

Electronic Supplementary Data

Synthesis and spectral investigation of Co(II), Ni(II), Cu(II) and Zn(II) complexes with novel N4 ligands

Jyothi Sunkari, Sreedhar Kodumuru, Nagaraju Devunuri & Jagannatha Swamy Sreedasyam*

Department of Chemistry, Kakatiya University, Warangal 506 009, India

Email: sj_swamy@yahoo.com; Mobile: +91 9849 272 970

No.	Contents	Page No.
1	Fig. S1 - IR spectrum of APMED	3
2	Fig. S2 - ¹³ C NMR spectrum of APMED	4
3	Fig. S3 - ¹ H NMR spectrum of APMED	5
4	Fig. S4 - Mass spectrum of APMED	6
5	Fig. S5 - IR spectrum of APMPD	7
6	Fig. S6 - ¹ H NMR spectrum of APMPD	8
7	Fig. S7 - ¹³ C NMR spectrum of APMPD	9
8	Fig. S8 - Mass spectrum of APMPD	10
9	Fig. S9 - IR spectrum of APMP'D	11
10	Fig. S10 - ¹ H NMR spectrum of APMP'D	12
11	Fig. S11 - ¹³ C NMR spectrum of APMP'D	13
12	Fig. S12 - Mass spectrum of APMP'D	14
13	Fig. S13 - IR spectrum of APMCD	15
14	Fig. S14 - ¹ H NMR spectrum of APMCD	16
15	Fig. S15 - ¹³ C NMR spectrum of APMCD	17
16	Fig. S16 - Mass NMR spectrum of APMCD	18
17	Fig. S17 - Thermogram of [Zn(APMED)Cl ₂].H ₂ O	19
18	Fig. S18 - Thermogram of [Ni(APMPD)Cl ₂].H ₂ O	20
19	Fig. S19 - Thermogram of [Cu(APMP'D)Cl ₂].H ₂ O	21
20	Fig. S20 - Thermogram of [Zn(APMP'D)Cl ₂].H ₂ O	22
21	Fig. S21 - Mass spectrum of [Zn(APMED)Cl ₂]	23
22	Fig. S22 - Mass spectrum of [Cu(APMPD)Cl ₂]	24
23	Fig. S23 - Mass spectrum of [Zn(APMPD)Cl ₂]	25
24	Fig. S24 - Mass spectrum of [Ni(APMPD)Cl ₂]	26
25	Fig. S25 - Electronic spectrum of [Co(APMED)Cl ₂].6H ₂ O	27
26	Fig. S26 - Electronic spectrum of [Co(APMP'D)Cl ₂].6H ₂ O	27
27	Fig. S27 - Electronic spectrum of [Ni(APMPD)Cl ₂].H ₂ O	28
28	Fig. S28 - Electronic spectrum of [Ni(APMED)Cl ₂].6H ₂ O	28
29	Fig. S29 - Electronic spectrum of [Cu(APMCD)Cl ₂].2H ₂ O	29
30	Fig. S30 - ESR spectrum of [Co(APMED)Cl ₂].2H ₂ O	30
31	Fig. S31 - ESR spectrum of [Co(APMPD)Cl ₂].2H ₂ O	31
32	Fig. S32 - ¹ H NMR spectrum of [Zn(APMPD)Cl ₂].H ₂ O	32
33	Fig. S33 - ¹ H NMR spectrum of [Zn(APMCD)Cl ₂].H ₂ O	33
34	Fig. S34 - ¹ H NMR spectrum of [Zn(APMP'D)Cl ₂]	34
35	Fig. S35 - ¹ H NMR spectrum of [Zn(APMED)Cl ₂].H ₂ O	35

