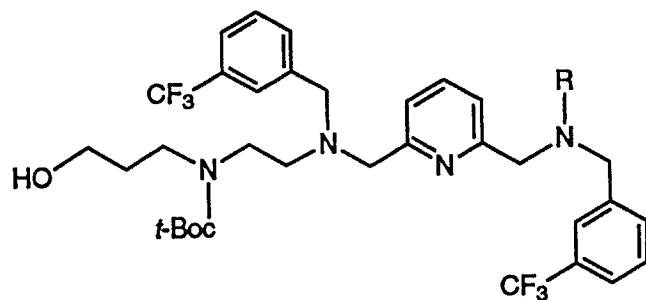
346: CDCl<sub>3</sub>



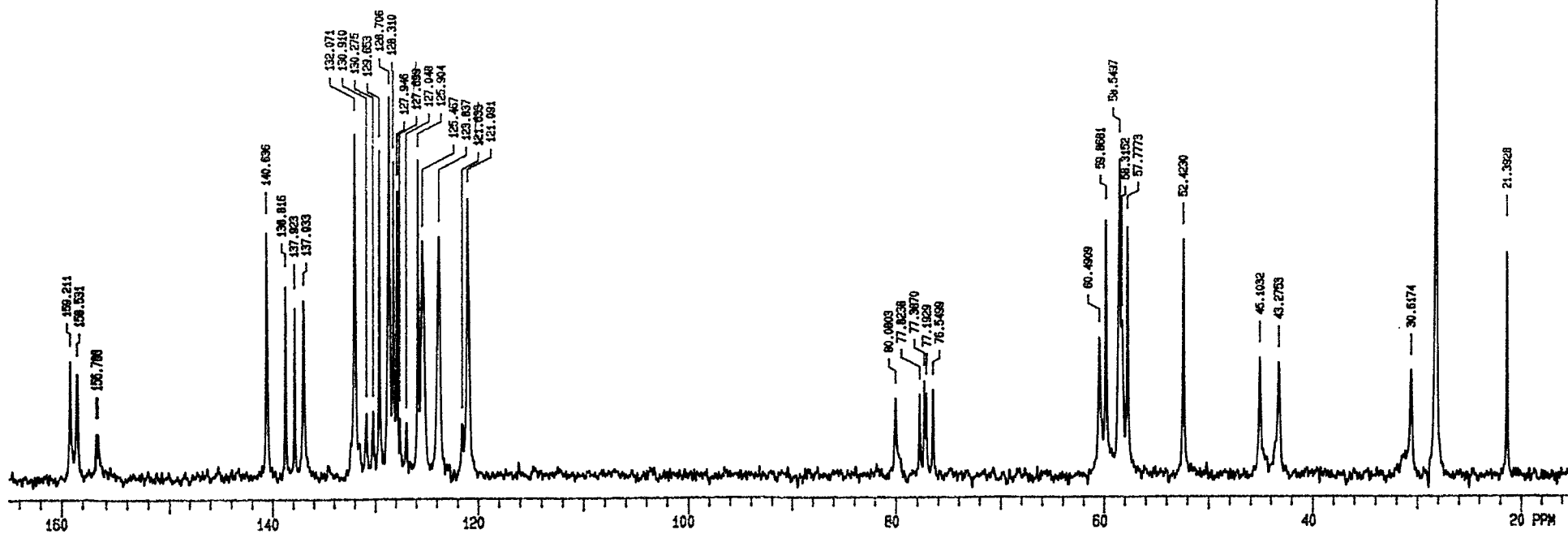
76, R = F<sub>3</sub>CH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>CH<sub>3</sub>-m



346.0003

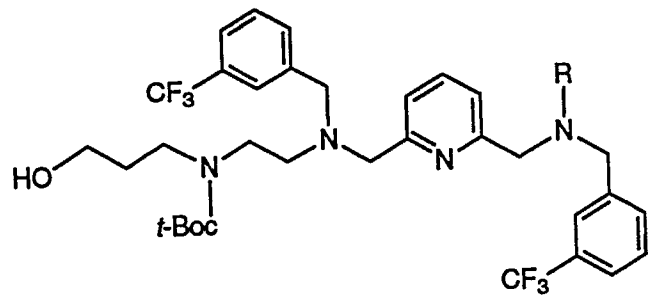


76, R = F<sub>3</sub> = CH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>CH<sub>3</sub>-m

