Transition Metal Complexes of α-Aminophosphonates Part II: Synthesis, Spectroscopic Characterization and In Vitro Anticancer Activity of Copper(II) Complexes of α-Aminophosphonates

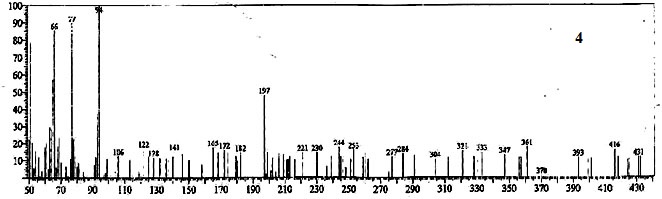
Mariam Ahmed Azzam1\*, Hanaa Abdel Latif El-Boraey2, Ibrahim El Tantawy El Sayed2

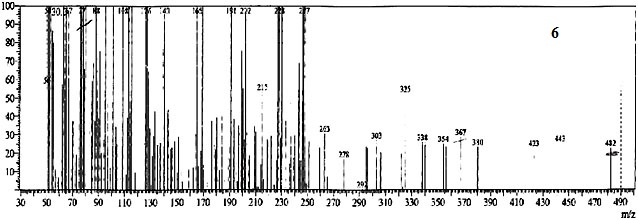
1Applied Organic Chemistry Department, National Research Centre, Dokki, Giza, Egypt

2Chemistry Department, Faculty of Science, El-Menoufia University, Shebin El Koom, Egypt

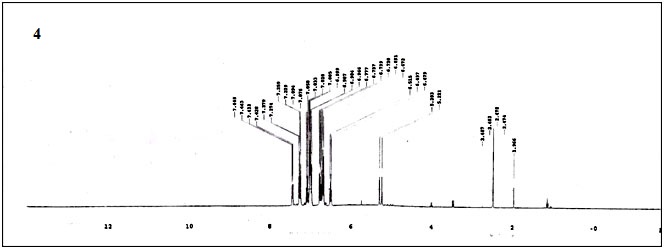
Email: [mariam\_ahmed\_987@yahoo.com](mailto:mariam_ahmed_987@yahoo.com)

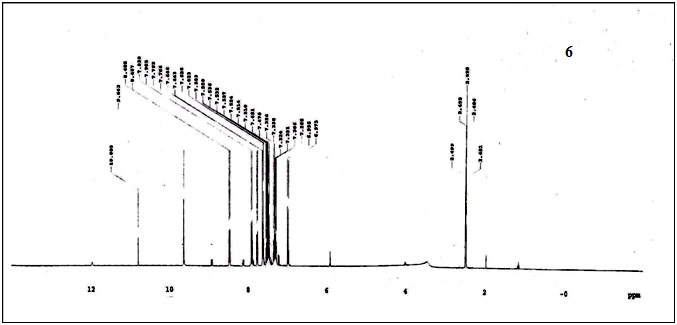
**Supplemental Materials**



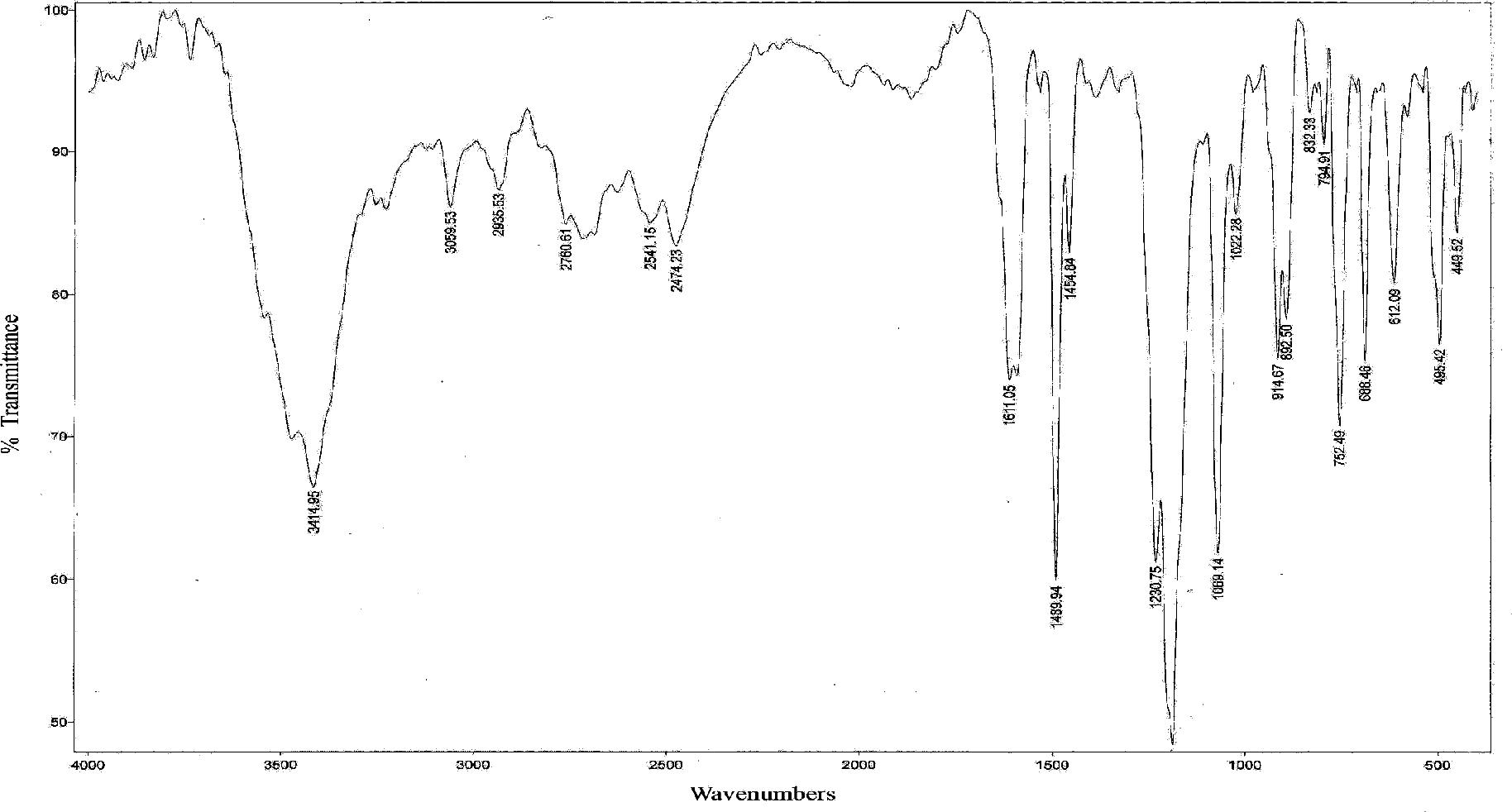


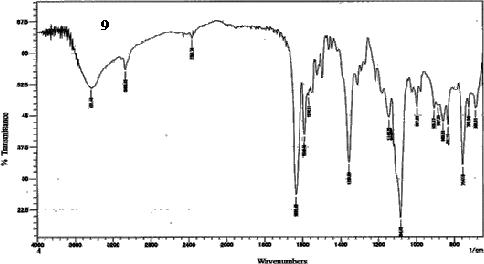
**Figure S 1:** The electron impact (EI) mass spectra of the free ligands **4, 6**.