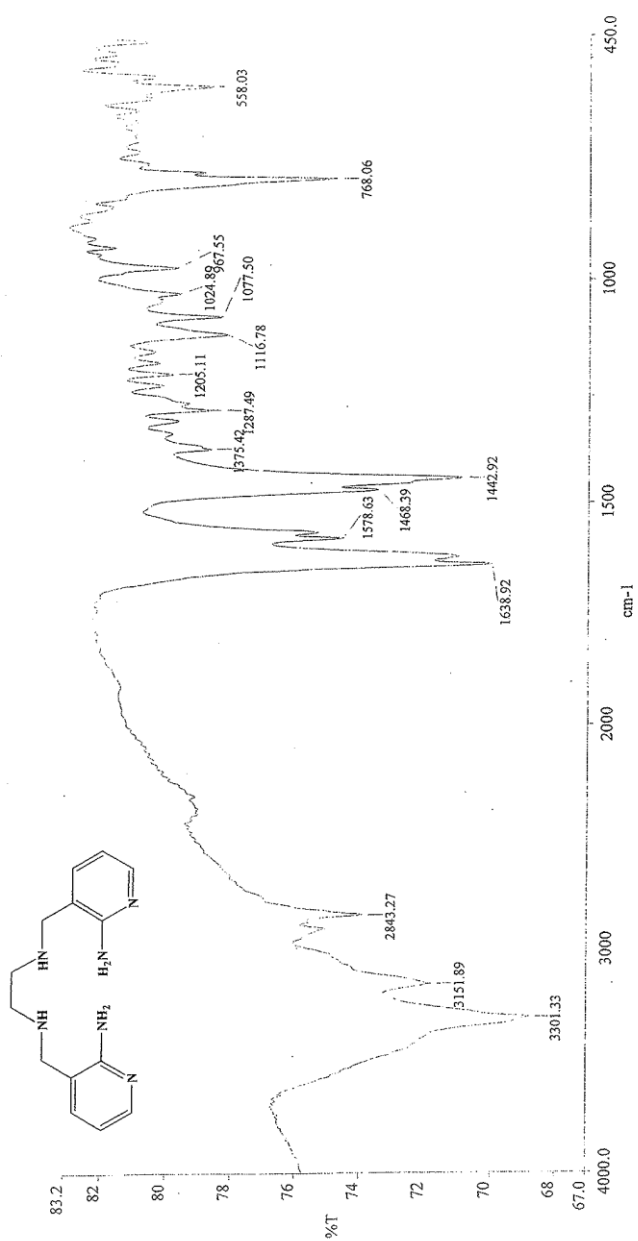


Fig. S1 - IR spectrum of APMED

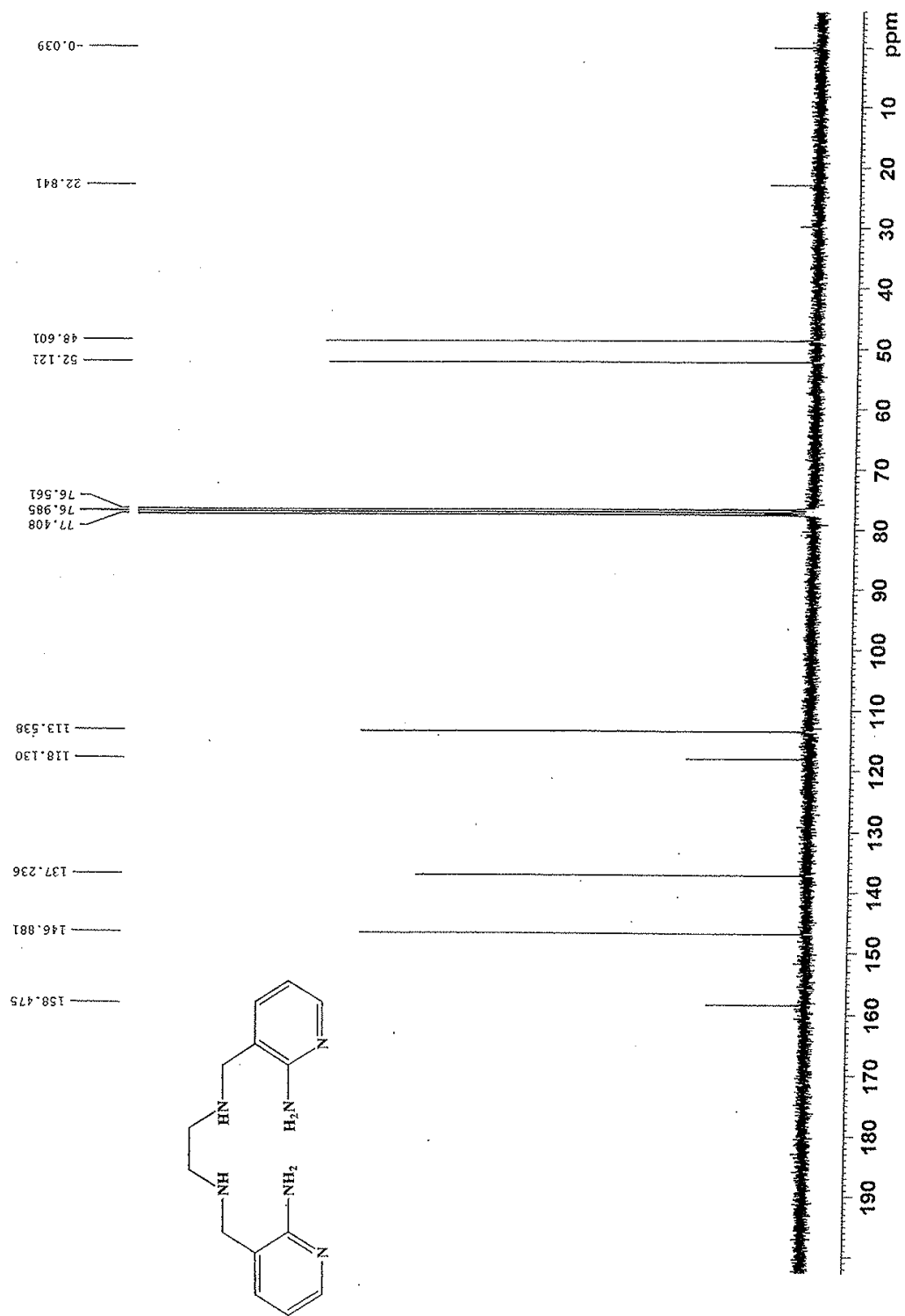


Fig. S2 - ^{13}C NMR spectrum of APMED

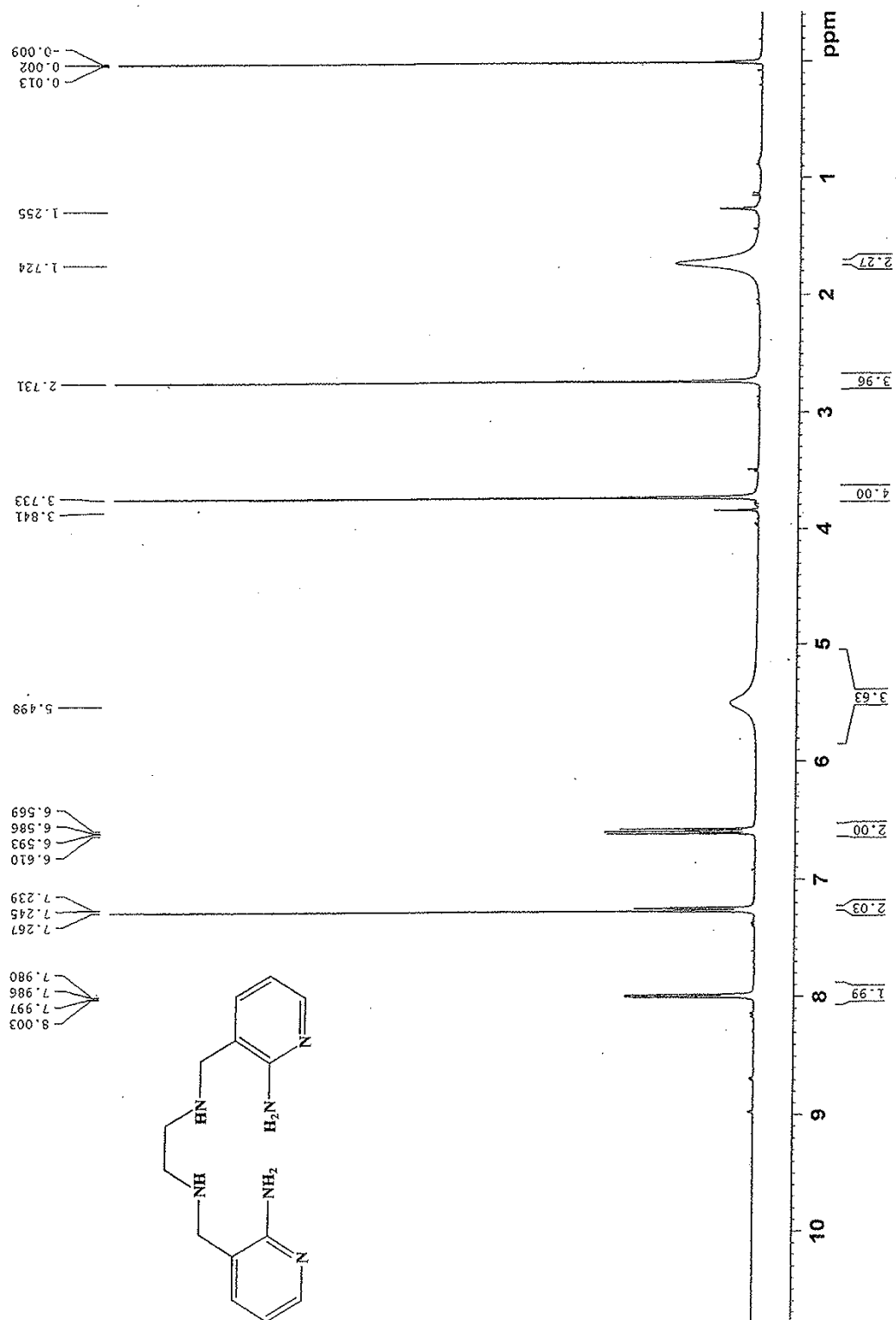


Fig. S3 - ^1H NMR spectrum of APMED

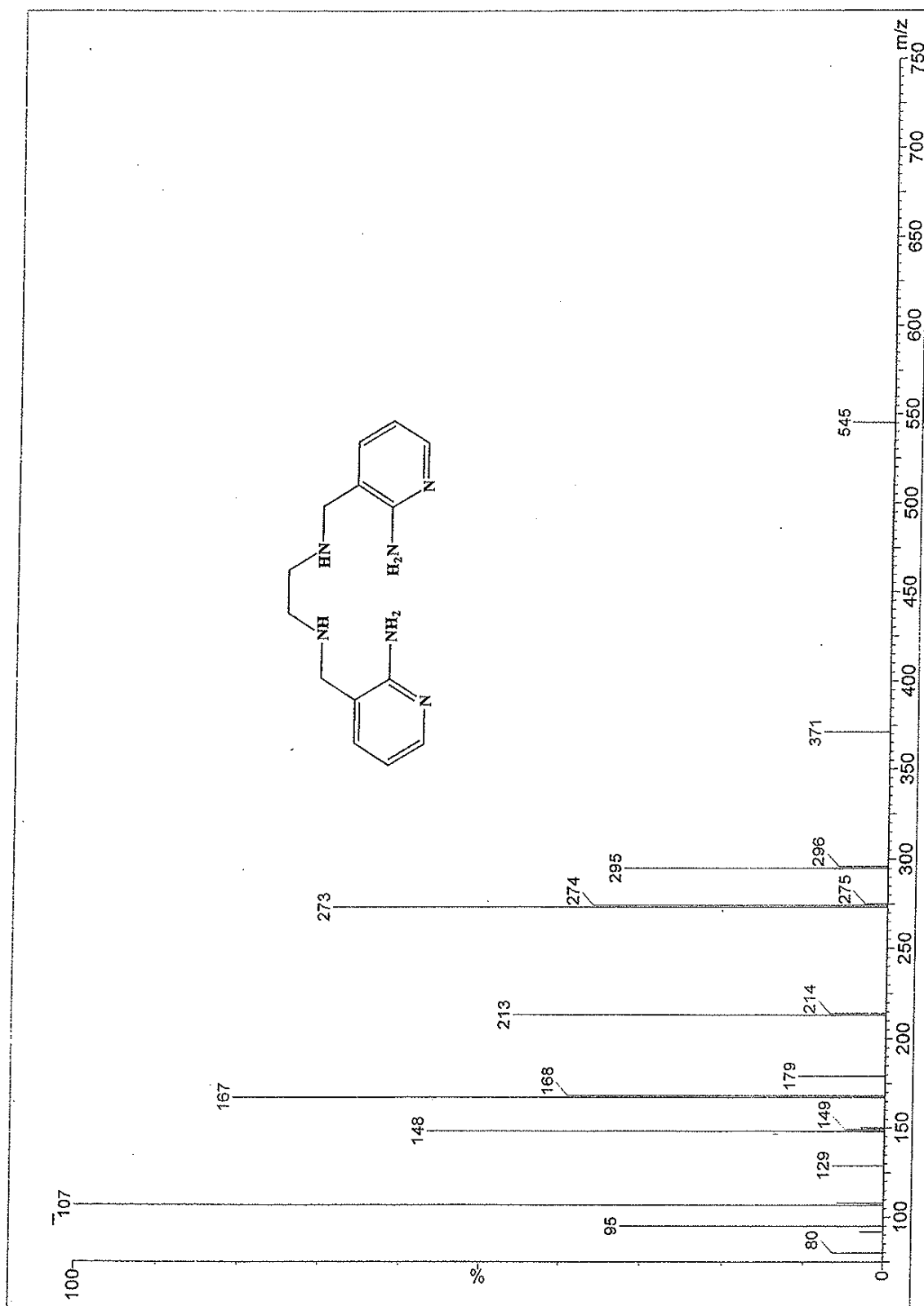


Fig. S4 - Mass spectrum of APMED

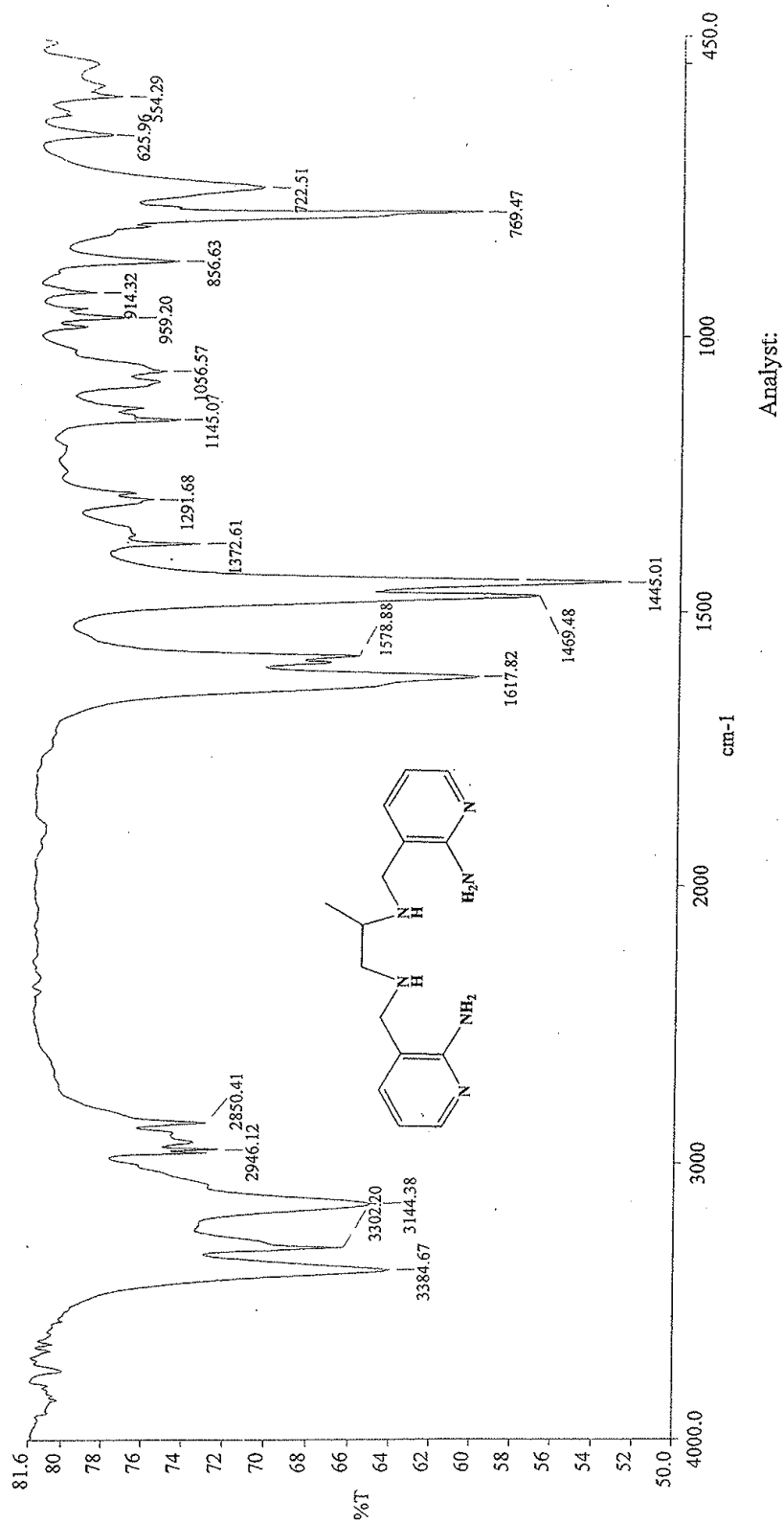


Fig. S5 - IR spectrum of APMPD

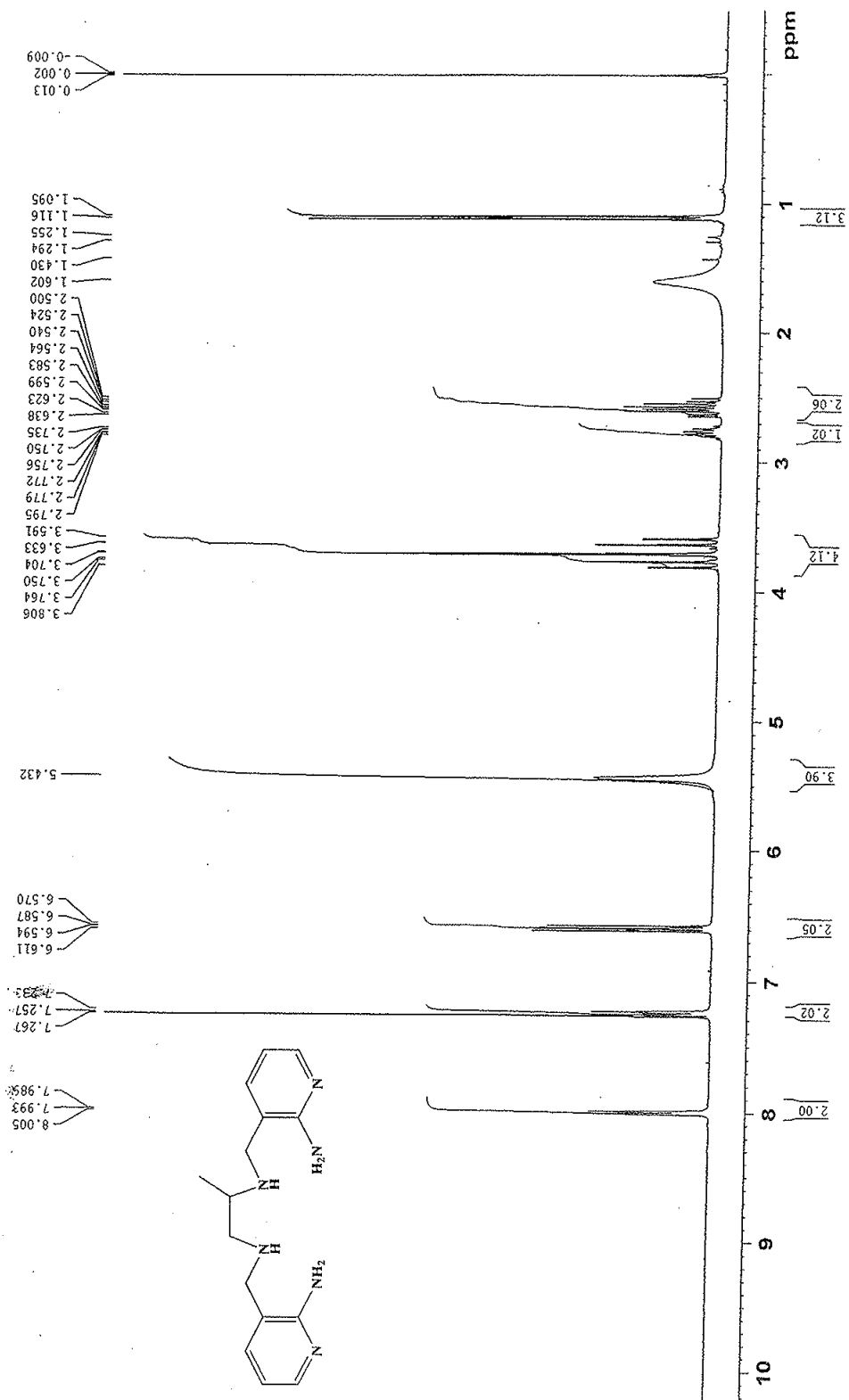