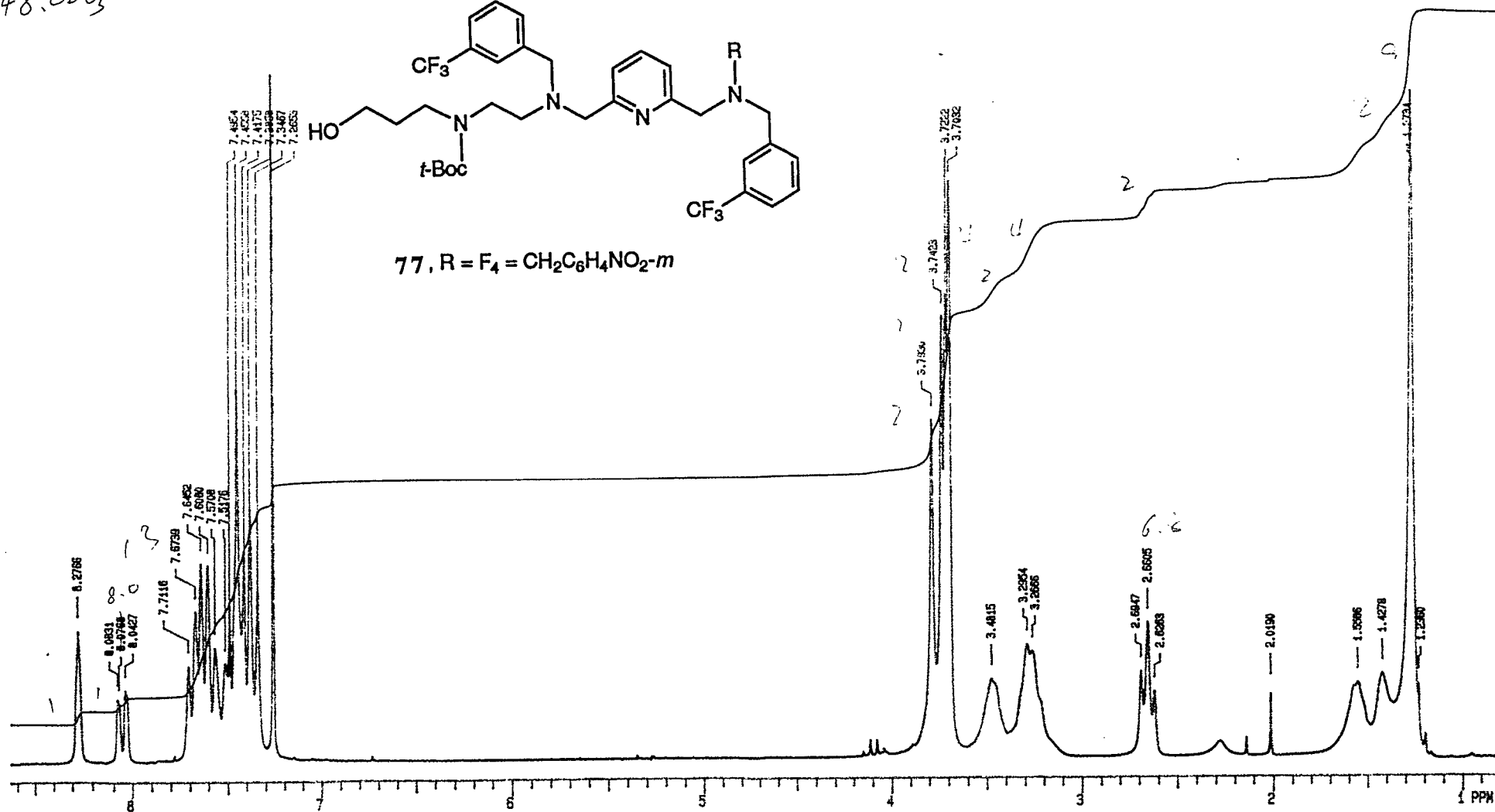


49

348.CDC3

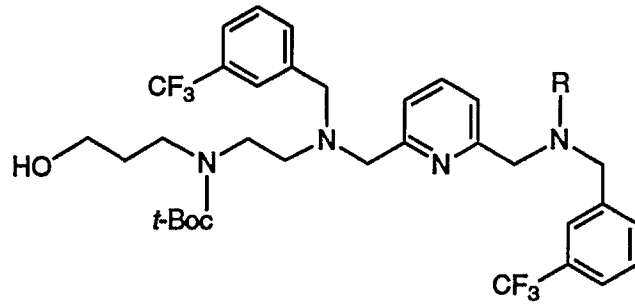


77, R = F<sub>4</sub> = CH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>NO<sub>2</sub>-m