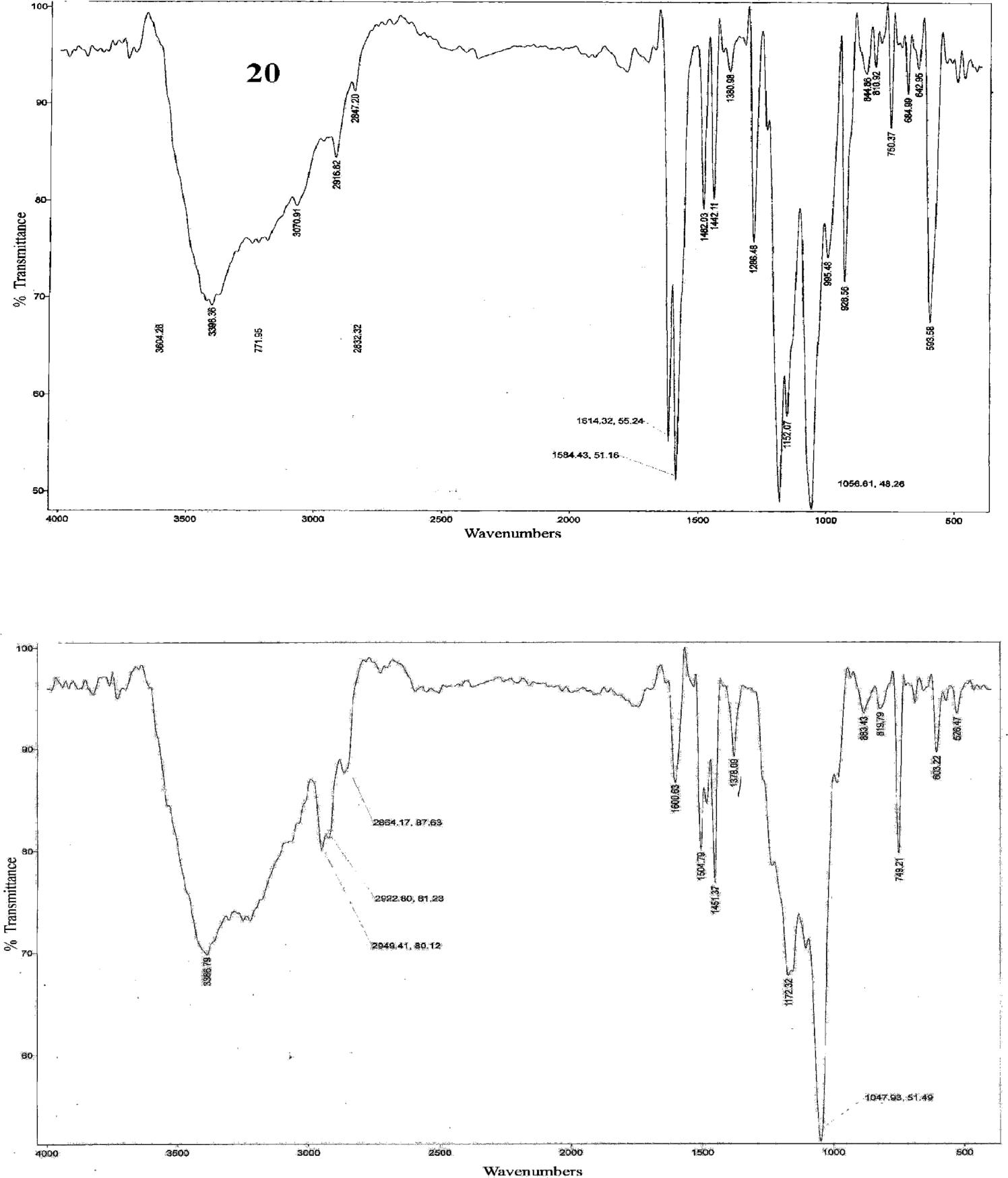
**Figure S 2:** The 1H NMR spectra of the free ligands **4, 6**.

 **4**

****

**6**

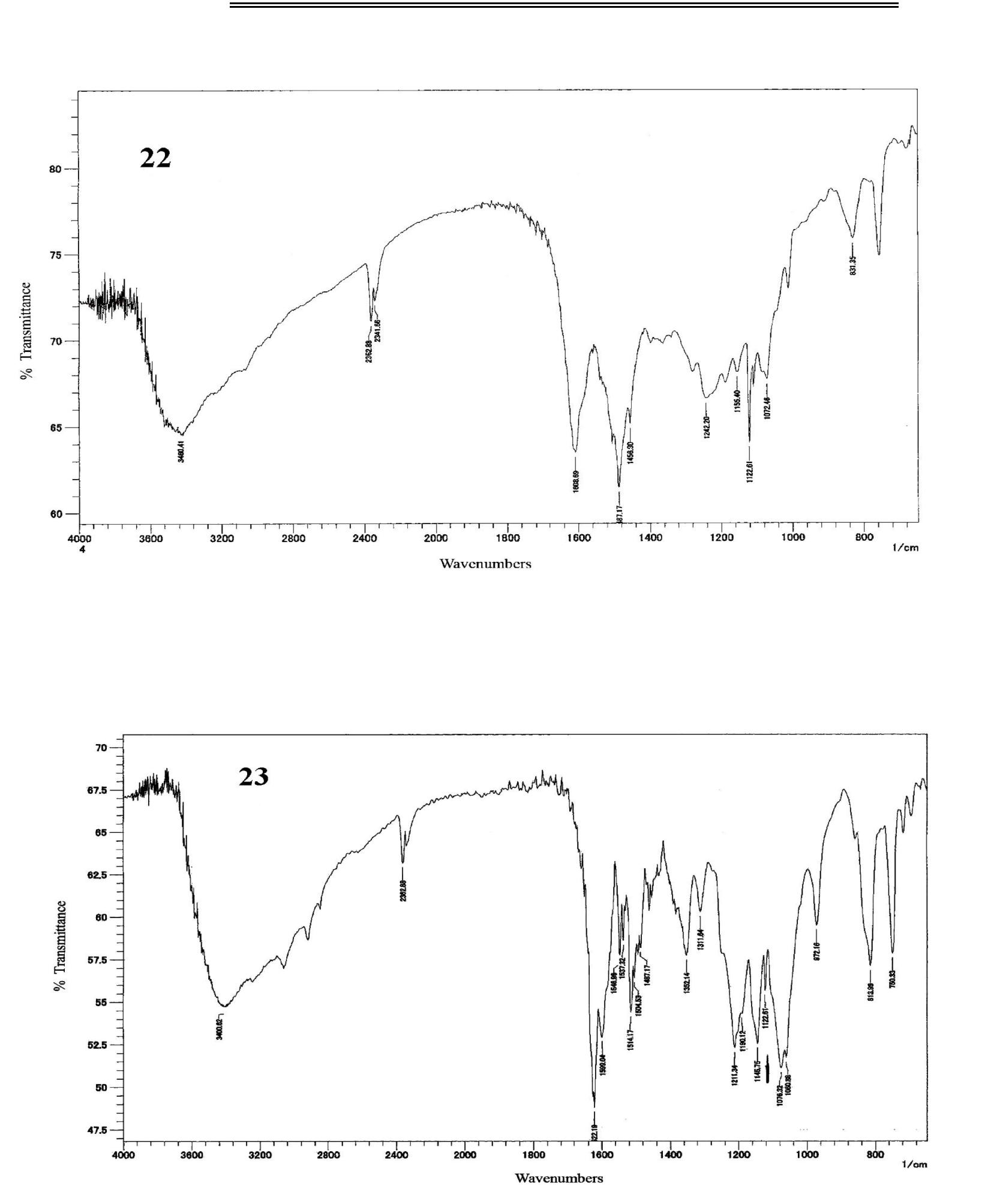
**Figure S 3:** The IR spectra of the free ligands**4, 6**.