Fig. S6 - ^1H NMR spectrum of APMPD

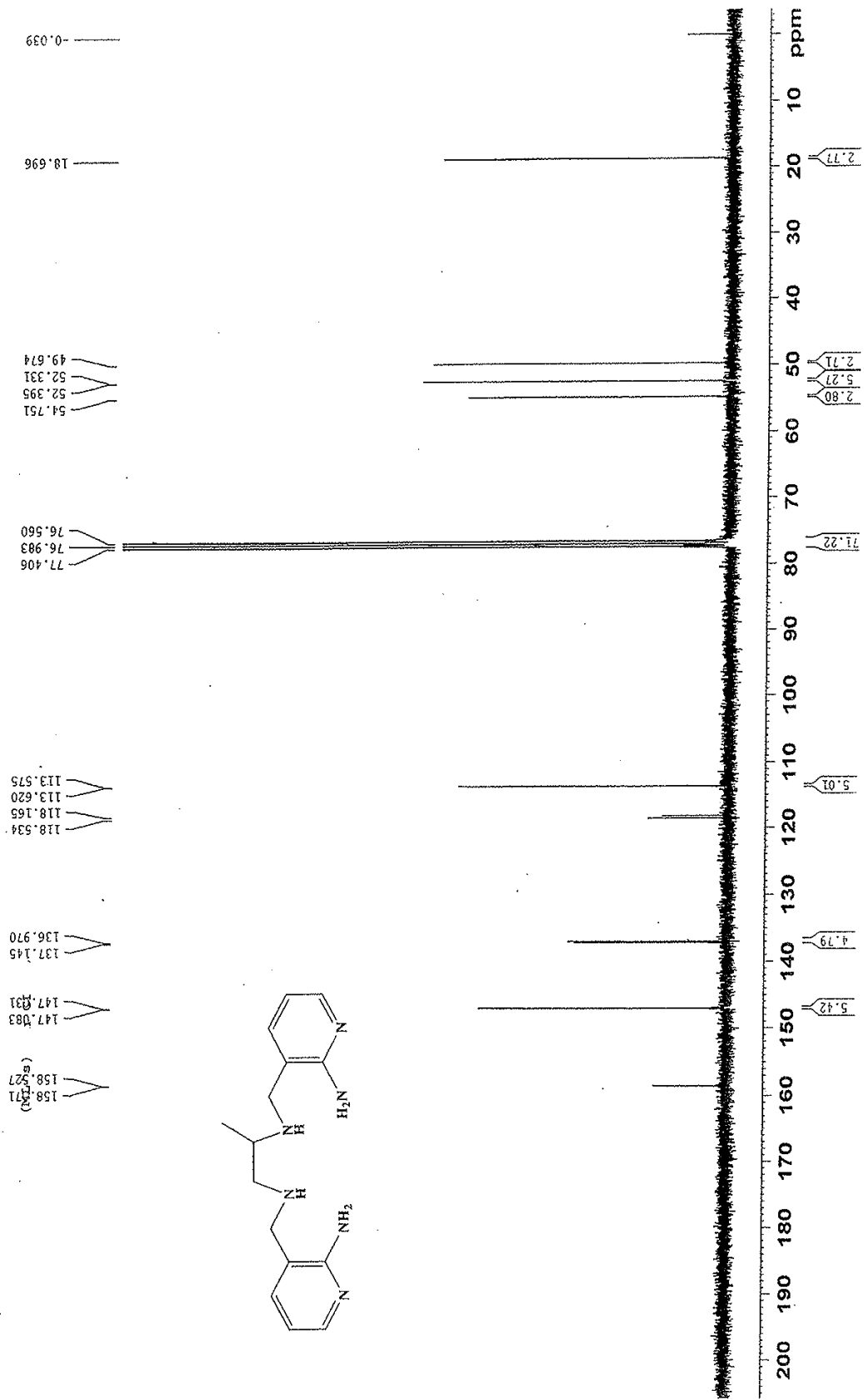


Fig. S7 - ^{13}C NMR spectrum of APMPD

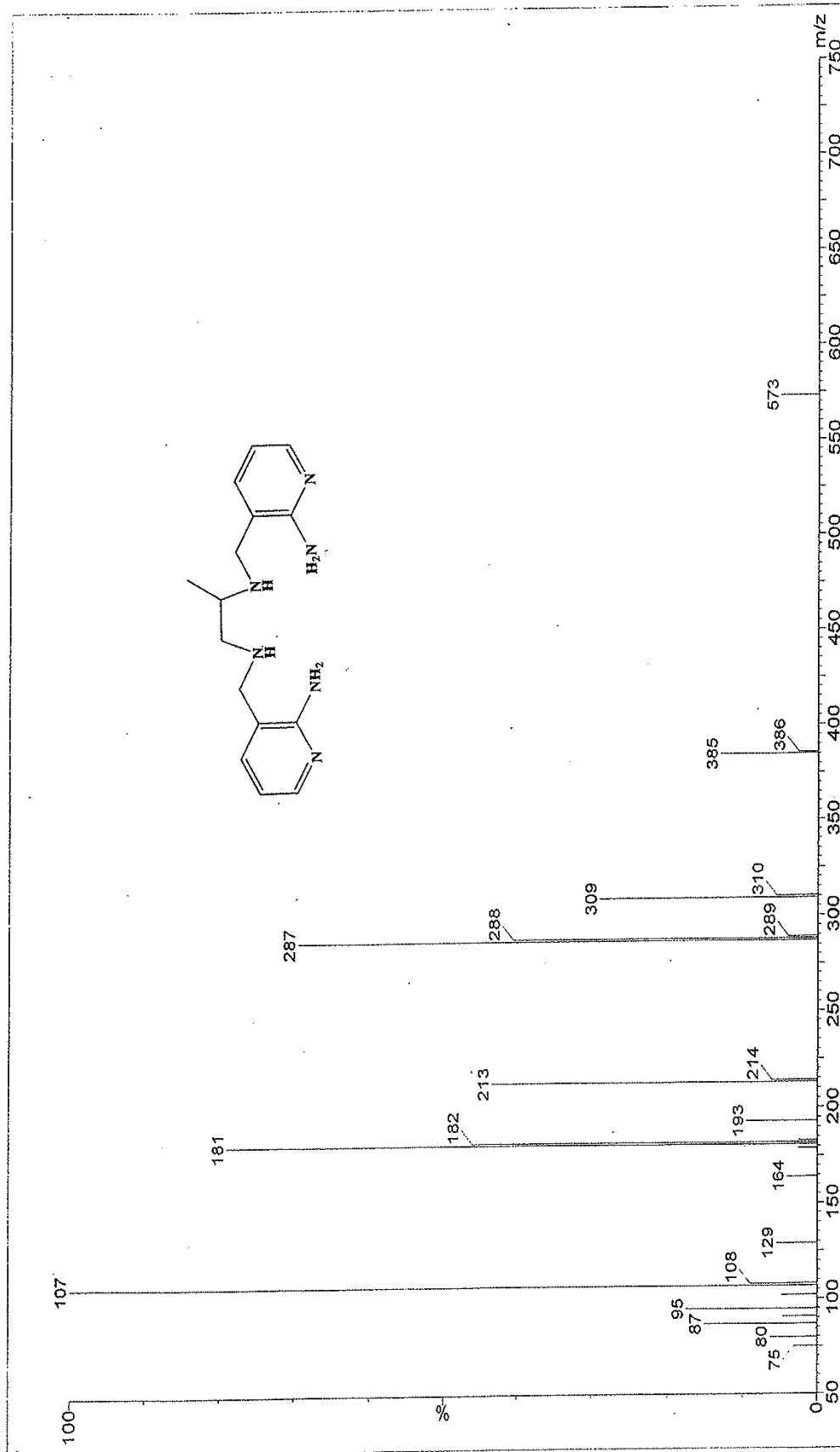


Fig. S8 - Mass spectrum of APMPD

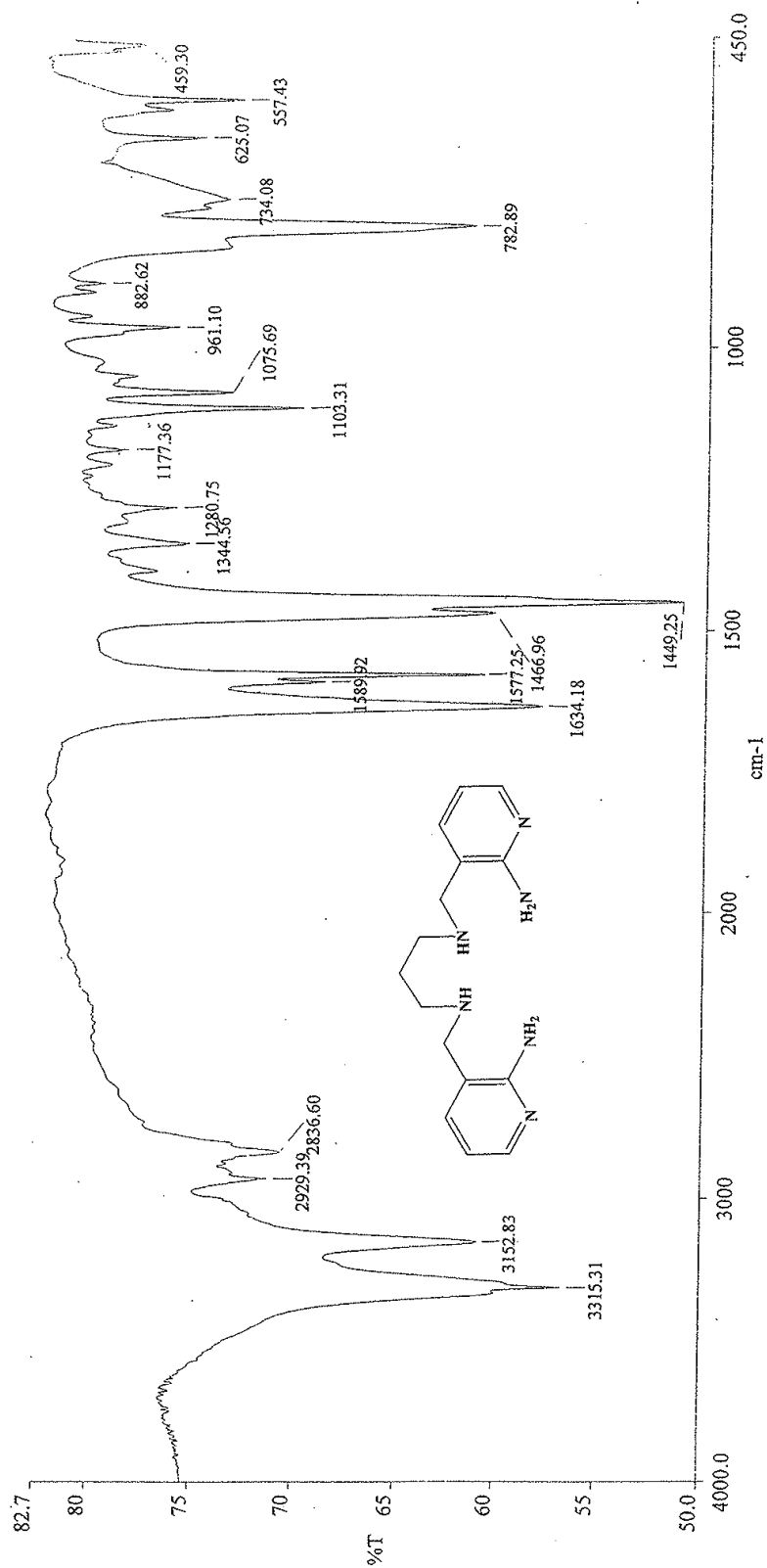


Fig. S9 - IR spectrum of APMP'D

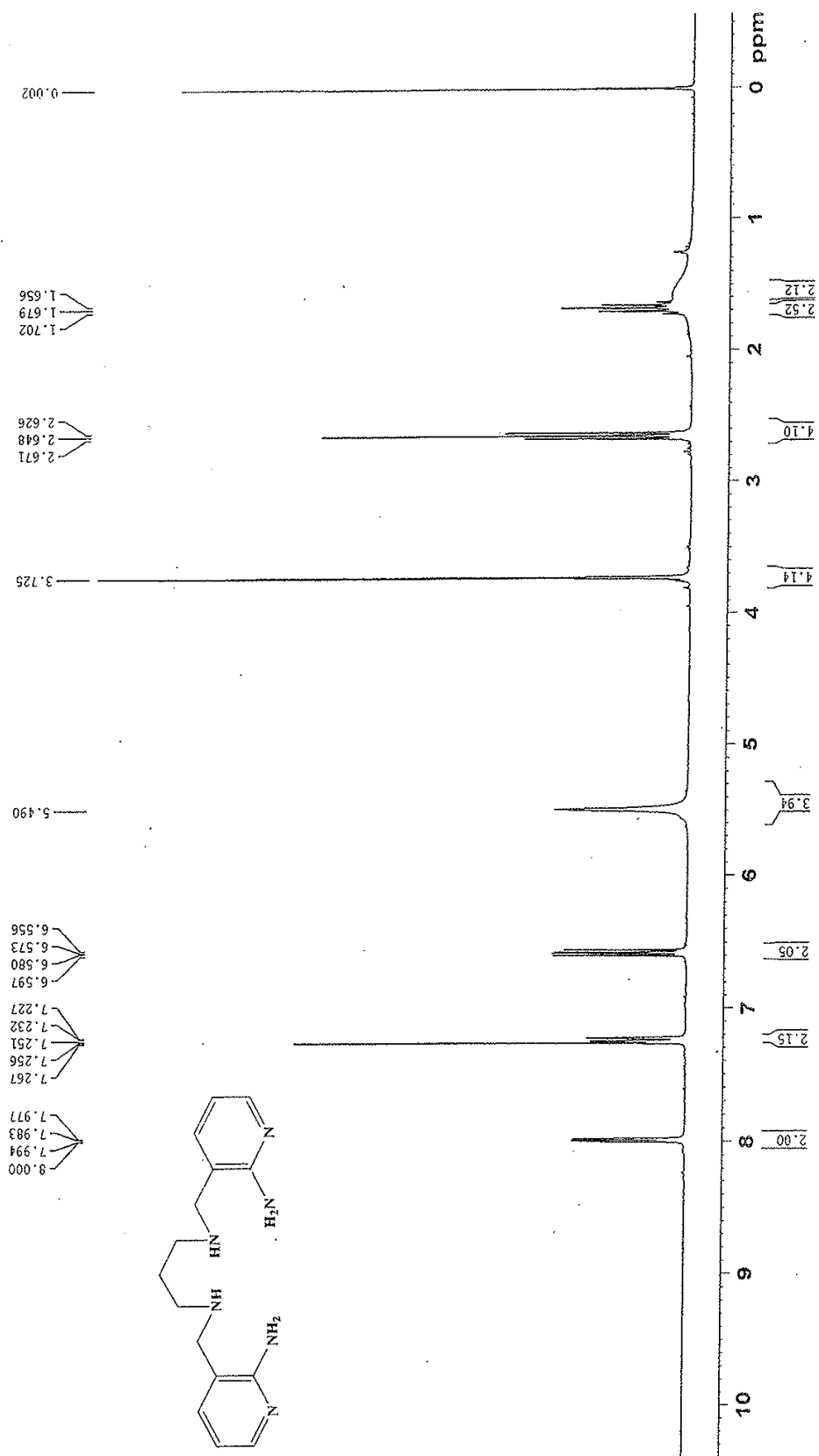


Fig. S10 - ¹H NMR spectrum of APMP'D

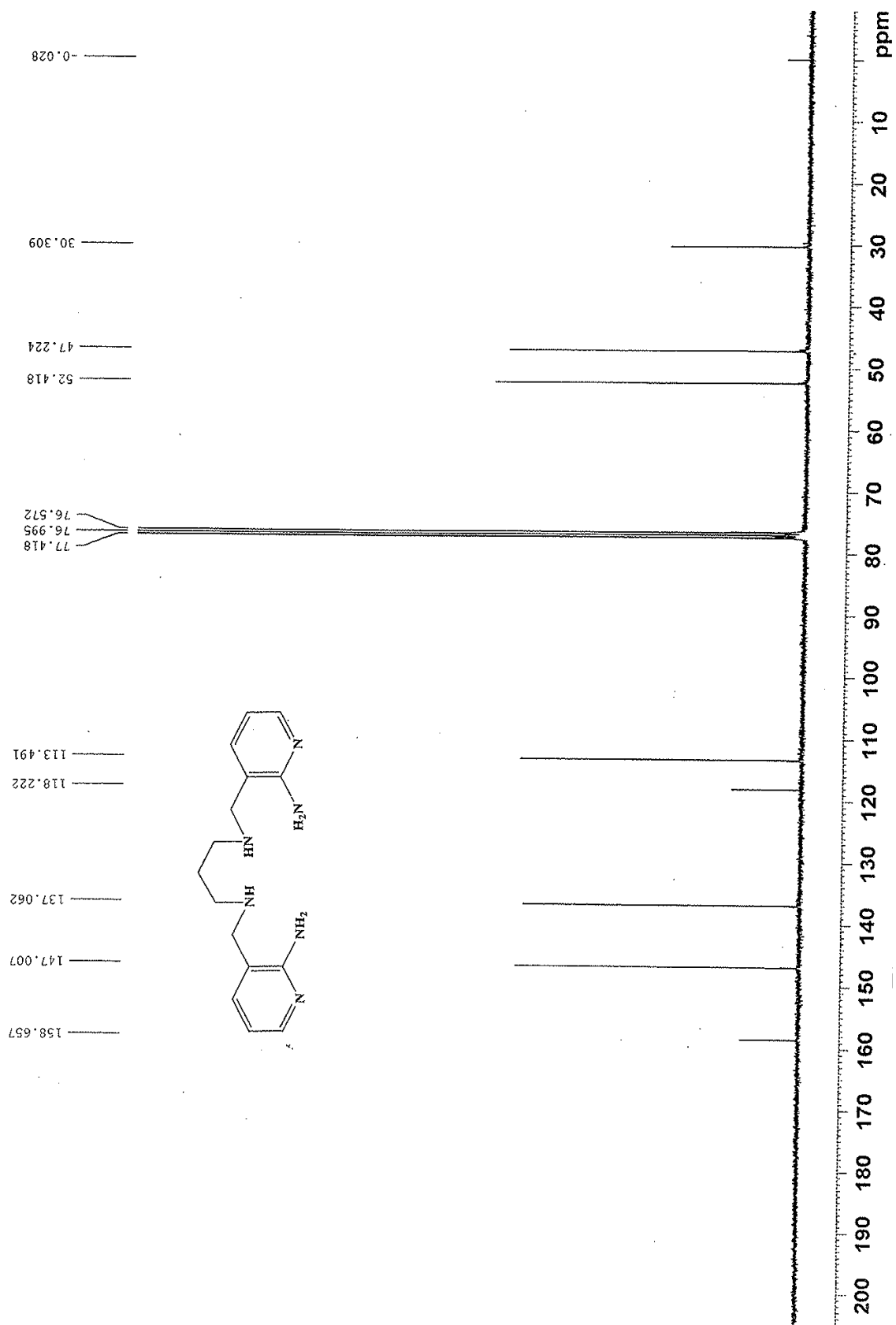


Fig. S11 - ^{13}C NMR spectrum of APMP'D