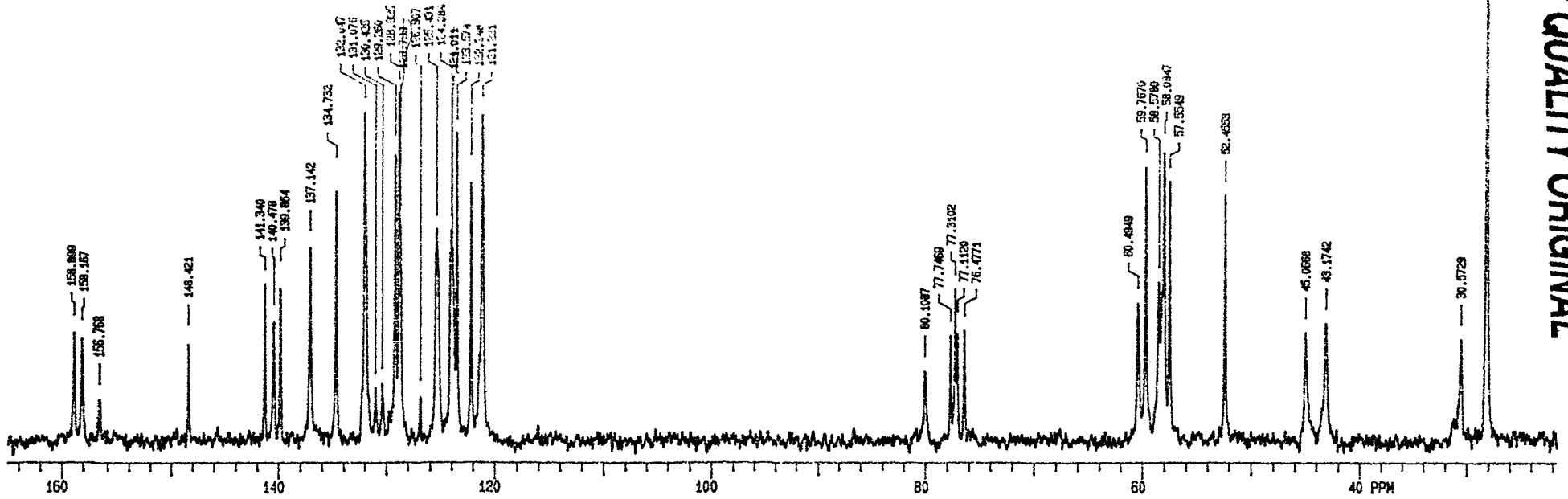




348. CD03



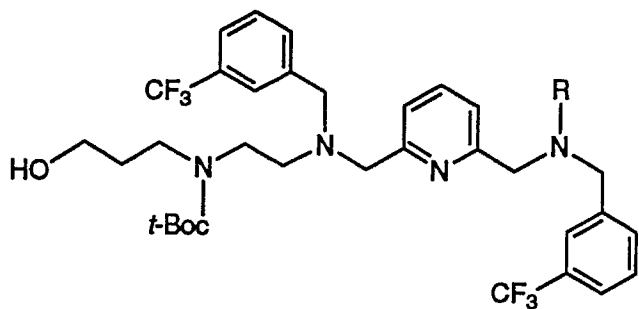
77, R = F<sub>4</sub> = CH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>NO<sub>2</sub>-m