**5a**

**5b**

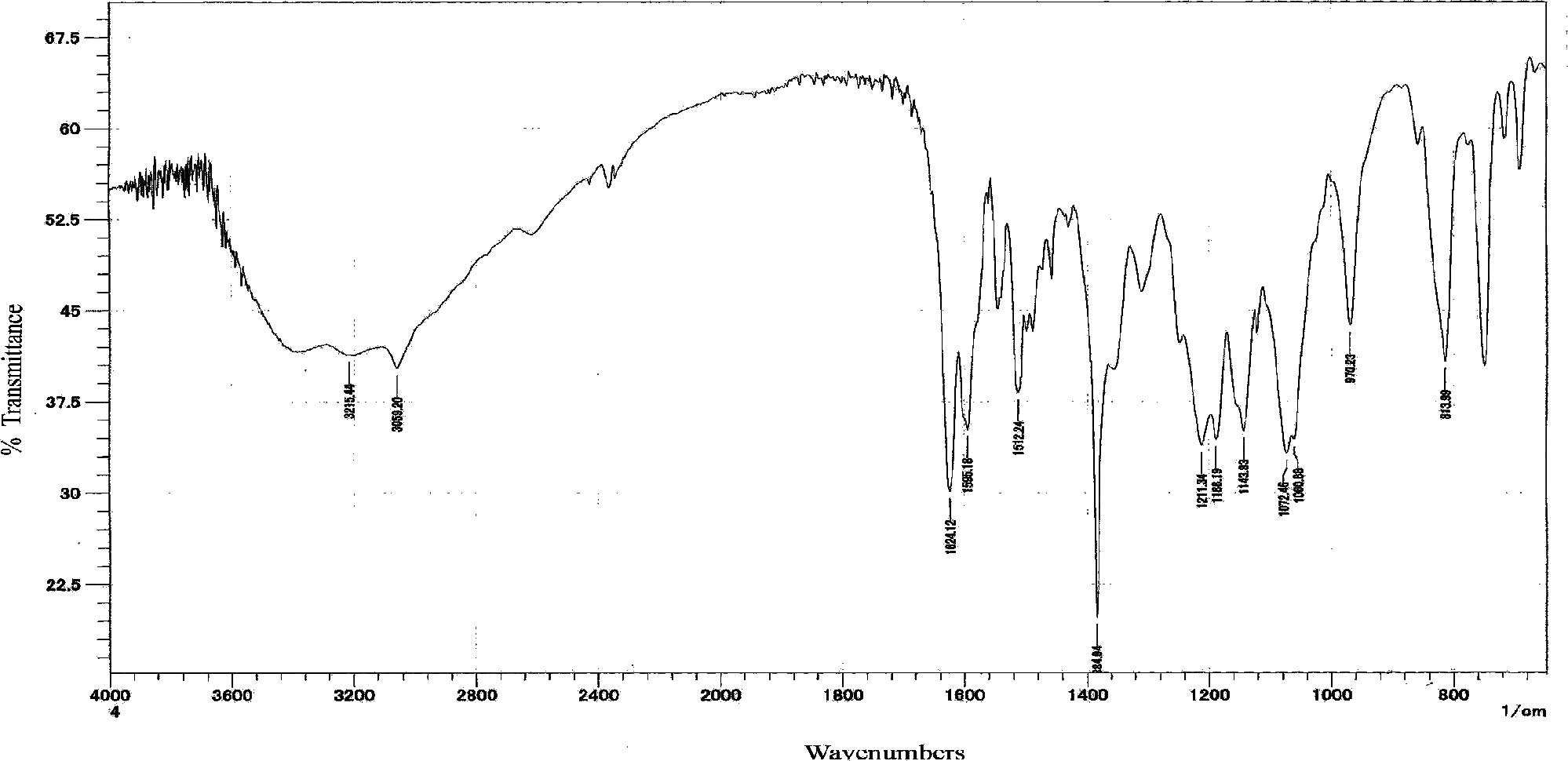
**Figure S 4:** The IR spectra of the copper(II) complexes **5a, 5b**.