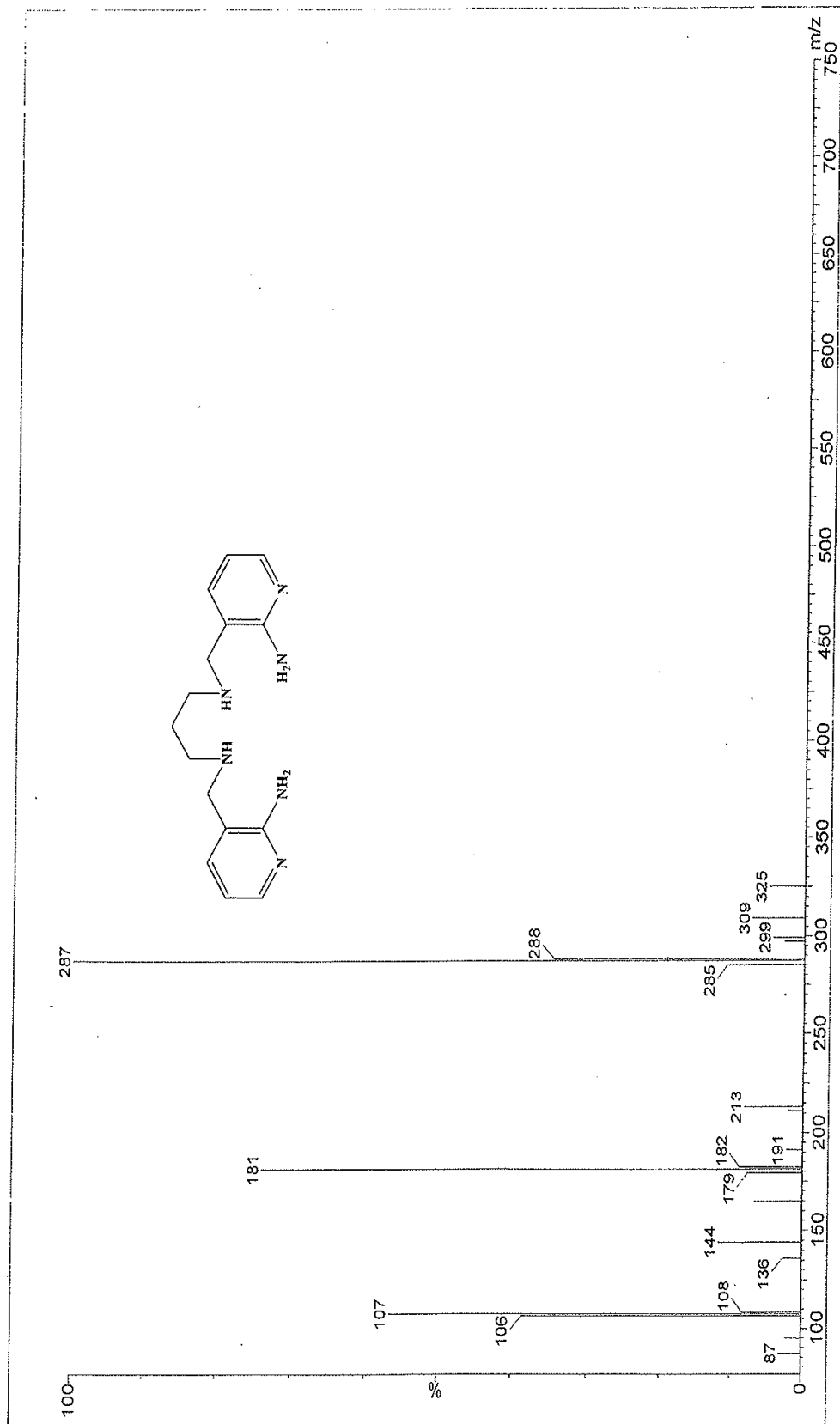


Fig. S12 - Mass spectrum of APMP'D

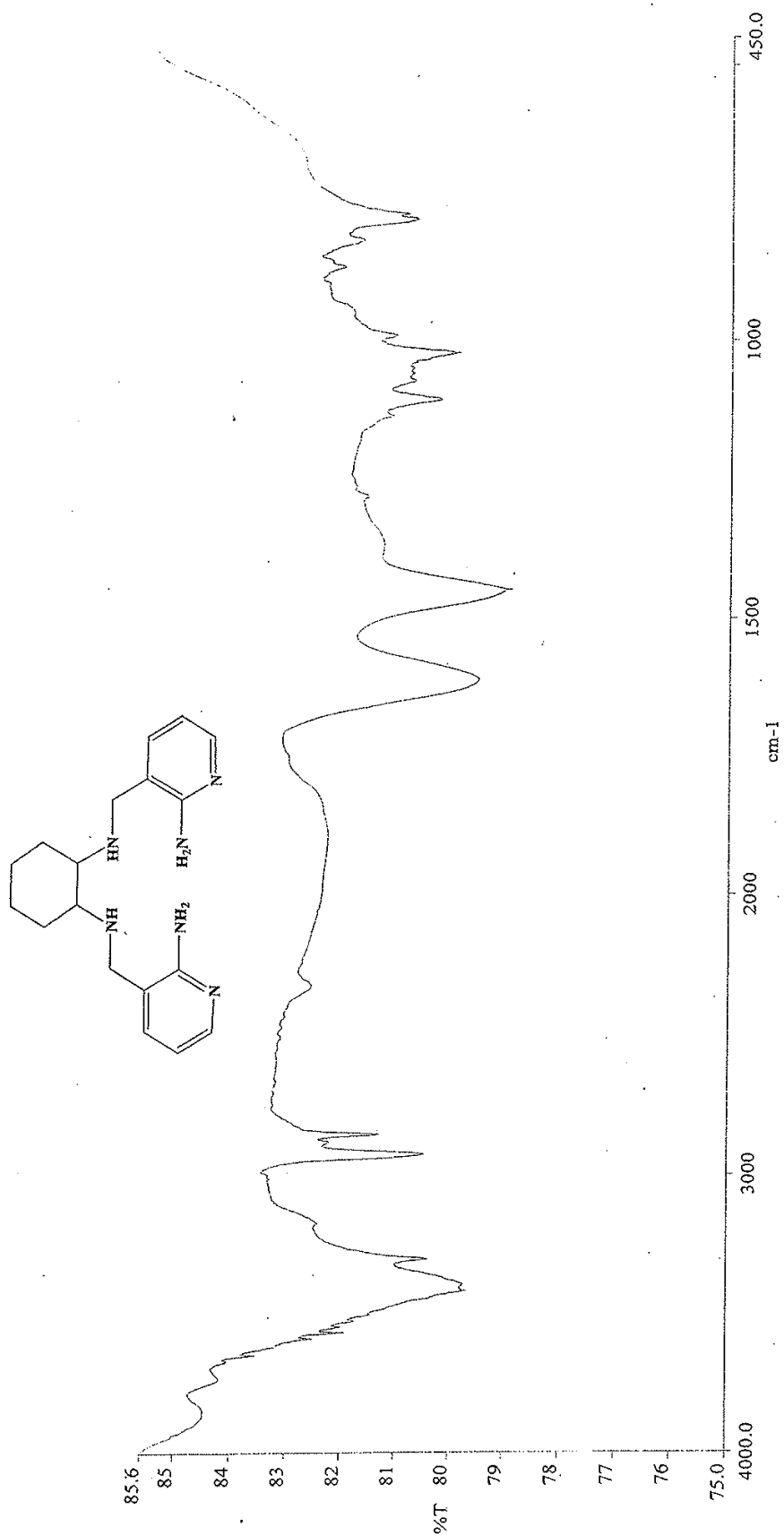


Fig. S13 - IR spectrum of APMCD

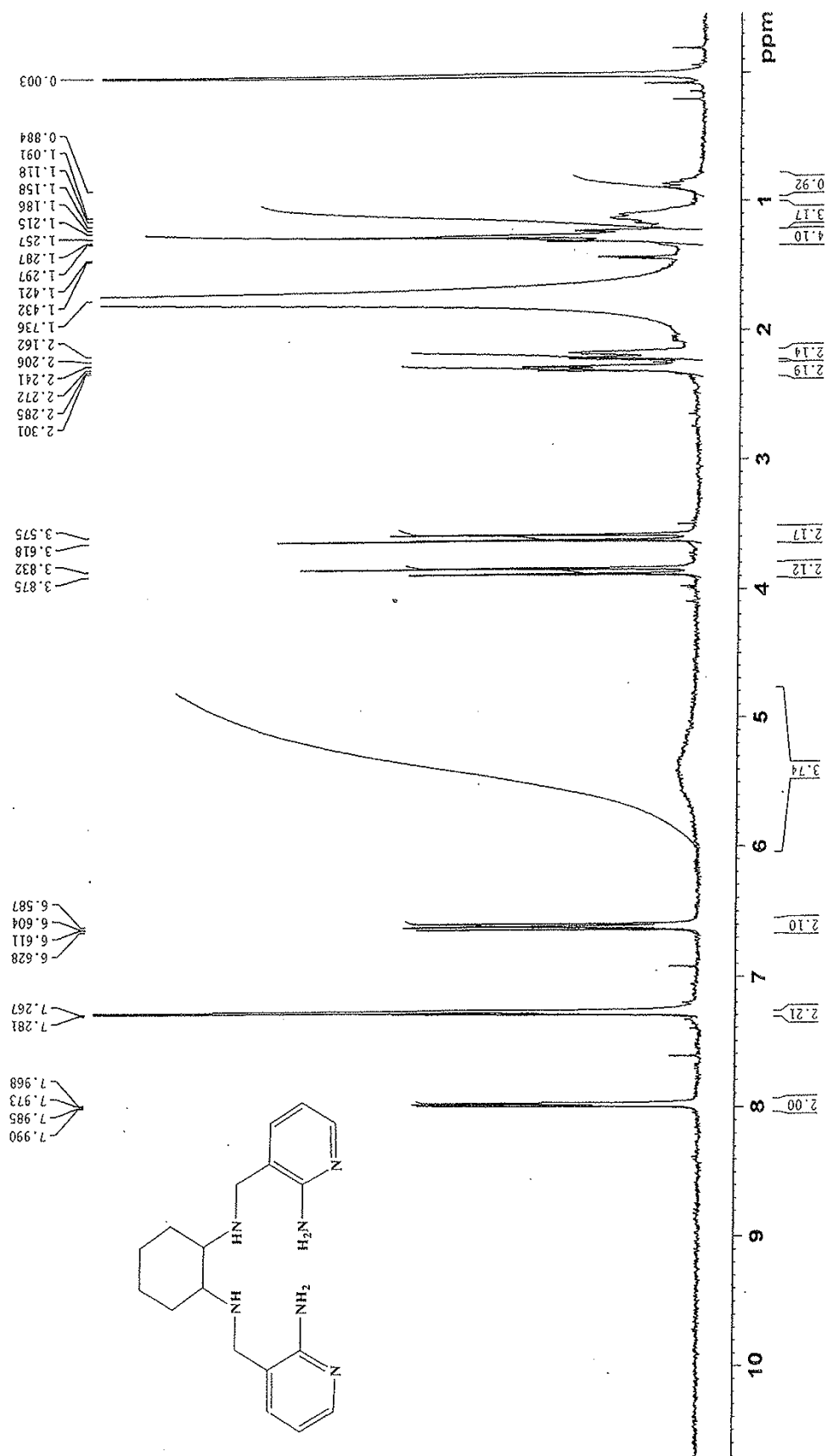


Fig. S14 - ^1H NMR spectrum of APMCD

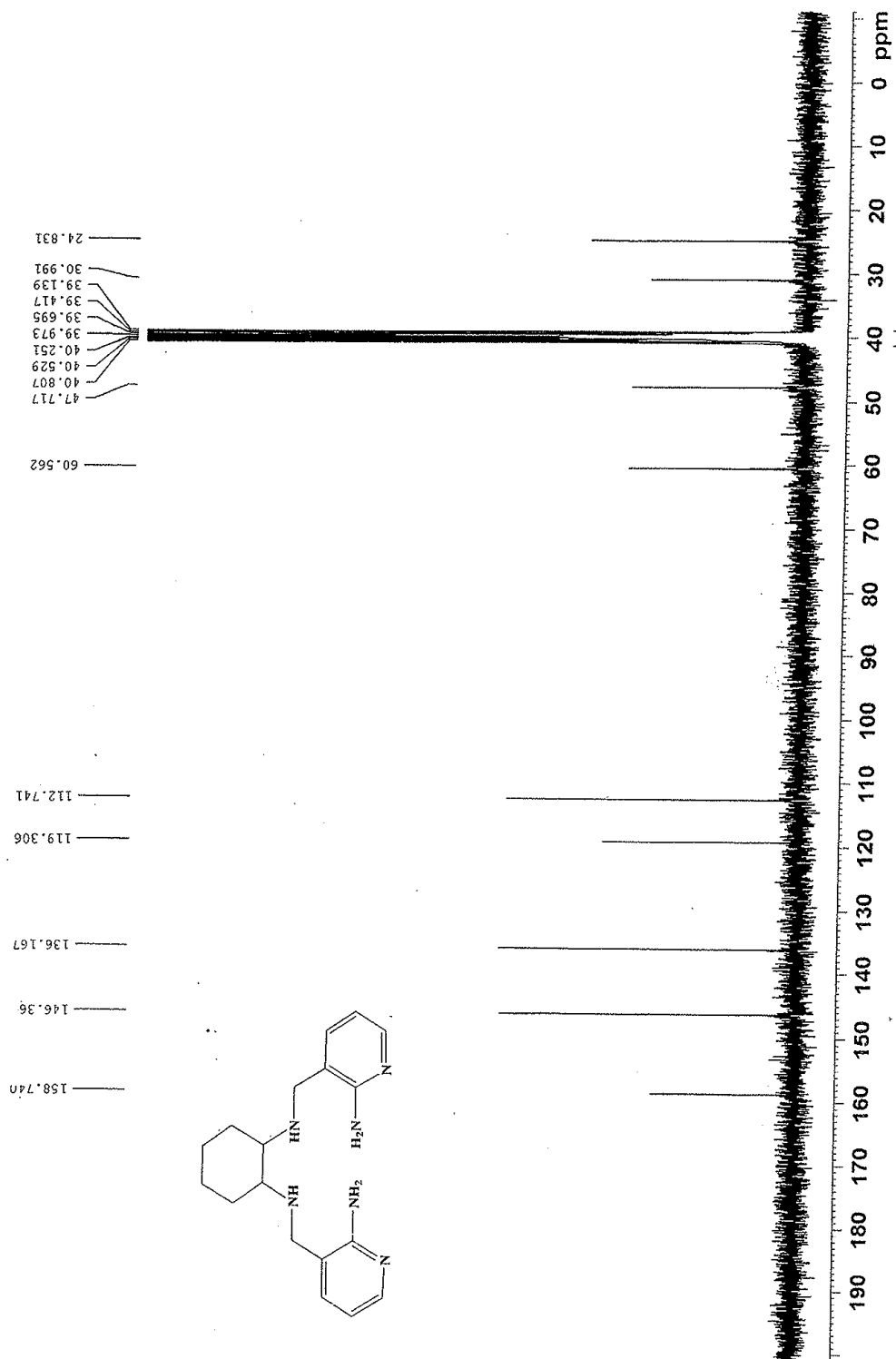


Fig. S15 - ^{13}C NMR spectrum of APMCD

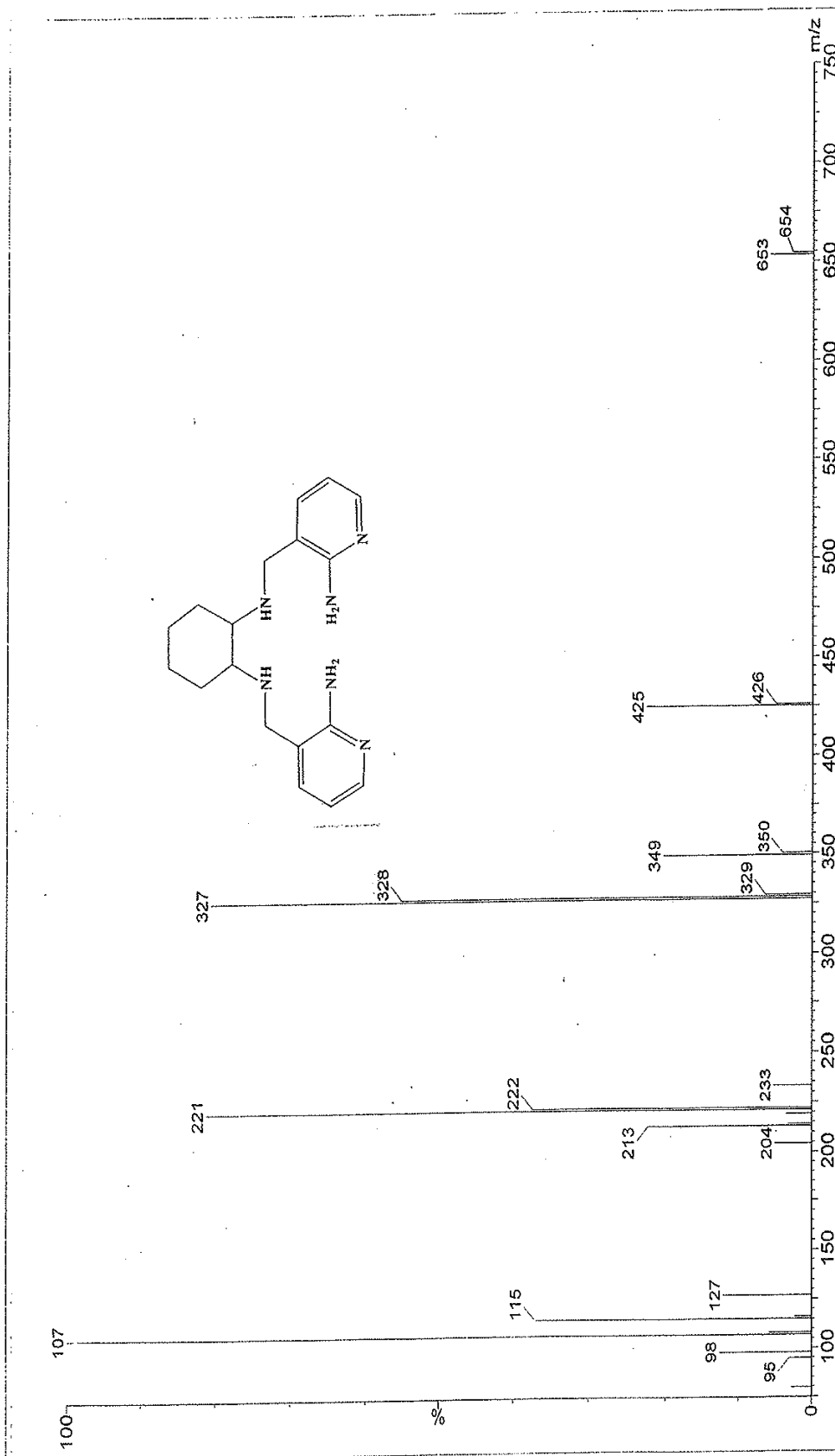


Fig. S16 - Mass spectrum of APMCD

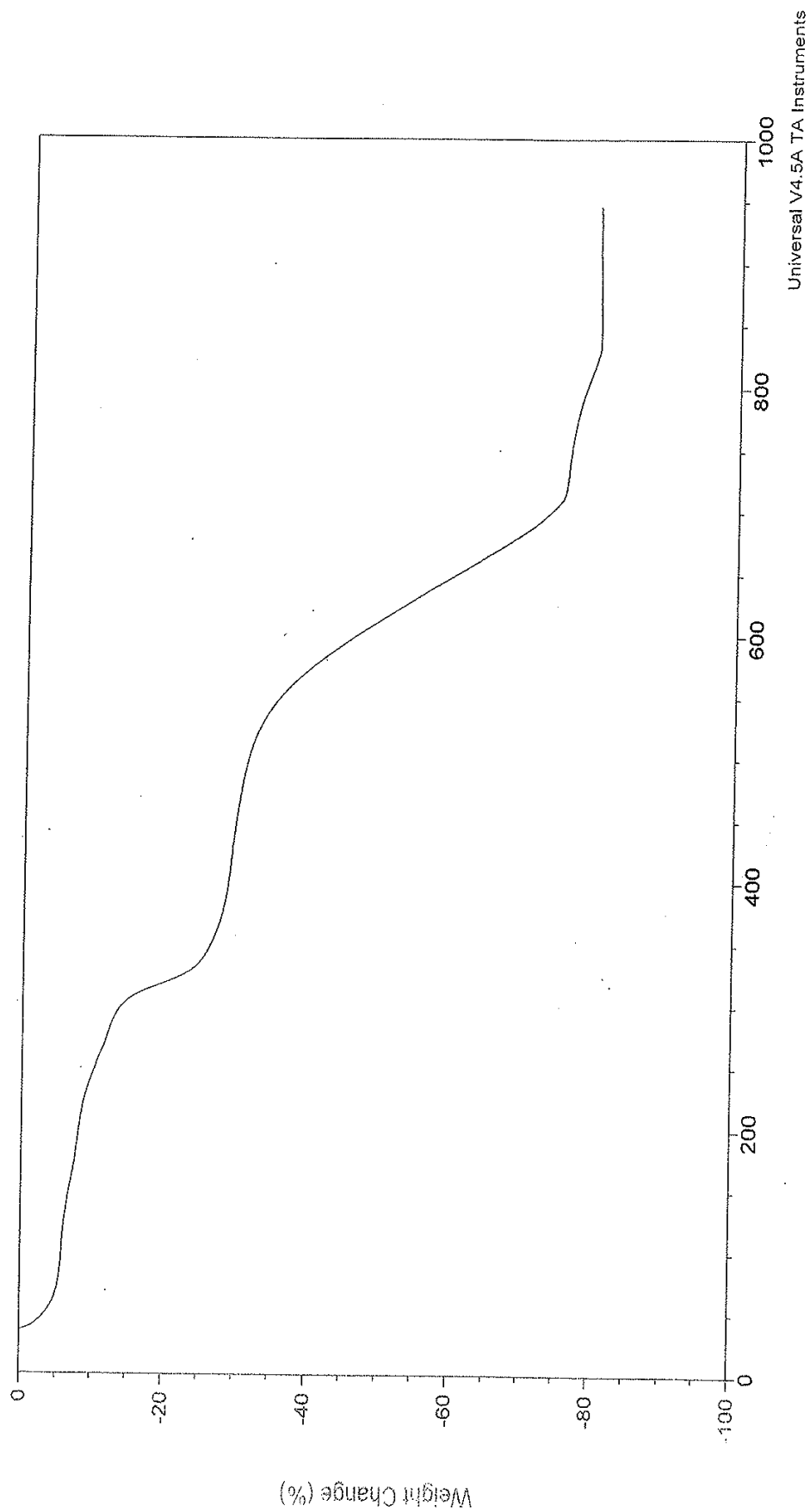