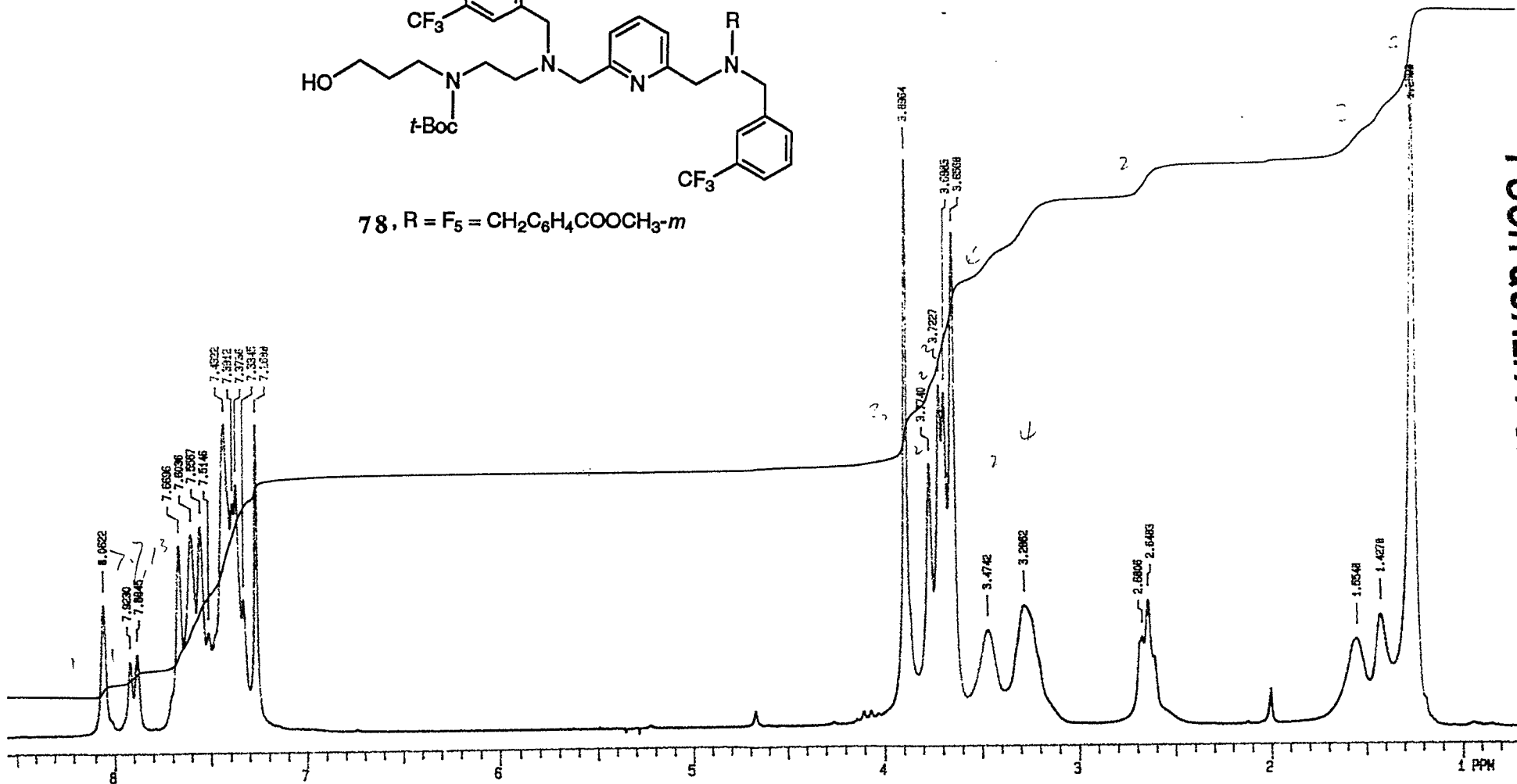
POOR QUALITY ORIGINAL

51

350 MHz

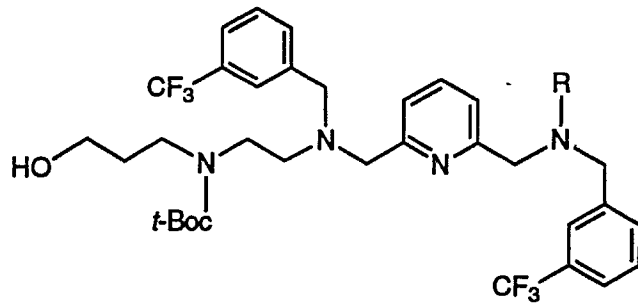


78, R = F<sub>5</sub> = CH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>COOCH<sub>3</sub>-*m*