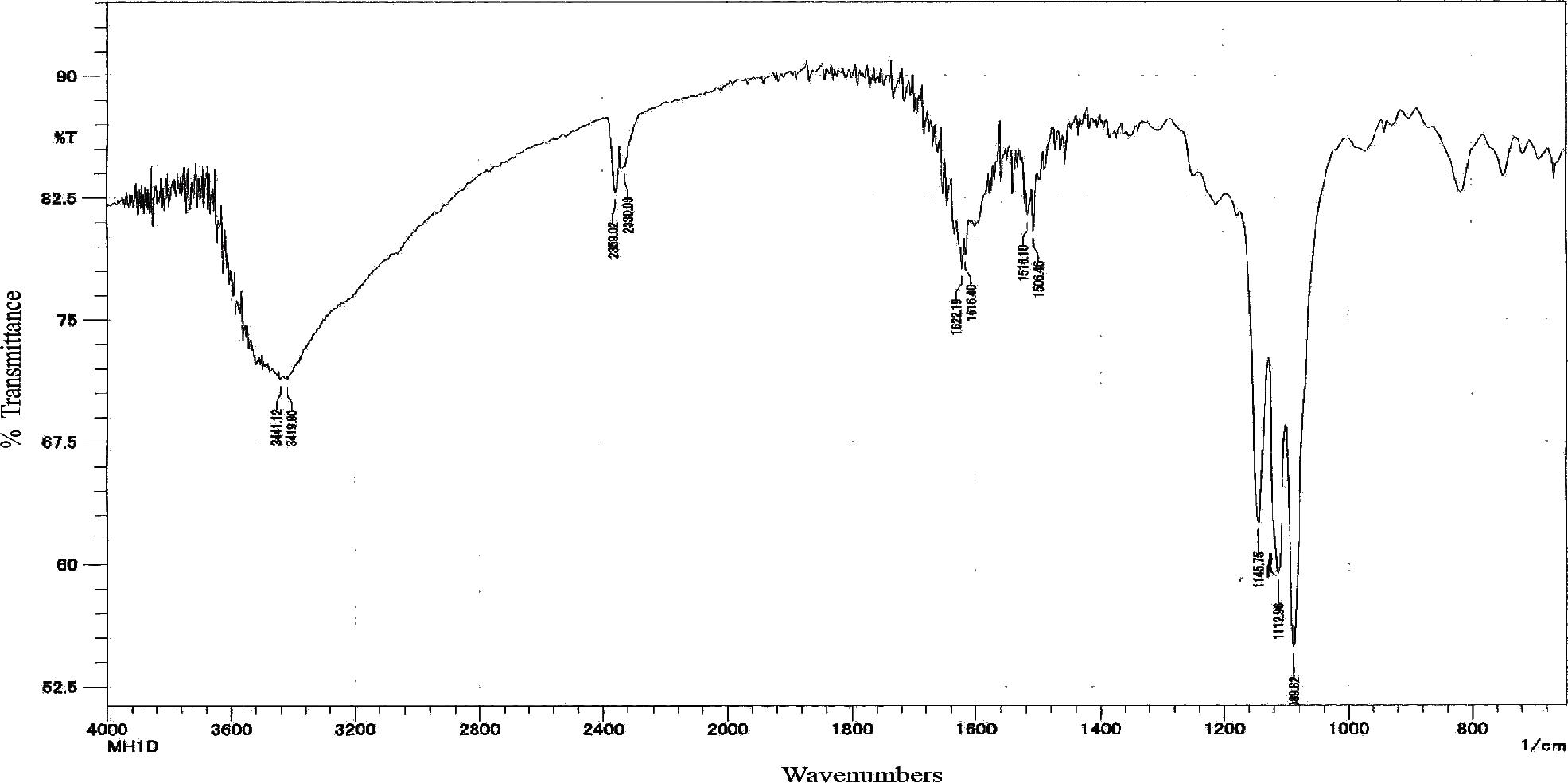
**5c**

**7a**

**Figure S 5:** The IR spectra of the copper(II) complexes **5c, 7a.**

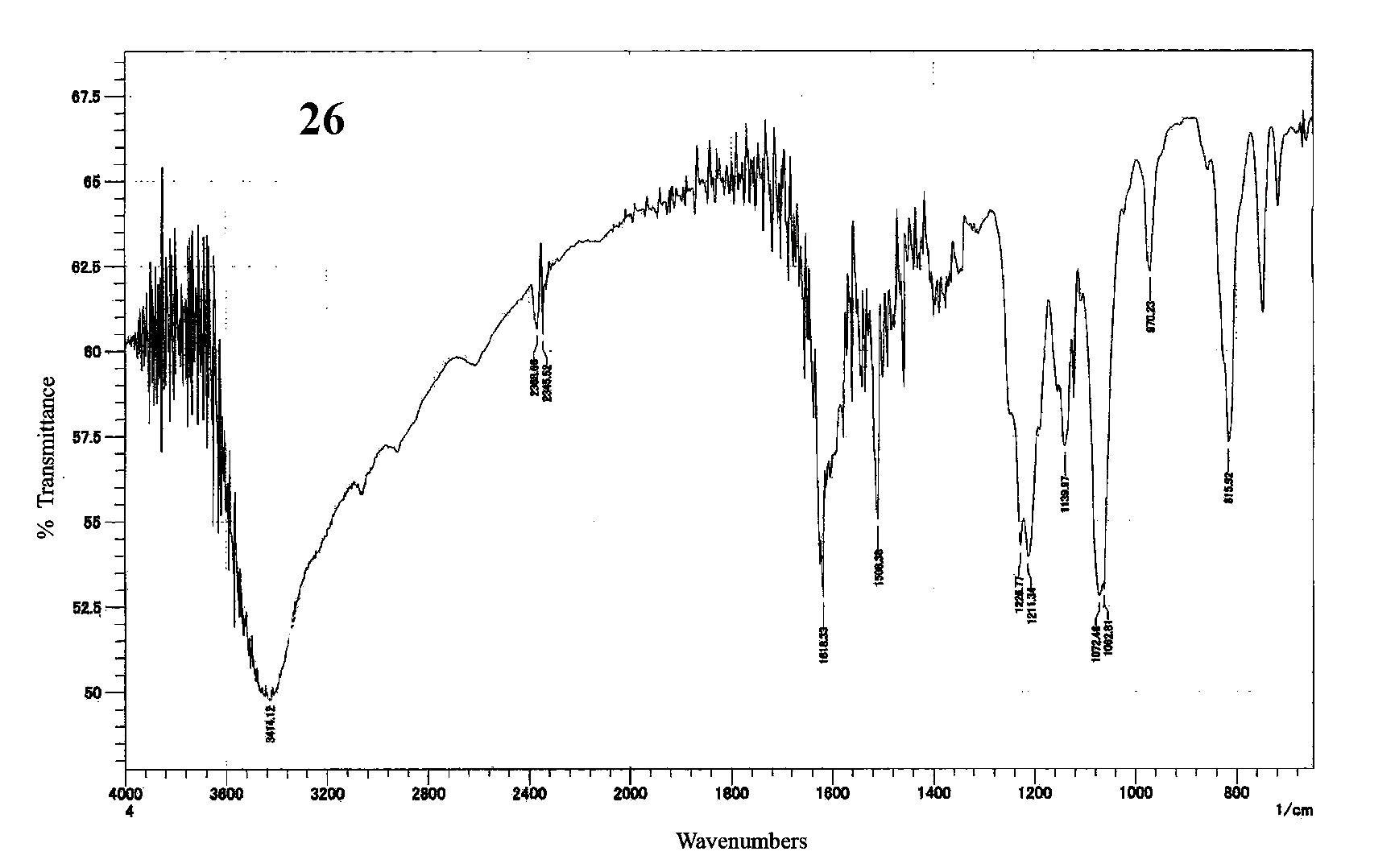


**7b**



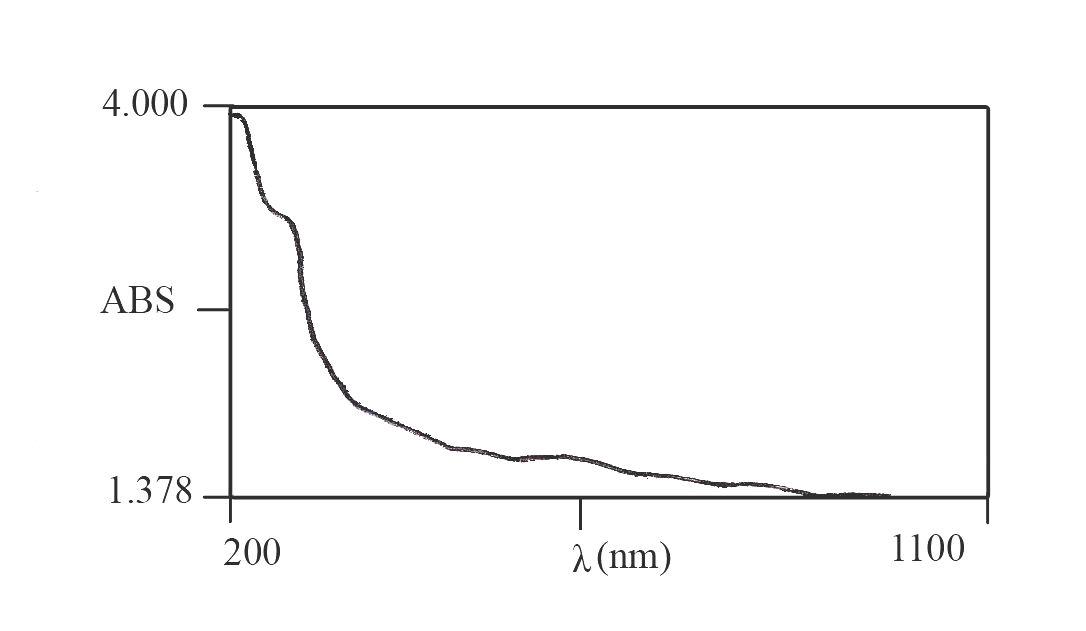
**7c**

**Figure S 6:** The IR spectra of the copper(II) complexes **7b, 7c.**

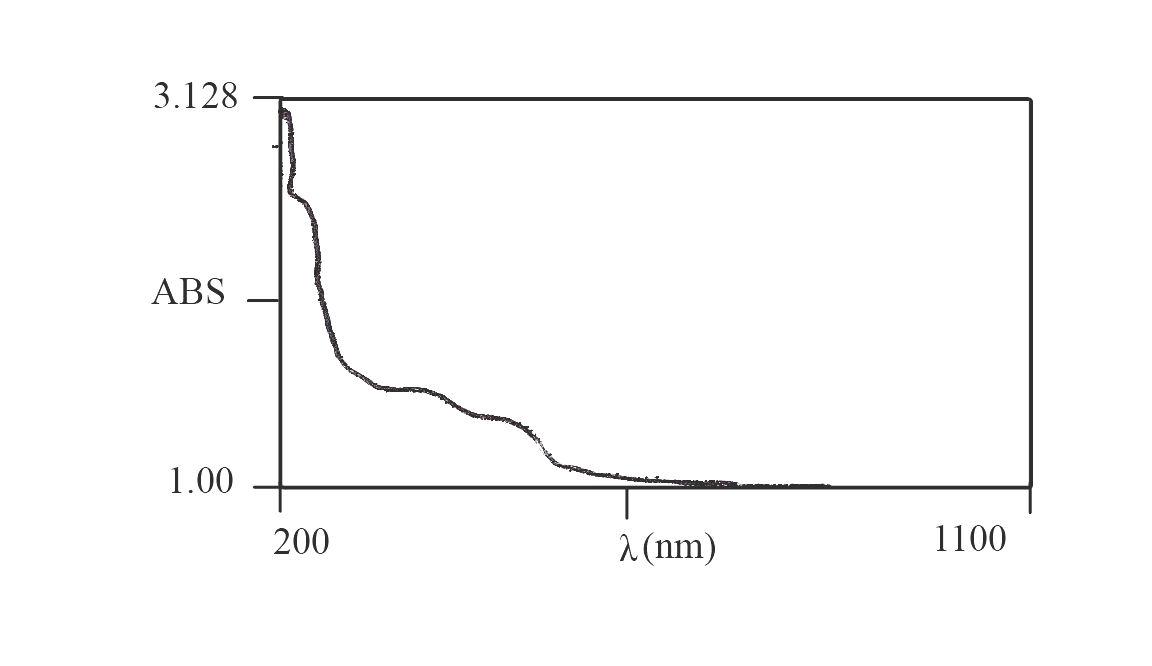