Fig. S17 - Thermogram of $[\text{Zn}(\text{APMED})\text{Cl}_2]\cdot\text{H}_2\text{O}$

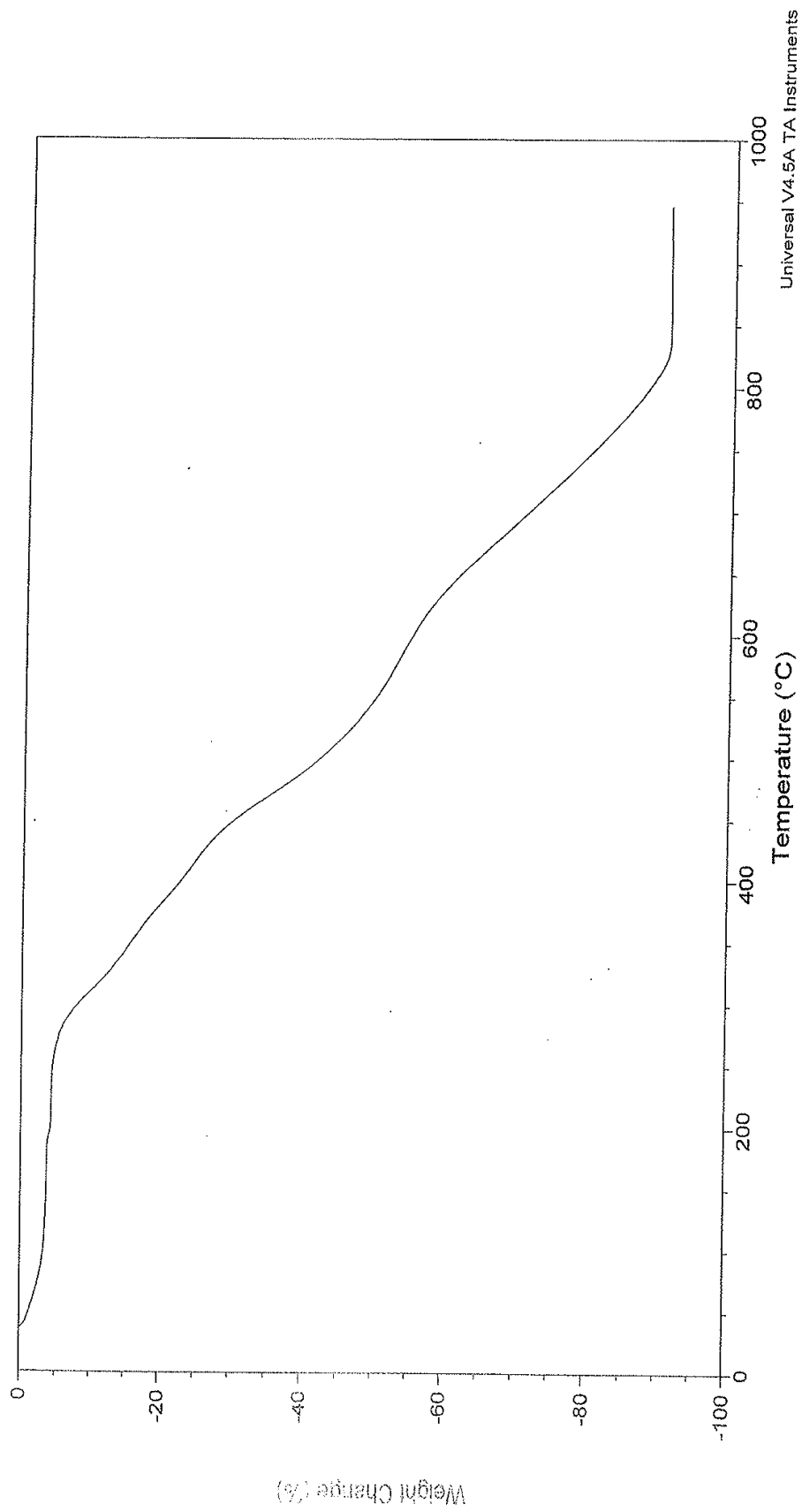


Fig. S18 - Thermogram of [Ni(APMPD)Cl₂].H₂O

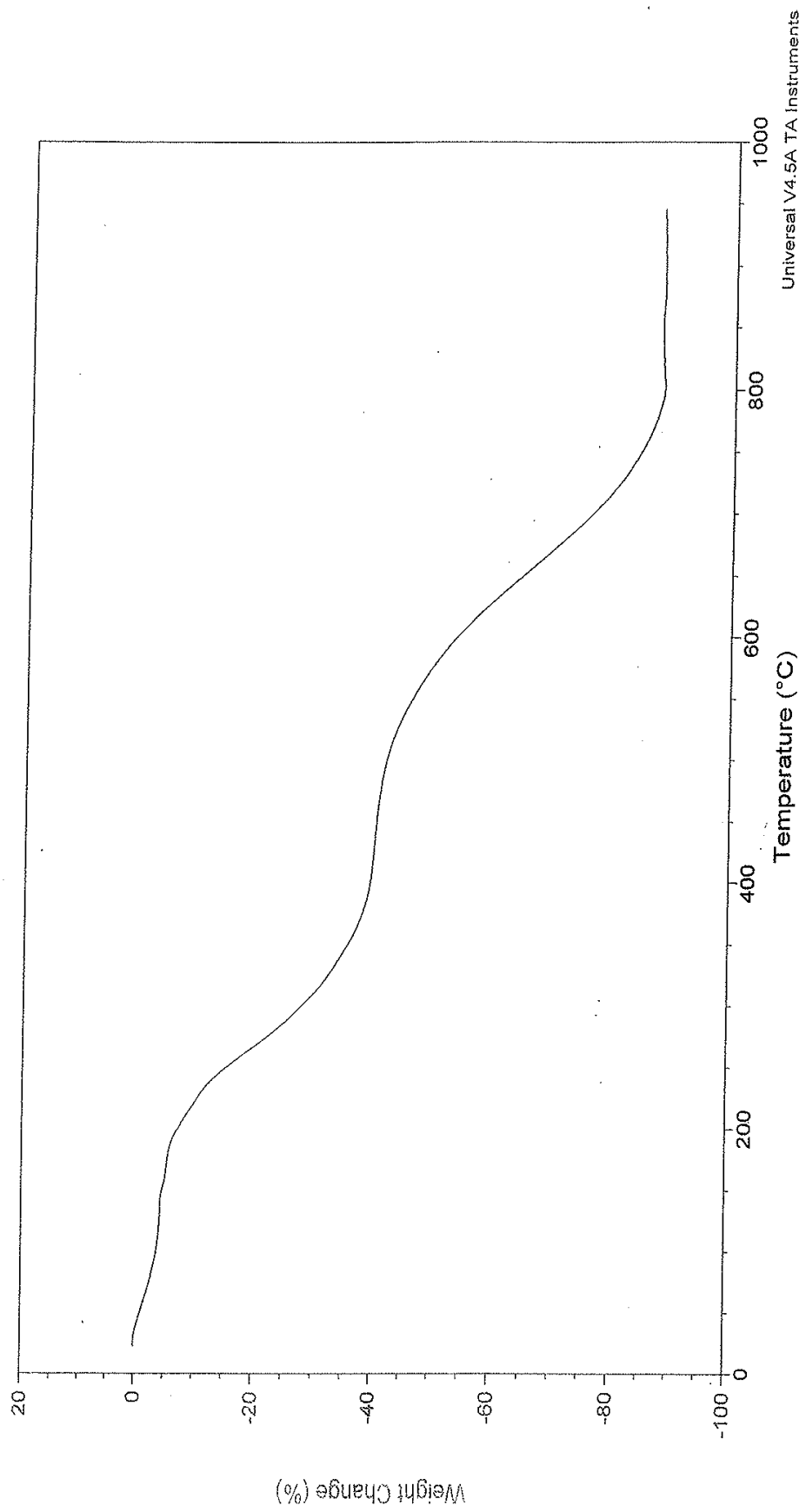
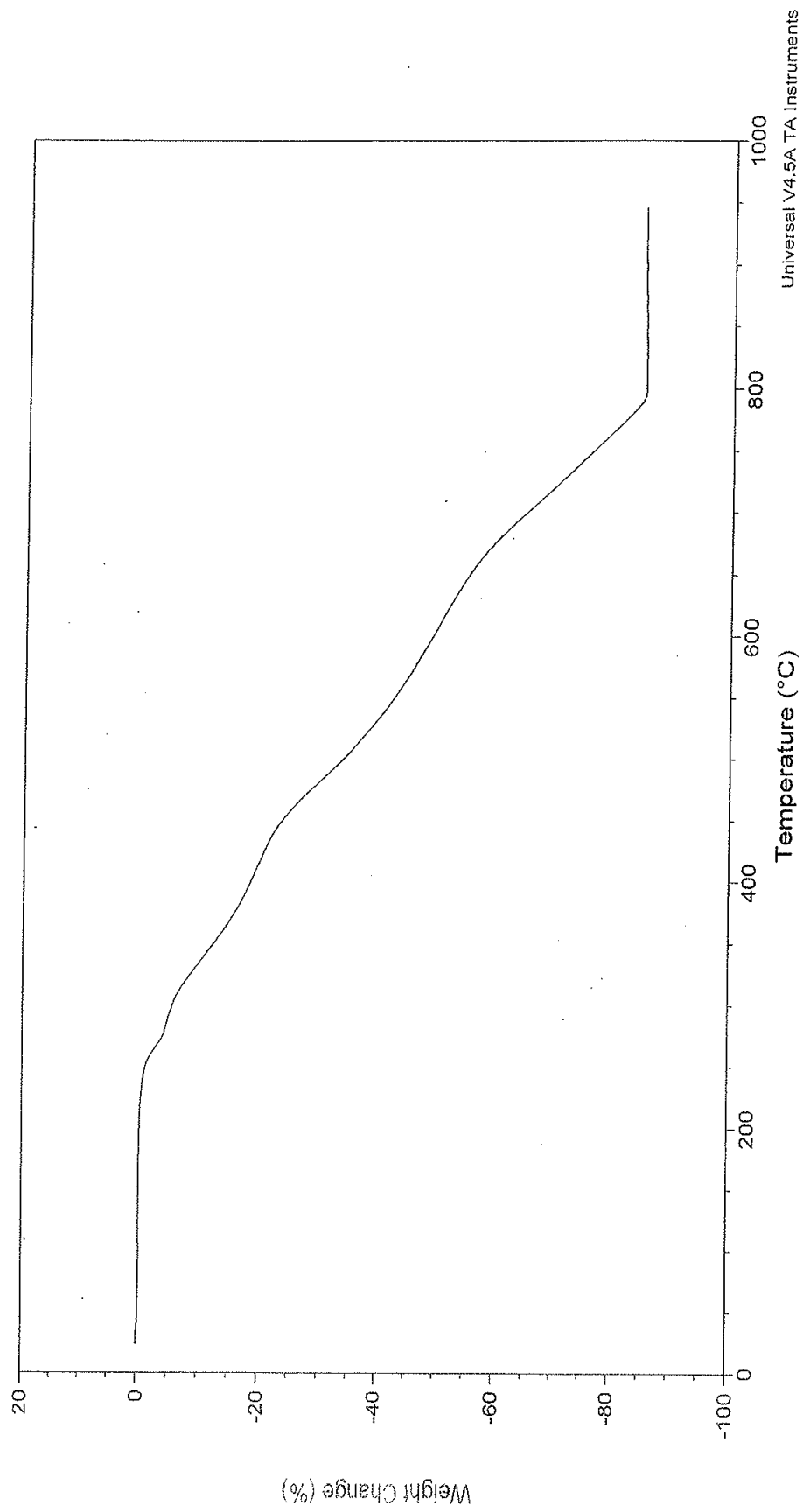


Fig. S19 - Thermogram of $[\text{Cu}(\text{APMP}'\text{D})\text{Cl}_2]\cdot\text{H}_2\text{O}$



Universal V4.5A TA Instruments

Fig. S20 - Thermogram of [Zn(APMP'D)Cl₂]