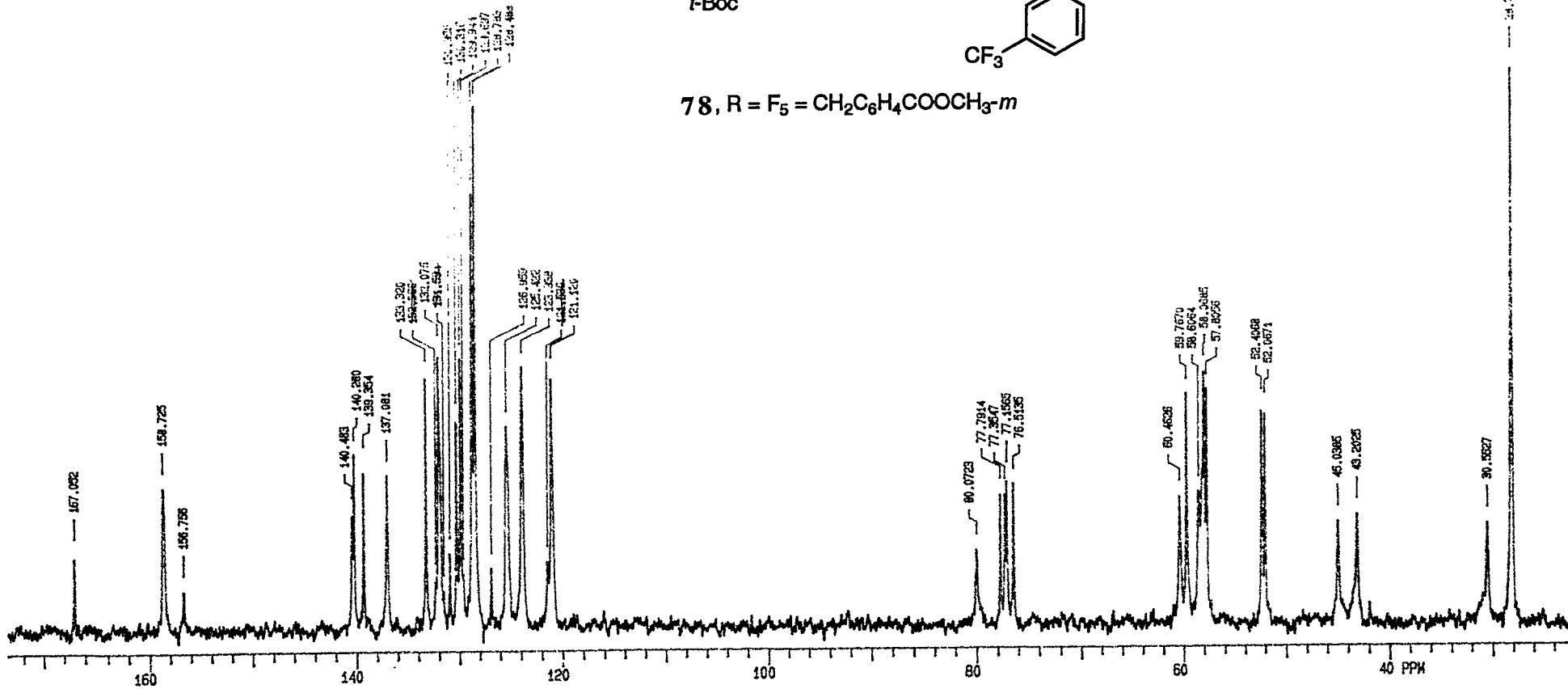


POOR QUALITY ORIGINAL

350



78, R = F<sub>5</sub> = CH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>COOCH<sub>3</sub>-*m*



POOR QUALITY ORIGINAL

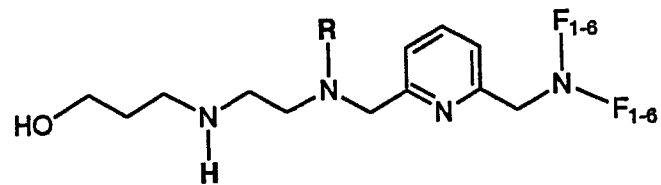
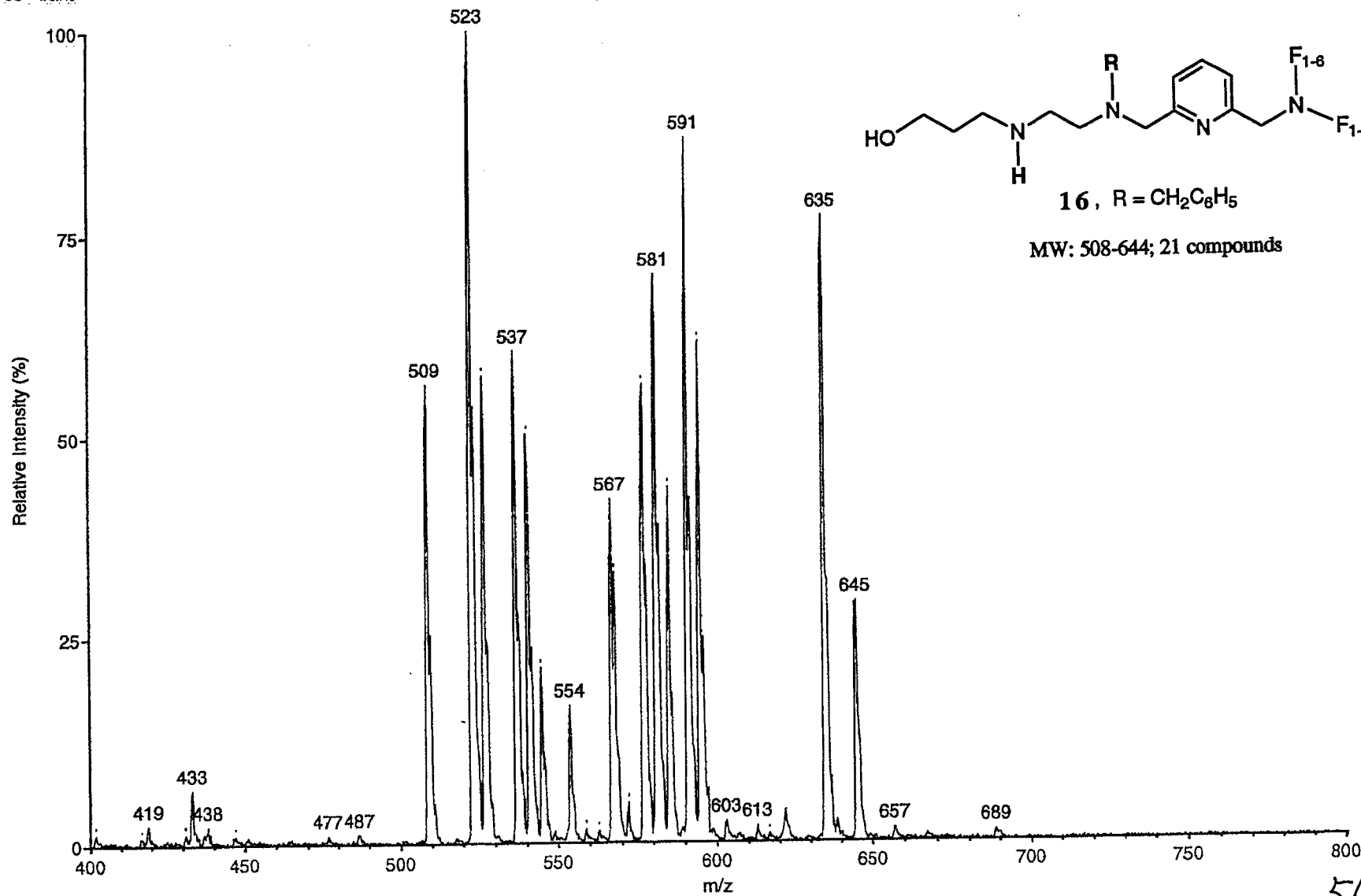
53