**7d**

**Figure S 7:** The IR spectra of the copper(II) complex **7d**.

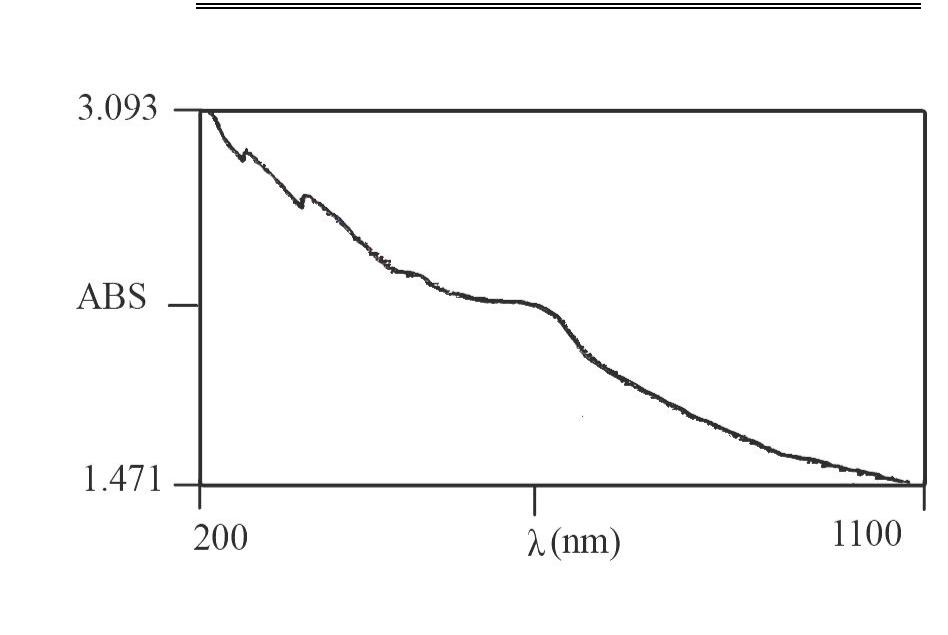


**4**

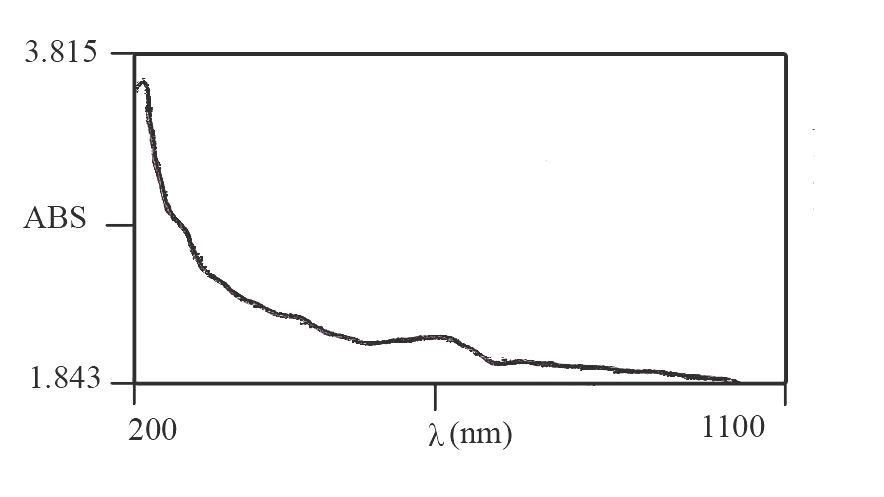


**6**

**Figure S 8:** The UV spectra of the ligands **4, 6.**

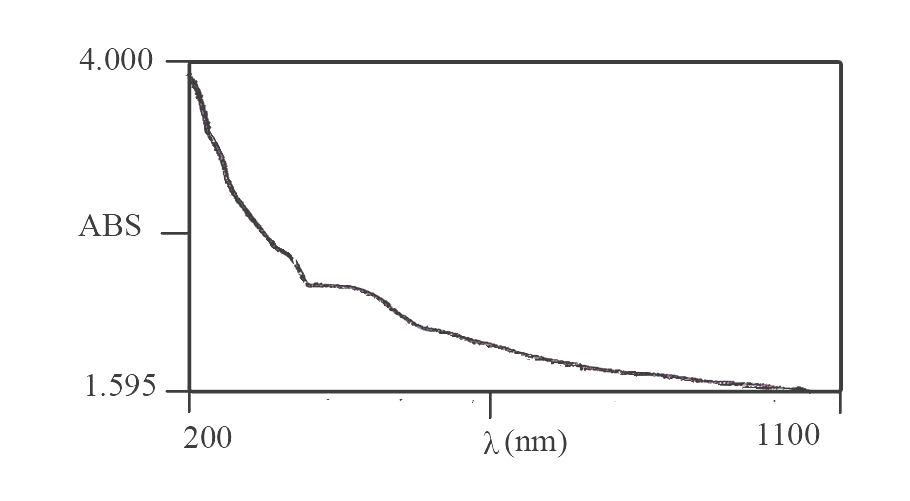