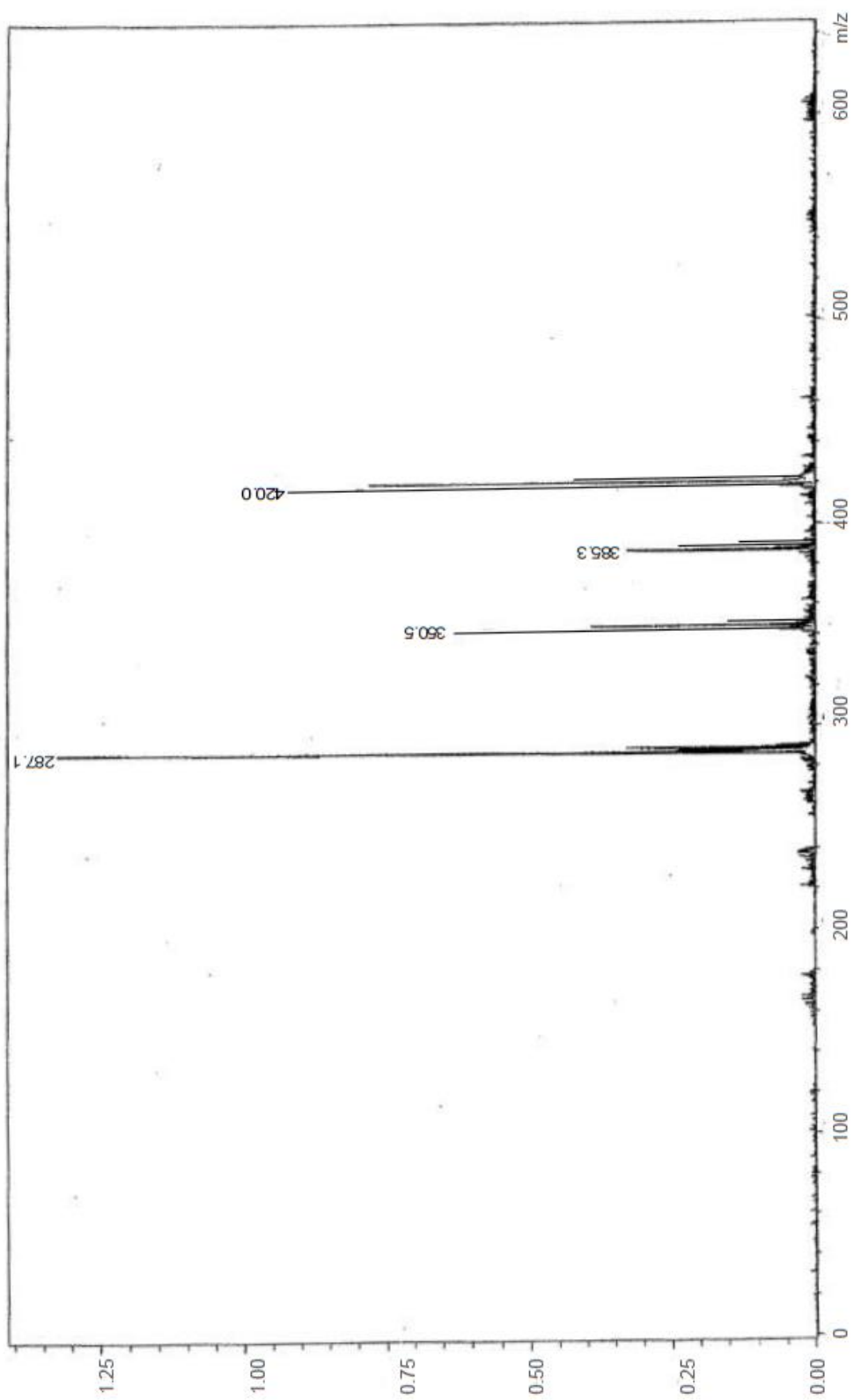


Fig. S21 - Mass spectrum of [Zn(APMED)Cl₂]

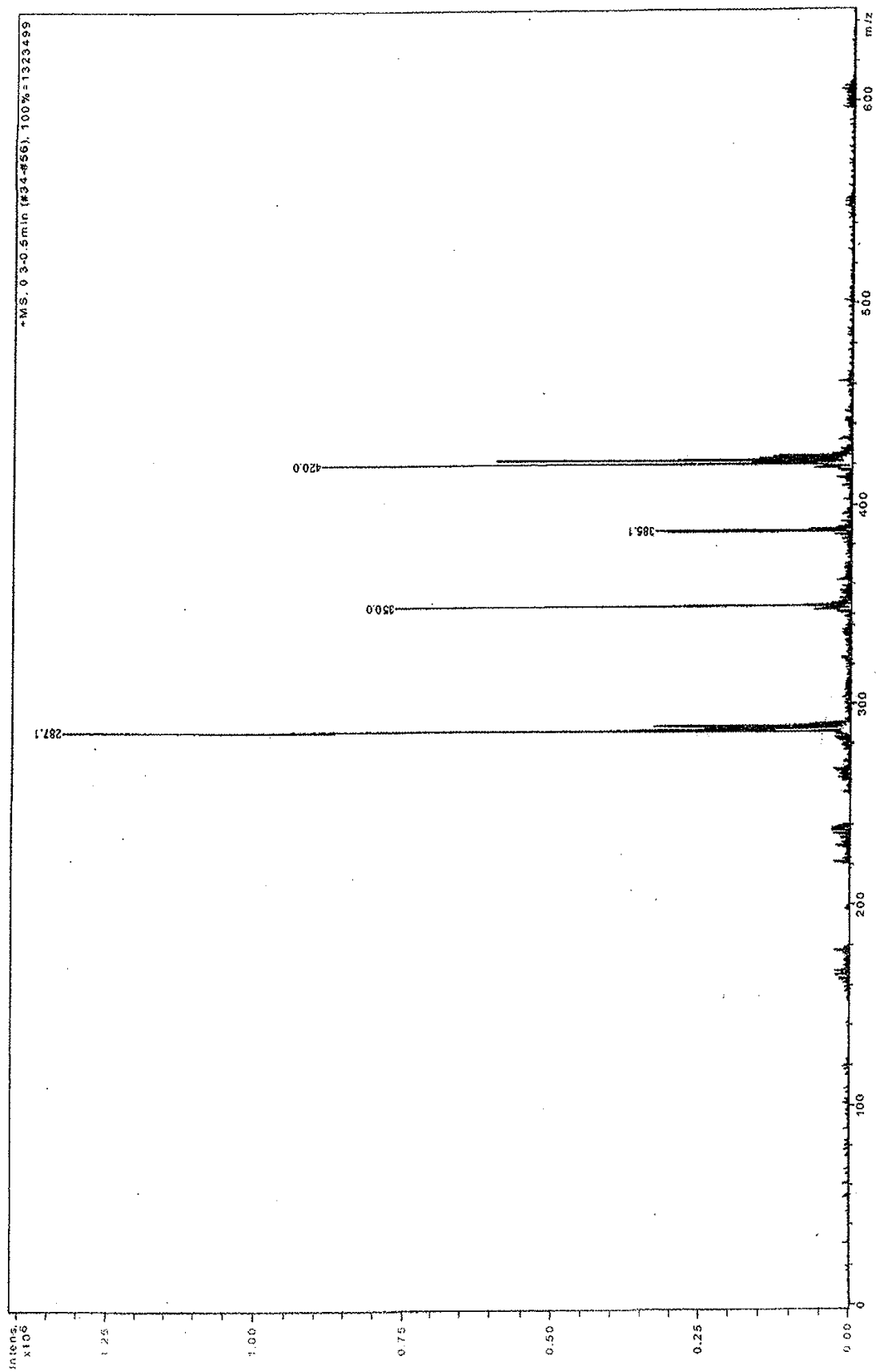


Fig. S22 - Mass spectrum of [Cu(APMPD)Cl₂]

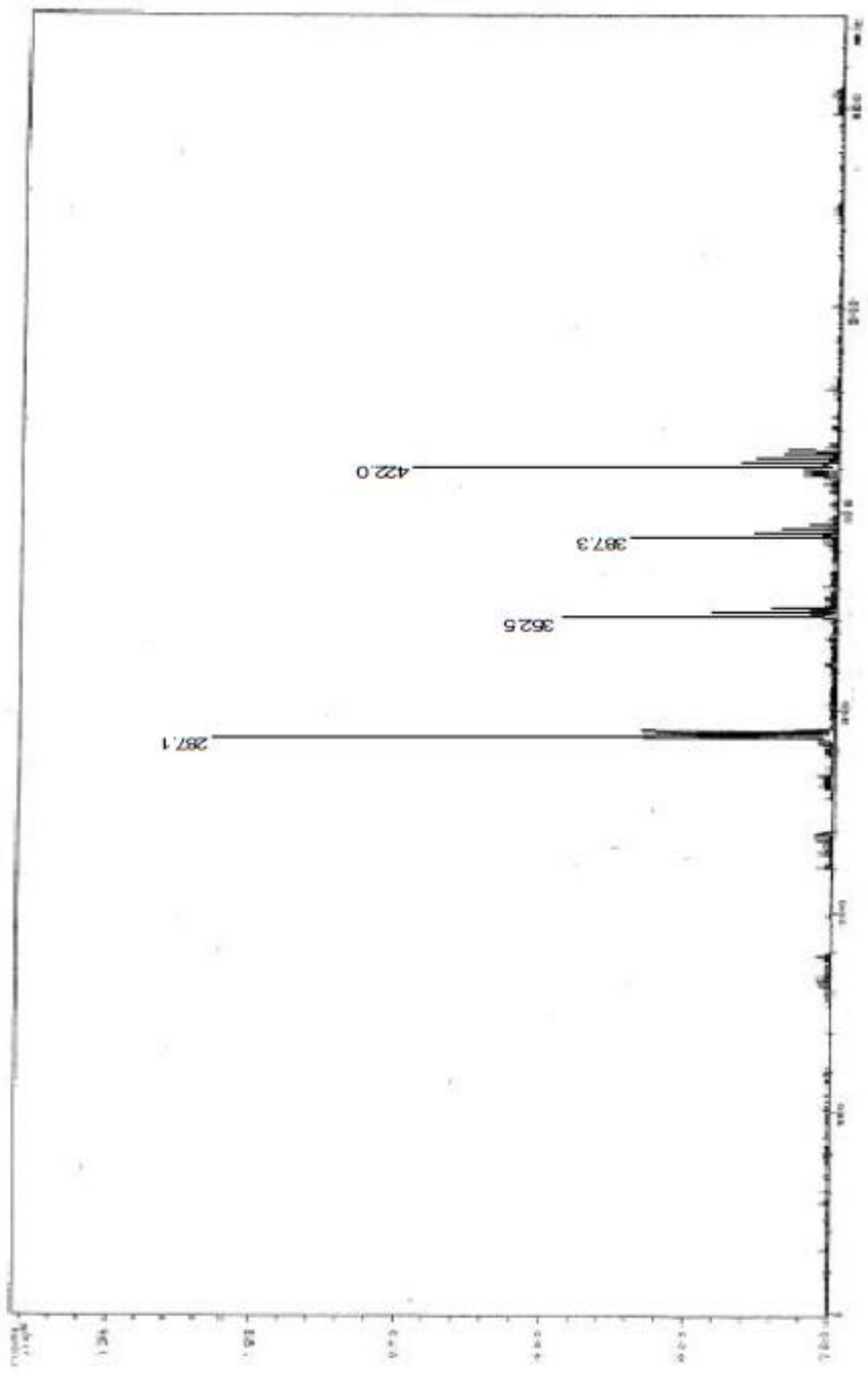


Fig. S23 - Mass spectrum of [Zn(APMPD)Cl₂]

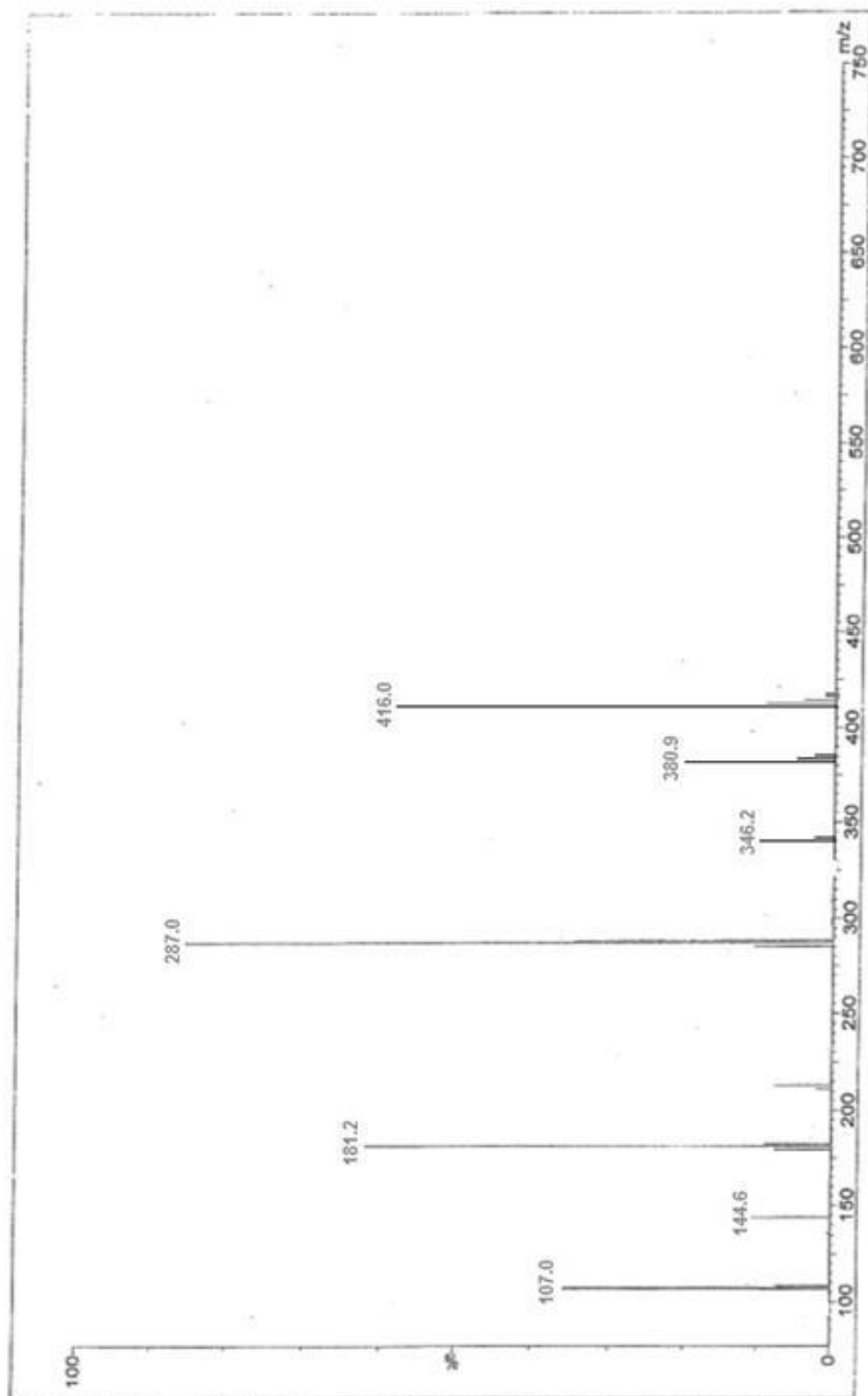


Fig. S24 - Mass spectrum of [Ni(APMPD)Cl₂]