+Profile Q1SCAN

ISHA272 OR60 - 5117196 - 9:53 AM  
ELECTROSPRAY BY KELLY

33 peaks

990,500



**16**, R = CH<sub>2</sub>C<sub>6</sub>H<sub>5</sub>

MW: 508-644; 21 compounds

### **$^{13}\text{C}$ NMR for the Following Compounds:**

**Compound 34:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  28.3, 30.6, 43.1, 45.1, 52.3, 58.3, 59.2, 59.8, 60.5, 80.0, 120.8, 127.0, 127.7, 128.3, 128.8, 136.9, 139.2, 139.4, 156.8, 158.9, 159.5.

**Compound 35:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  28.3, 30.6, 43.1, 45.0, 52.3, 57.9, 58.3, 58.6, 59.8, 60.5, 80.1, 113.8, 114.2, 115.2, 115.6, 120.9, 124.3, 129.7, 129.9, 137.1, 141.8, 142.0, 156.8, 158.9, 160.6, 165.5.

**Compound 36:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  21.5, 28.3, 30.6, 43.1, 45.1, 52.2, 58.3, 59.2, 59.8, 60.6, 80.0, 120.8, 125.9, 127.7, 127.8, 128.2, 129.6, 136.9, 137.7, 139.1, 139.3, 157.0, 158.9, 159.7.

**Compound 37:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  28.3, 30.6, 43.2, 45.0, 52.6, 57.6, 58.1, 59.6, 60.3, 80.1, 121.4, 122.2, 122.4, 123.4, 123.6, 129.4, 134.7, 137.2, 141.1, 141.7, 148.4, 156.8, 158.0, 158.7.

**Compound 38:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  28.3, 30.6, 43.2, 45.1, 52.1, 52.3, 58.0, 58.3, 58.7, 59.7, 60.5, 80.0, 121.0, 128.4, 130.0, 130.3, 133.3, 137.0, 139.5, 156.8, 158.7, 158.8, 167.1.

**Compound 39:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  28.2, 30.6, 43.1, 45.0, 52.4, 58.0, 58.2, 58.6, 59.8, 60.5, 80.1, 121.1, 124.0, 125.4, 126.9, 128.8, 130.4, 131.1, 131.6, 132.0, 137.1, 140.1, 140.5, 156.8, 158.6, 158.7.

**Compound 2:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  30.8, 47.1, 49.6, 53.4, 58.3, 59.3,

59.8, 60.5, 64.2, 120.9, 127.0, 128.3, 128.8, 136.8, 139.3, 139.4, 158.9, 159.6.

**Compound 3:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  30.7, 47.0, 49.3, 53.5, 57.9, 58.8, 59.8, 60.4, 63.7, 113.8, 114.2, 115.2, 115.6, 121.0, 121.2, 124.3, 129.7, 129.9, 137.0, 141.9, 142.0, 158.7, 159.0, 160.6, 165.5.

**Compound 4:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  21.5, 30.6, 47.0, 49.5, 53.1, 58.3, 59.3, 59.9, 60.5, 64.1, 120.9, 125.9, 127.7, 127.9, 128.2, 129.7, 136.9, 137.7, 139.1, 139.4, 158.9, 159.7.

**Compound 5:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  30.6, 46.9, 49.4, 53.7, 57.6, 58.4, 59.7, 60.1, 63.8, 121.4, 121.6, 122.2, 122.4, 123.6, 129.2, 129.4, 134.7, 137.2, 141.0, 141.6, 148.4, 158.1, 158.6.