**5a**

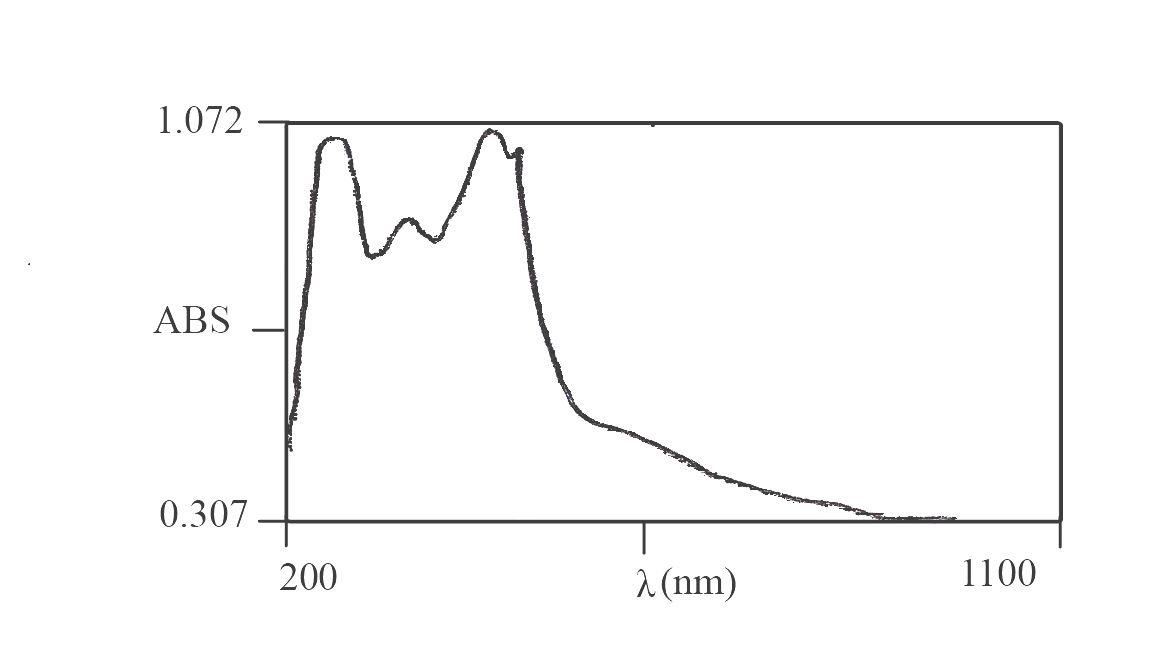


**5b**

**Figure S 9:** The UV spectra of the copper(II) complexes **5a, 5b.**

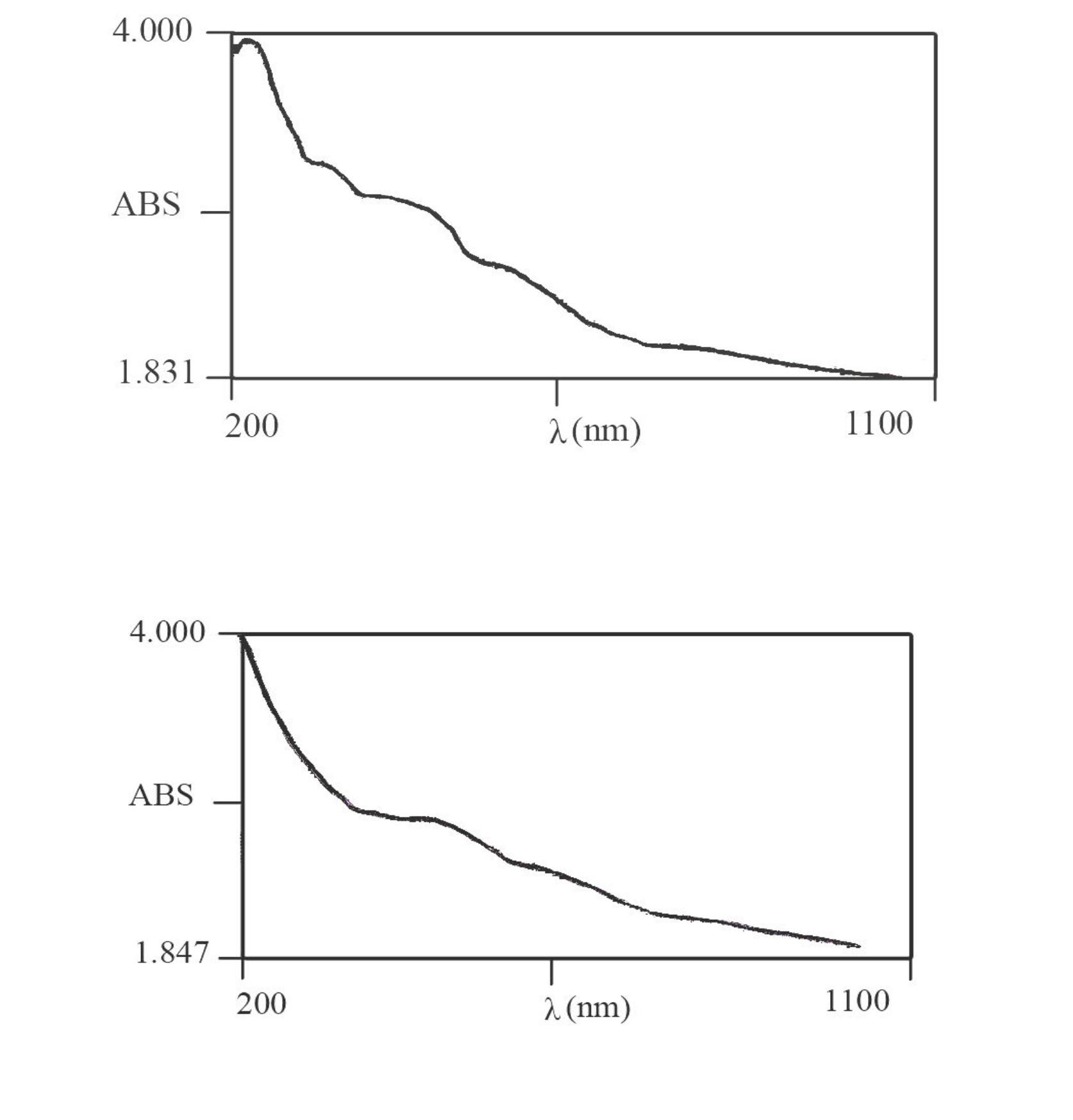


**5c**



**7a**

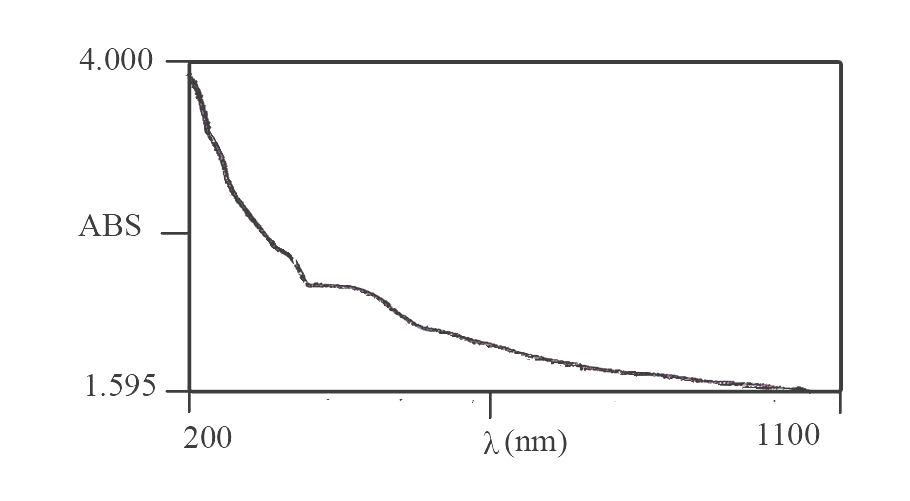
**Figure S 10:** The UV spectra of the copper(II) complexes **5c, 7a.**