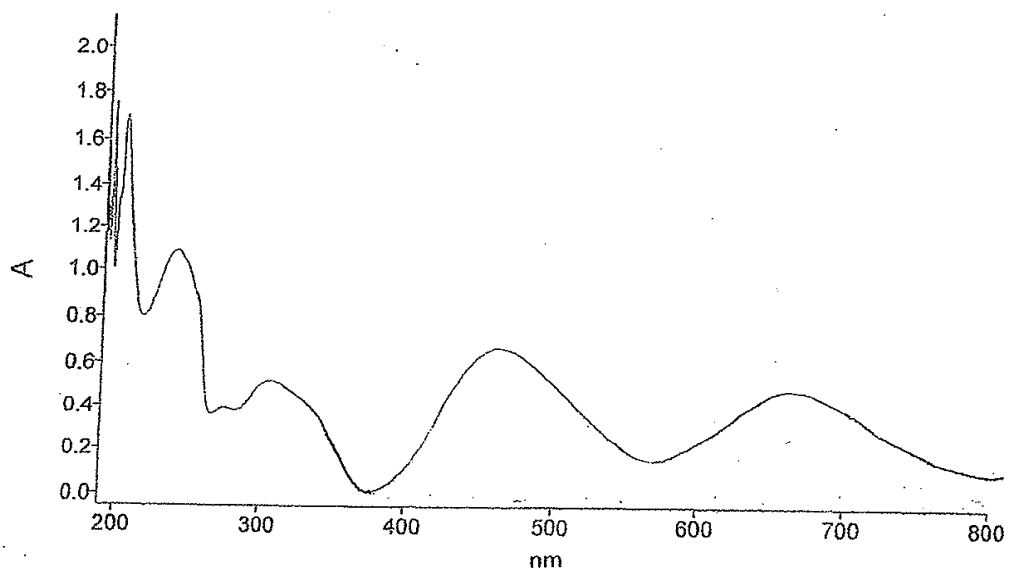


Fig. S25 - Electronic spectrum of [Co(APMED)Cl₂].6H₂O

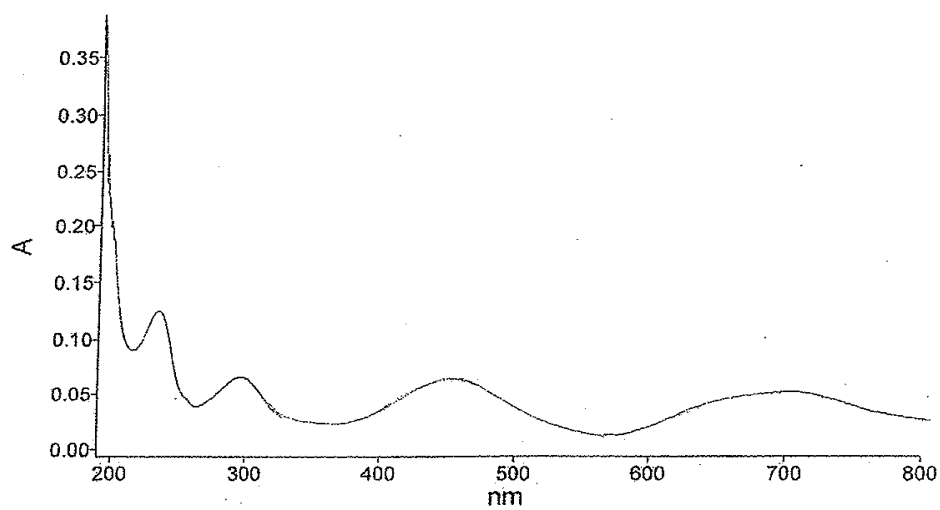


Fig. S26 - Electronic spectrum of [Co(APMP'D)Cl₂].6H₂O

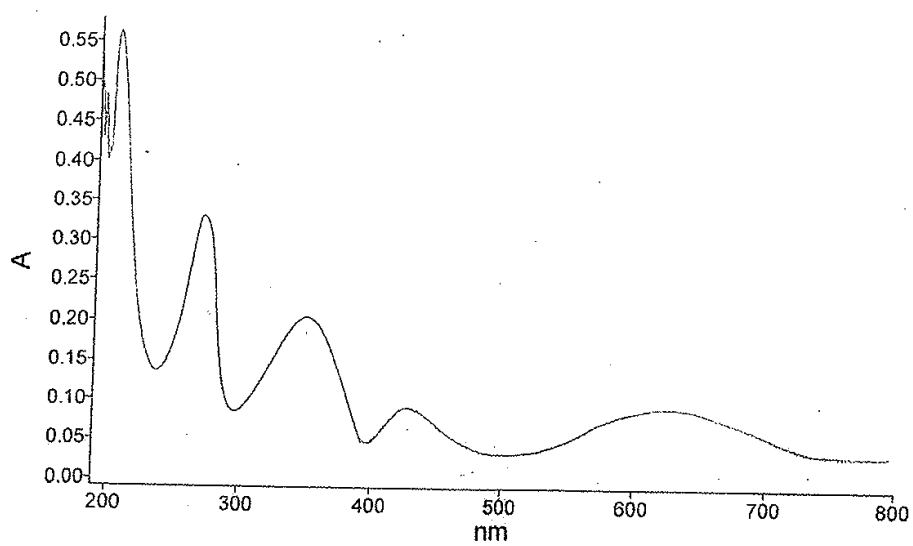


Fig. S27 - Electronic spectrum of [Ni(APMPD)Cl₂].H₂O

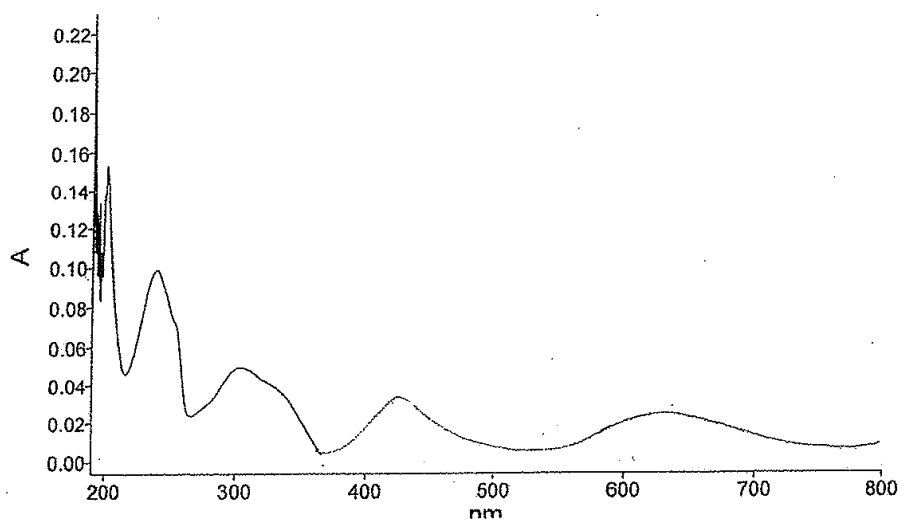


Fig. S28 - Electronic spectrum of [Ni(APMED)Cl₂].6H₂O

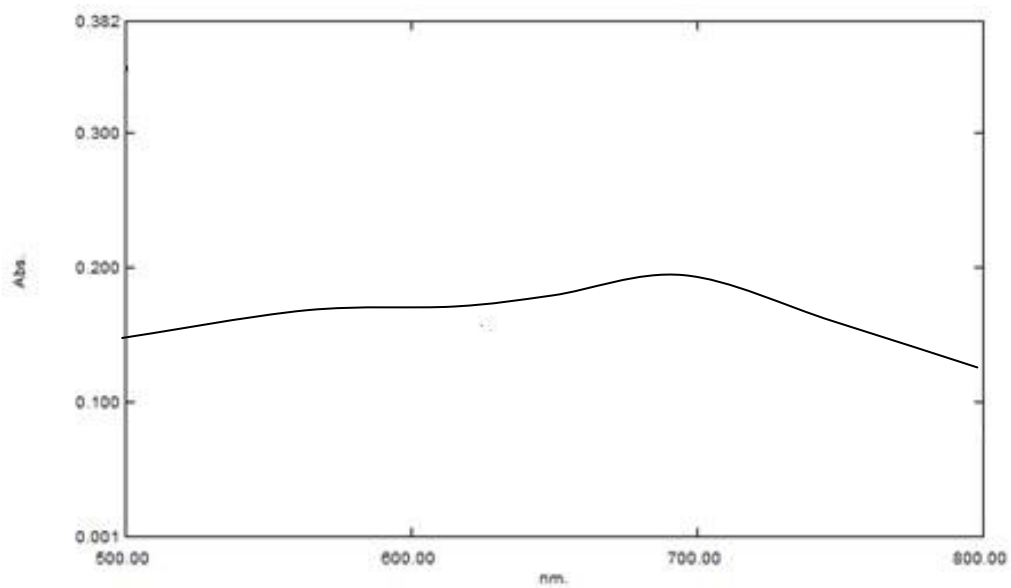


Fig. S29 - Electronic spectrum of [Cu(APMCD)Cl₂].2H₂O

R.S.I.C. I.I.T. CHENNAI-36

Scale in Gauss

0 x 1 k G
 Range 300
 Sat
 Time Constant 0.5 s
 Scan Time 4 min
 Modulation Amplitude 10 G
 Modulation Frequency 100 Hz
 Receiver Gain 1.6 x 10
 Temperature 30°C
 Microwave Power 10 mW
 Microwave Frequency 9.16 GHz

NSIC
 Operator
 Date 10.01.08

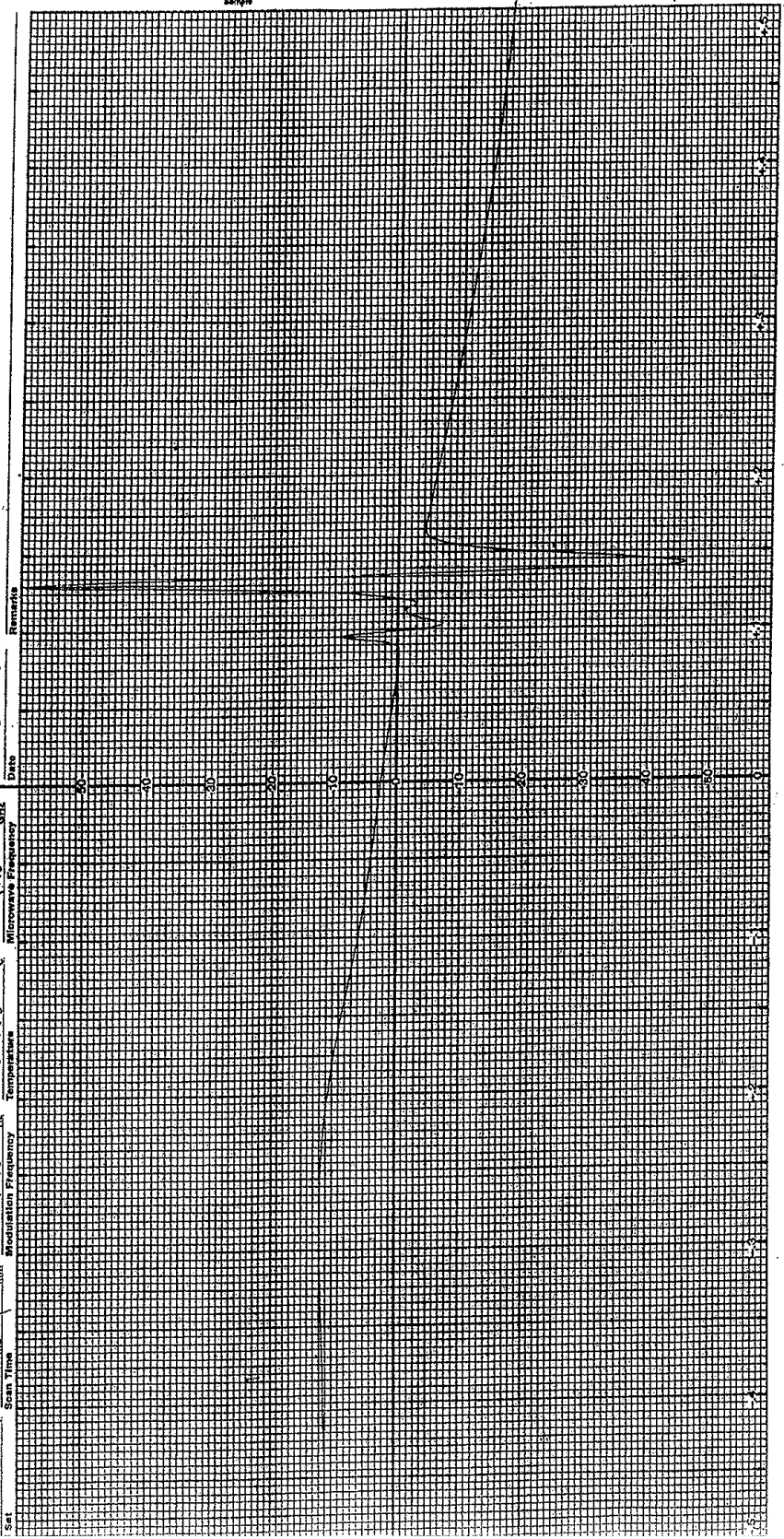


Fig. S30 - ESR spectrum of [Cu(APMED)Cl₂].2H₂O

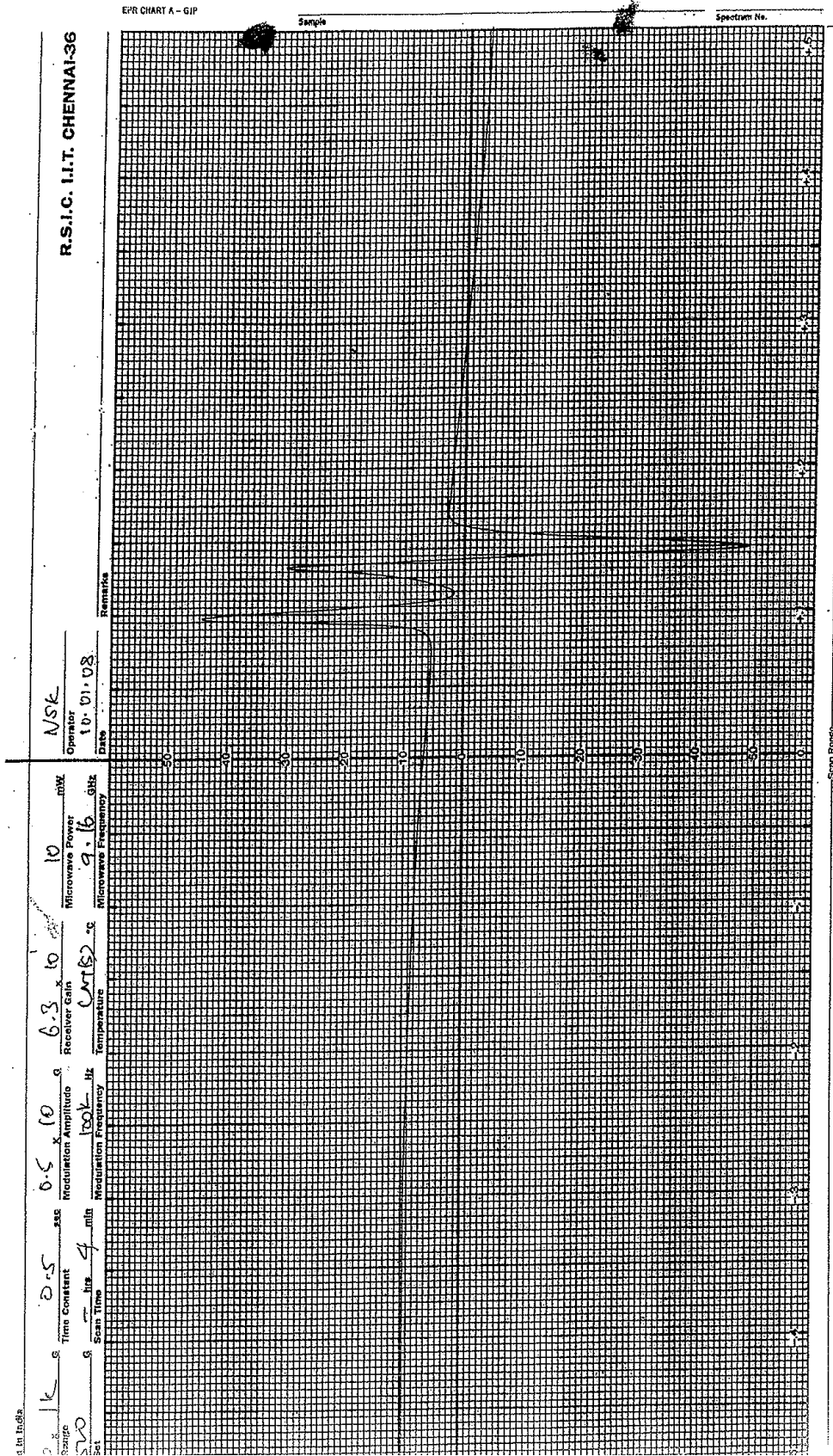


Fig. S31 - ESR spectrum of $[\text{Cu}(\text{APMPD})\text{Cl}_2] \cdot 2\text{H}_2\text{O}$