**Compound 6:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  30.7, 46.9, 49.2, 52.1, 53.4, 57.9, 58.8, 59.7, 60.3, 63.7, 121.0, 121.2, 128.4, 129.9, 130.2, 133.3, 137.0, 139.5, 139.7, 158.7, 158.9, 167.1.

**Compound 7:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  30.6, 47.0, 49.7, 53.7, 57.9, 58.8, 59.9, 60.4, 64.2, 121.1, 121.3, 124.0, 125.4, 126.9, 128.8, 130.4, 131.0, 132.0, 137.0, 140.1, 140.5, 158.6, 158.7.

**Compound 67:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  21.4, 28.3, 30.5, 43.1, 45.0, 52.2, 57.8, 58.3, 58.5, 59.2, 59.8, 60.6, 80.0, 120.8, 123.8, 125.4, 125.8, 127.2, 127.9, 128.2, 128.4, 128.7, 128.8, 129.5, 130.3, 130.9, 132.1, 137.0, 137.9, 138.9, 139.1, 140.5, 156.9, 158.9, 159.2.

**Compound 68:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  21.4, 28.2, 30.5, 43.0, 45.0, 52.2, 57.9, 58.2, 59.2, 59.8, 60.6, 80.0, 113.9, 114.3, 115.2, 115.7, 120.8, 124.0, 124.3, 125.5, 125.8, 127.9, 128.2, 128.8, 129.4, 129.7, 129.9, 131.0, 132.0, 137.0, 137.9, 139.0, 140.2, 141.7, 141.8, 156.9, 158.5, 159.3, 160.6, 165.5.

**Compound 69:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  21.4, 28.2, 30.6, 43.2, 45.1, 52.3, 57.7, 58.3, 58.5, 59.2, 59.8, 60.4, 60.6, 80.0, 120.9, 123.8, 125.5, 125.9, 127.9, 128.3, 128.7, 129.5, 129.7, 130.3, 132.1, 137.0, 137.9, 138.8, 139.1, 140.7, 156.9, 159.0, 159.2.

**Compound 70:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  21.4, 28.2, 30.5, 43.0, 45.0, 52.2, 57.5, 58.0, 59.1, 59.8, 60.6, 80.0, 121.0, 122.3, 123.6, 124.1, 125.4, 125.7, 126.9, 127.9, 128.2, 128.9, 129.3, 129.4, 132.0, 134.7, 137.1, 137.9, 139.0, 139.8, 141.3, 148.4, 156.8, 157.9, 159.5.

**Compound 71:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  21.4, 28.2, 30.6, 43.2, 45.0, 52.0, 52.2, 57.7, 58.0, 58.3, 59.2, 59.7, 60.5, 79.8, 121.0, 123.9, 125.4, 125.8, 127.8, 128.2, 128.5, 128.8, 129.5, 129.9, 130.3, 130.9, 132.1, 133.3, 137.0, 137.8, 139.0, 139.4, 140.3, 156.7, 158.5, 159.2, 167.0.

**Compound 74:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  28.3, 30.6, 43.2, 45.1, 52.4, 57.8, 58.3, 58.5, 59.8, 60.5, 80.1, 121.1, 123.9, 125.4, 127.0, 127.2, 128.4, 128.8, 130.3, 130.9, 132.1, 137.0, 138.9, 140.6, 156.8, 158.6, 159.2.

**Compound 75:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  28.2, 30.6, 43.2, 45.1, 52.4, 57.9, 58.3, 58.6, 59.8, 60.5, 80.1, 113.8, 114.3, 115.2, 115.7, 121.1, 124.0, 124.3,

125.4, 127.0, 128.8, 129.7, 129.9, 130.3, 131.0, 132.1, 137.1, 140.2, 140.5, 141.7, 141.8, 156.8, 158.8, 160.6, 165.5.

**Compound 76:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  21.4, 28.2, 30.6, 43.3, 45.1, 52.4, 57.8, 58.3, 58.5, 59.9, 60.5, 80.1, 121.1, 123.8, 125.5, 125.9, 127.0, 127.9, 128.3, 128.7, 129.6, 130.3, 130.9, 132.1, 137.0, 137.9, 138.8, 140.6, 156.8, 158.5, 159.2.

**Compound 77:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  28.2, 30.6, 43.2, 45.1, 52.5, 57.6, 58.1, 58.6, 59.8, 60.5, 80.1, 121.1, 122.2, 123.6, 124.1, 125.4, 126.9, 128.9, 129.3, 130.4, 131.1, 132.0, 134.7, 137.1, 139.9, 140.5, 141.3, 148.4, 156.8, 158.2, 158.9.

**Compound 78:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  28.2, 30.6, 43.2, 45.0, 52.1, 52.4, 57.8, 58.1, 58.6, 59.8, 60.5, 80.1, 121.1, 123.9, 125.4, 126.9, 128.5, 128.8, 129.7, 129.9, 130.3, 130.9, 132.1, 133.3, 137.1, 139.4, 140.3, 140.5, 156.7, 158.7, 167.1.