**7b**

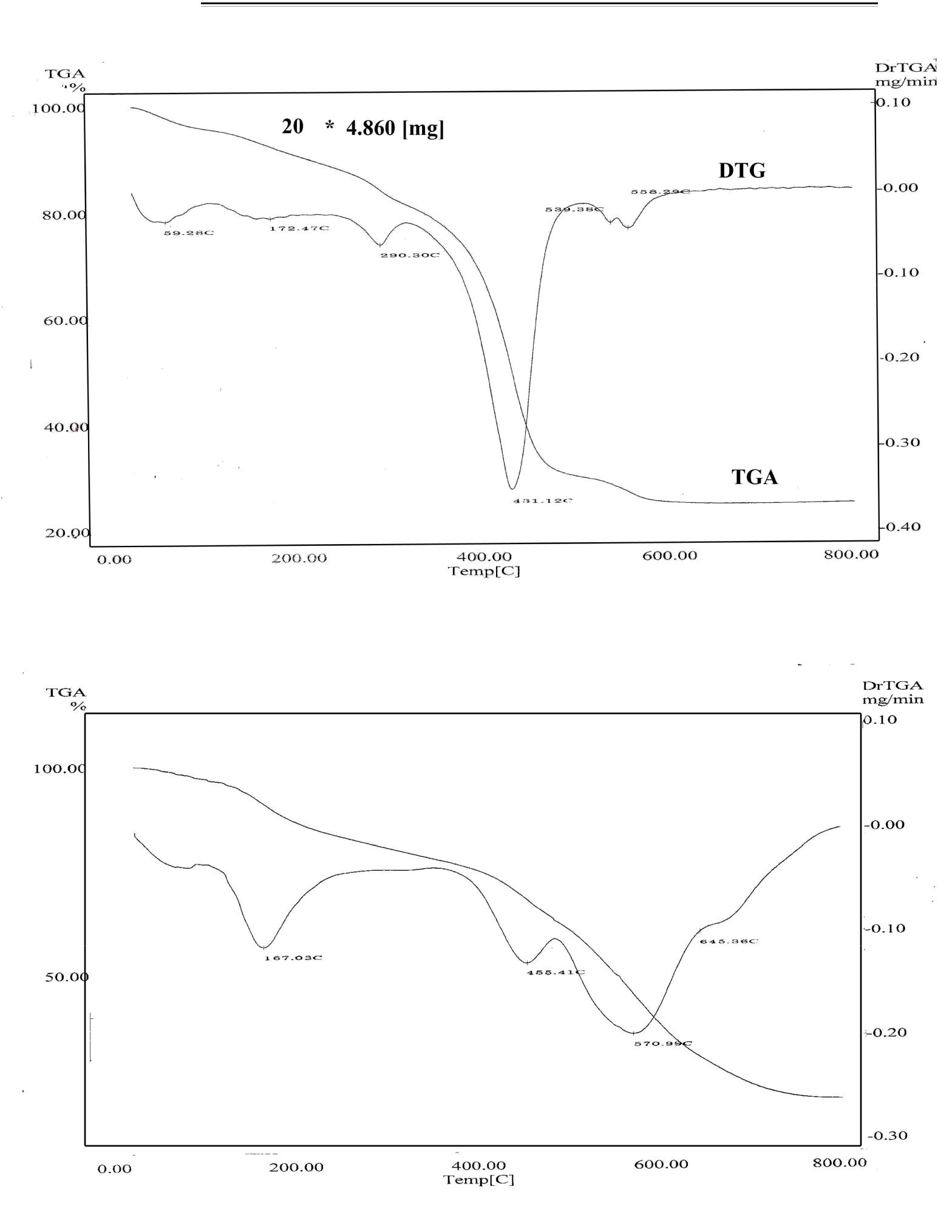
**7c**

**Figure S 11:** The UV spectra of the copper(II) complexes **7b, 7c**.



**7d**

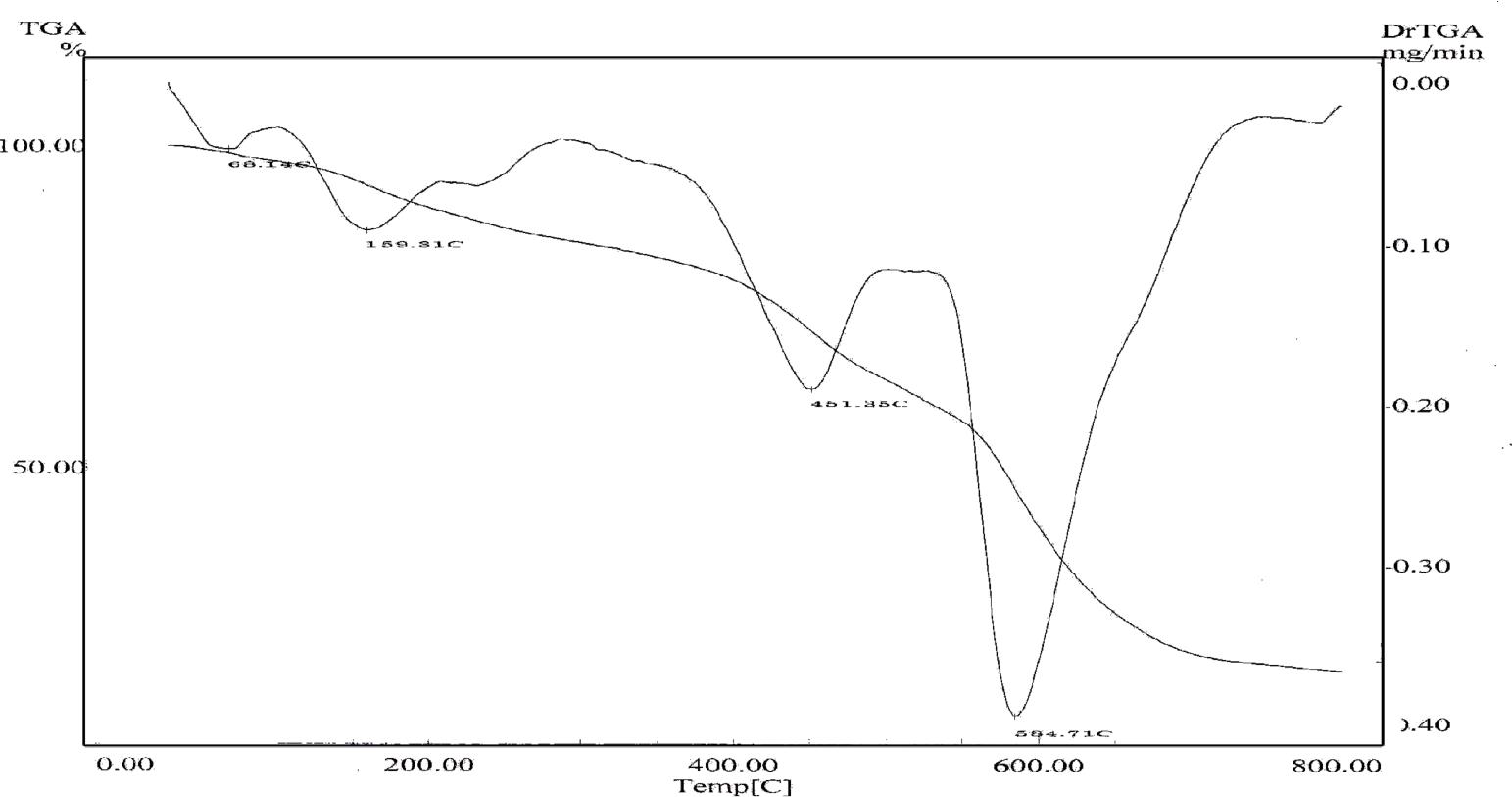