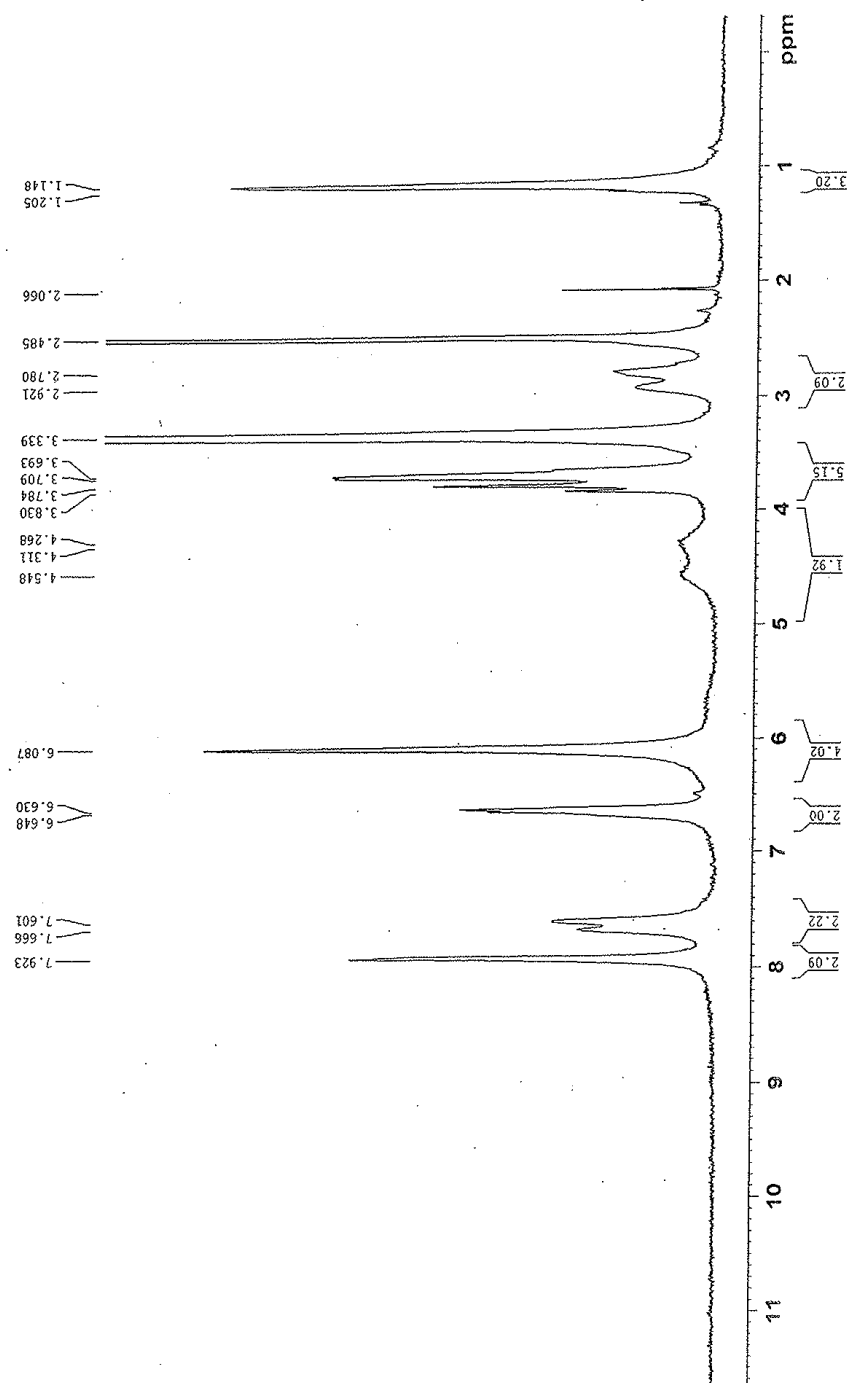


Fig. S32 - ¹H NMR spectrum of [Zn(APMPD)Cl₂].H₂O

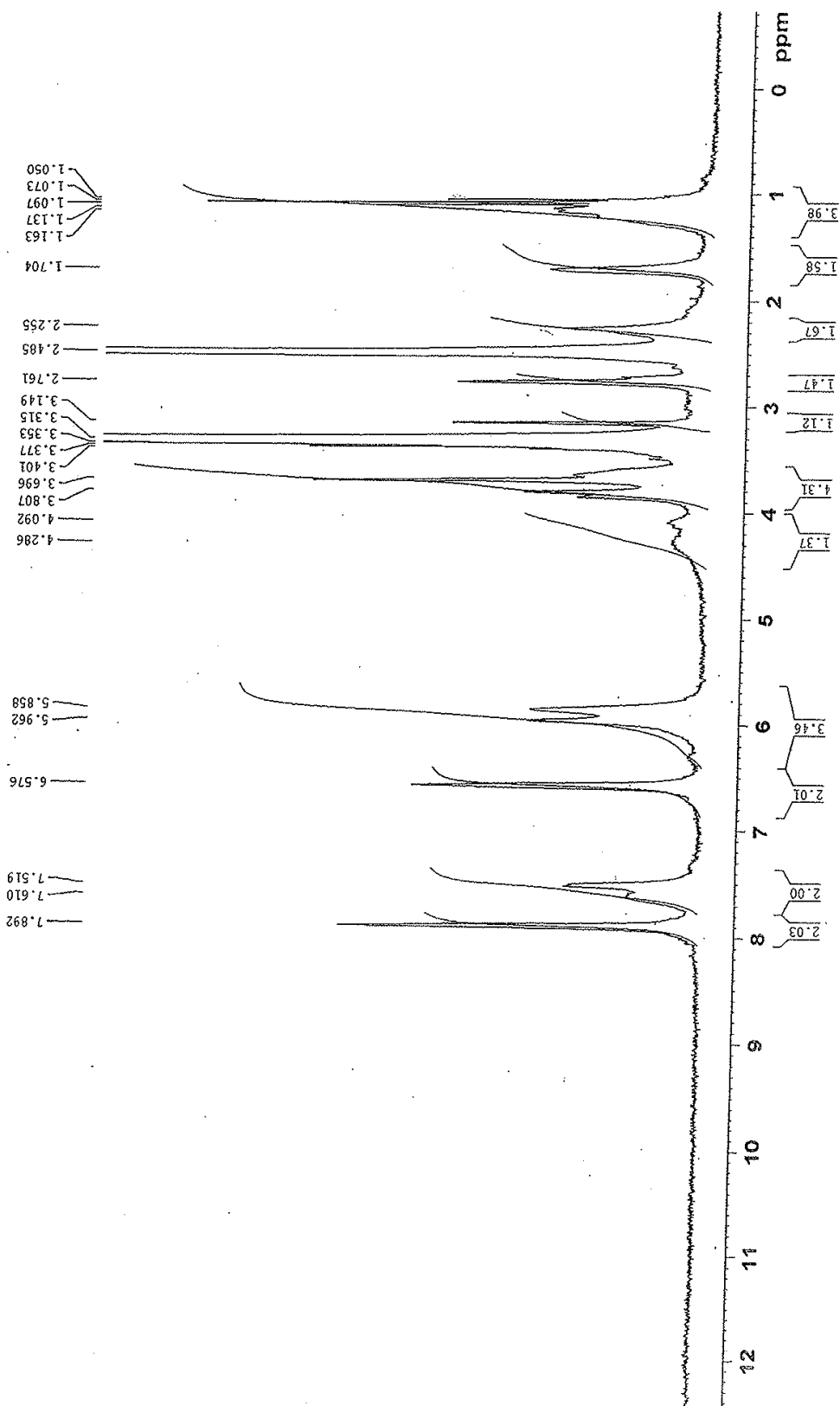


Fig. S33 - ^1H NMR spectrum of $[\text{Zn}(\text{APMCD})\text{Cl}_2]\cdot\text{H}_2\text{O}$

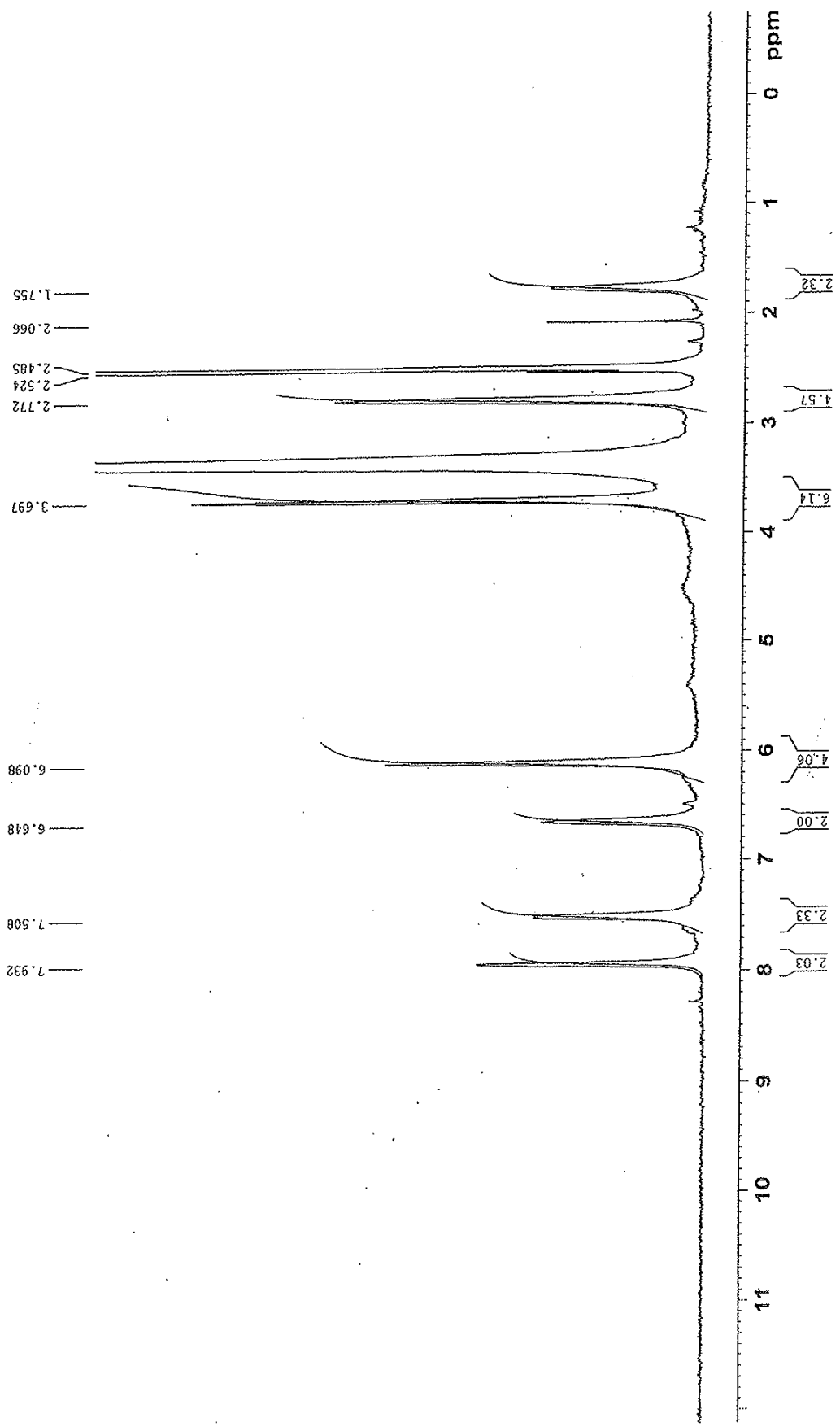


Fig. S34 - ¹H NMR spectrum of [Zn(APMP'D)Cl₂].H₂O

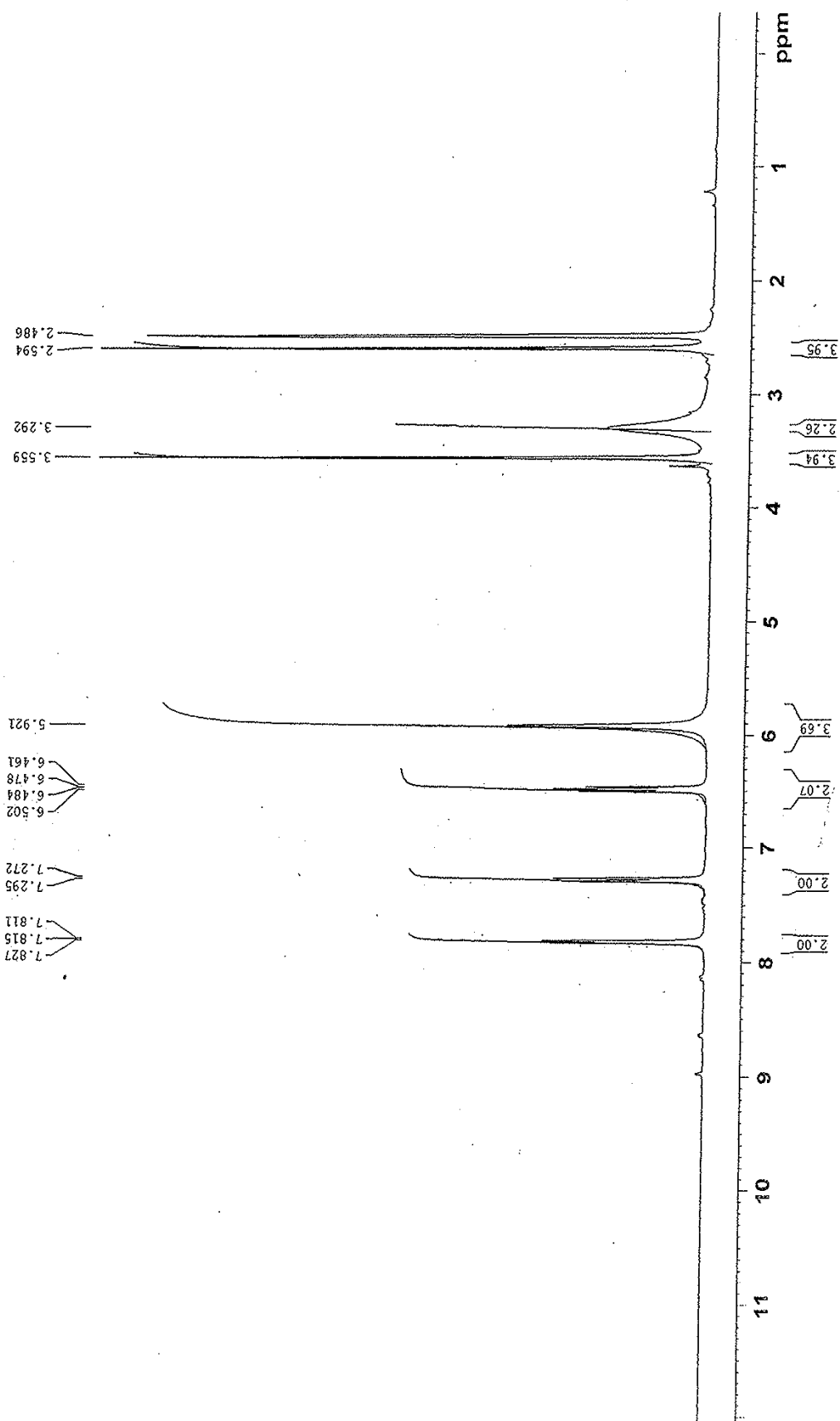


Fig. S35 - ^1H NMR spectrum of $[\text{Zn}(\text{APMED})\text{Cl}_2]\cdot\text{H}_2\text{O}$