**Compound 22:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  21.5, 30.7, 47.0, 49.4, 53.2, 57.8, 58.5, 59.3, 59.8, 60.3, 64.0, 120.9, 121.1, 123.8, 125.4, 125.9, 127.2, 127.9, 128.4, 128.7, 128.8, 129.7, 130.3, 130.9, 132.1, 137.0, 137.9, 138.9, 139.1, 140.6, 159.0, 159.1.

**Compound 23:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  21.4, 30.9, 47.1, 49.5, 53.4, 57.9, 59.3, 59.8, 60.6, 63.9, 113.9, 114.3, 115.3, 115.7, 120.9, 121.2, 123.9, 124.4, 125.5, 125.9, 127.9, 128.3, 128.8, 129.6, 129.9, 130.3, 130.9, 132.1, 137.0,



137.9, 139.1, 140.3, 141.7, 141.9, 158.6, 159.3, 160.6, 165.5.

**Compound 24:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  21.5, 30.9, 47.1, 49.3, 53.3, 57.8, 58.5, 59.3, 59.9, 60.6, 63.7, 121.0, 121.2, 123.9, 125.6, 126.0, 128.0, 128.3, 128.7, 129.7, 130.3, 132.1, 137.0, 137.9, 138.9, 139.2, 140.7, 159.1, 159.2.

**Compound 25:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  21.4, 30.5, 46.8, 49.1, 53.0, 57.5, 58.1, 59.3, 59.8, 60.5, 63.6, 121.2, 121.5, 122.3, 123.6, 124.1, 125.5, 125.9, 127.9, 128.3, 128.9, 129.3, 129.6, 130.4, 131.0, 132.1, 134.8, 137.2, 137.9, 139.0, 140.0, 141.4, 148.4, 158.1, 159.3.

**Compound 26:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  21.4, 30.6, 46.9, 49.1, 52.1, 53.0, 57.8, 58.0, 59.3, 59.8, 60.5, 63.6, 121.1, 121.3, 123.9, 125.5, 125.9, 127.9, 128.3, 128.5, 128.8, 129.6, 130.0, 130.3, 131.0, 132.1, 133.4, 137.1, 137.9, 139.0, 139.4, 140.3, 158.7, 159.1, 167.1.

**Compound 27:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  11.0, 14.0, 21.4, 23.0, 23.7, 28.9, 30.3, 38.7, 46.8, 49.3, 52.9, 57.9, 59.2, 59.8, 60.4, 64.0, 68.1, 121.0, 121.3, 124.0, 125.4, 125.9, 127.8, 128.2, 128.8, 129.6, 130.5, 130.9, 132.0, 137.1, 137.9, 138.9, 140.0, 158.4, 159.1.

**Compound 28:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  30.8, 47.1, 49.5, 53.8, 57.8, 58.5, 58.8, 59.8, 60.4, 64.0, 121.1, 123.9, 125.4, 127.2, 128.4, 128.8, 130.3, 130.9, 132.1, 137.0, 138.9, 140.6, 158.6, 159.2.

**Compound 29:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  30.6, 46.9, 49.1, 53.5, 57.9, 58.8,

59.8, 60.3, 63.5, 113.9, 114.3, 115.2, 115.7, 121.1, 121.4, 124.0, 124.3, 125.4, 126.9, 128.8, 129.7, 129.9, 130.3, 130.9, 132.1, 137.1, 140.2, 140.4, 141.7, 141.8, 158.5, 158.9, 160.6, 165.5.

**Compound 30:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  21.4, 30.7, 46.9, 49.1, 53.5, 57.8, 58.5, 58.8, 59.9, 60.3, 63.4, 121.1, 123.9, 125.5, 125.9, 127.0, 127.9, 128.3, 128.7, 129.7, 130.3, 130.9, 132.1, 137.0, 137.9, 138.8, 140.4, 140.6, 158.4, 159.3.

**Compound 31:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  30.4, 46.7, 48.8, 53.3, 57.6, 58.1, 58.8, 59.8, 60.2, 63.2, 121.3, 121.5, 122.3, 123.6, 124.1, 125.4, 126.9, 128.8, 128.9, 129.3, 130.2, 130.4, 130.9, 131.0, 132.1, 134.8, 137.2, 139.9, 140.3, 141.3, 148.4, 158.3, 158.7.

**Compound 32:**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  30.2, 46.6, 48.6, 52.1, 53.0, 57.8, 58.1, 58.9, 59.8, 60.0, 62.9, 121.2, 121.4, 124.0, 125.5, 127.0, 128.5, 128.8, 129.9, 130.3, 130.9, 132.1, 133.3, 137.2, 139.3, 140.1, 140.3, 158.3, 159.0, 167.1.