**Figure S 12:** The UV spectra of the copper(II) complex **7d**.



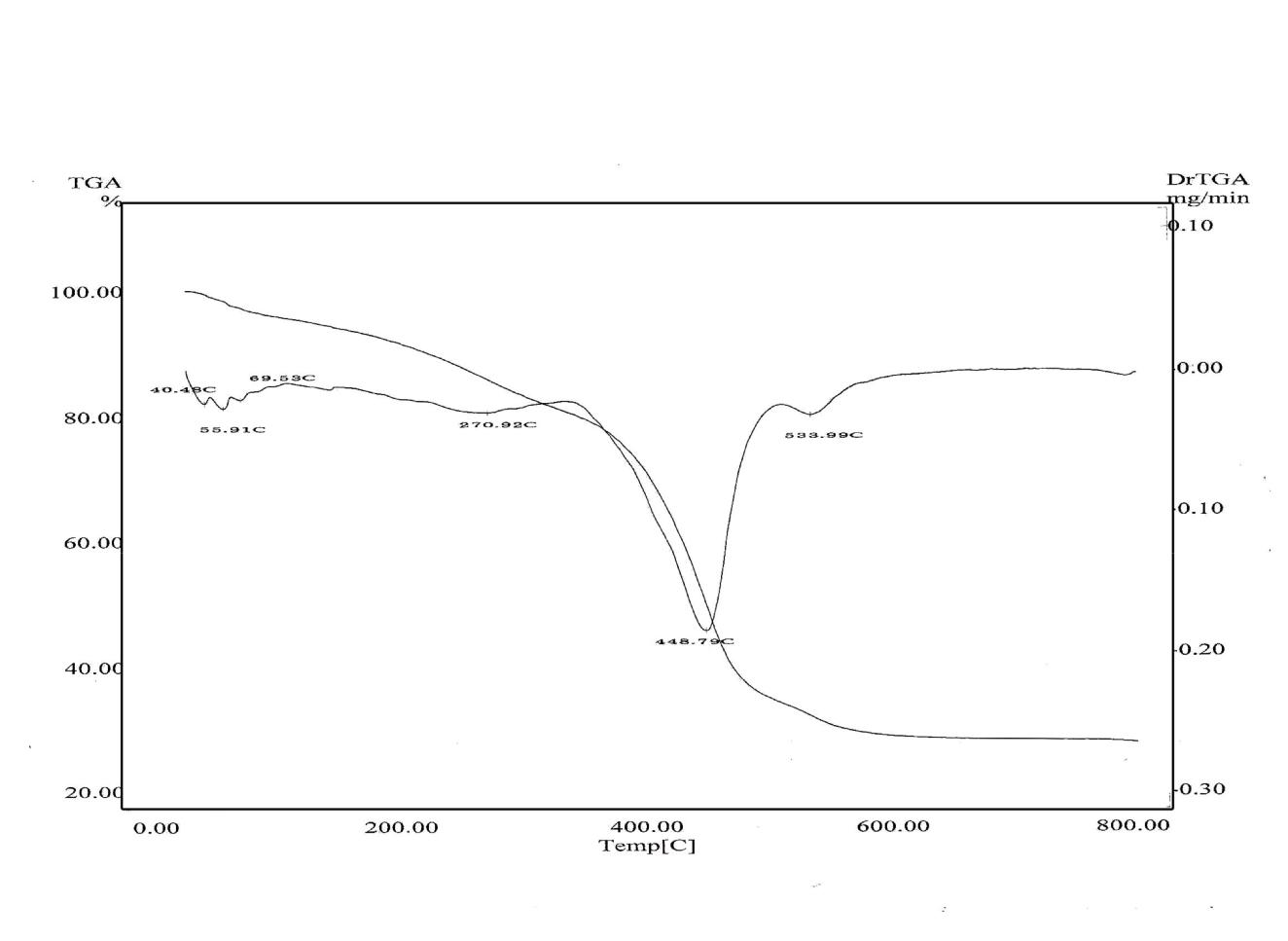
**5a**

**5b**

**Figure S 13:** TG/ DTG curve of the copper(II) complexes **5a, 5b**.

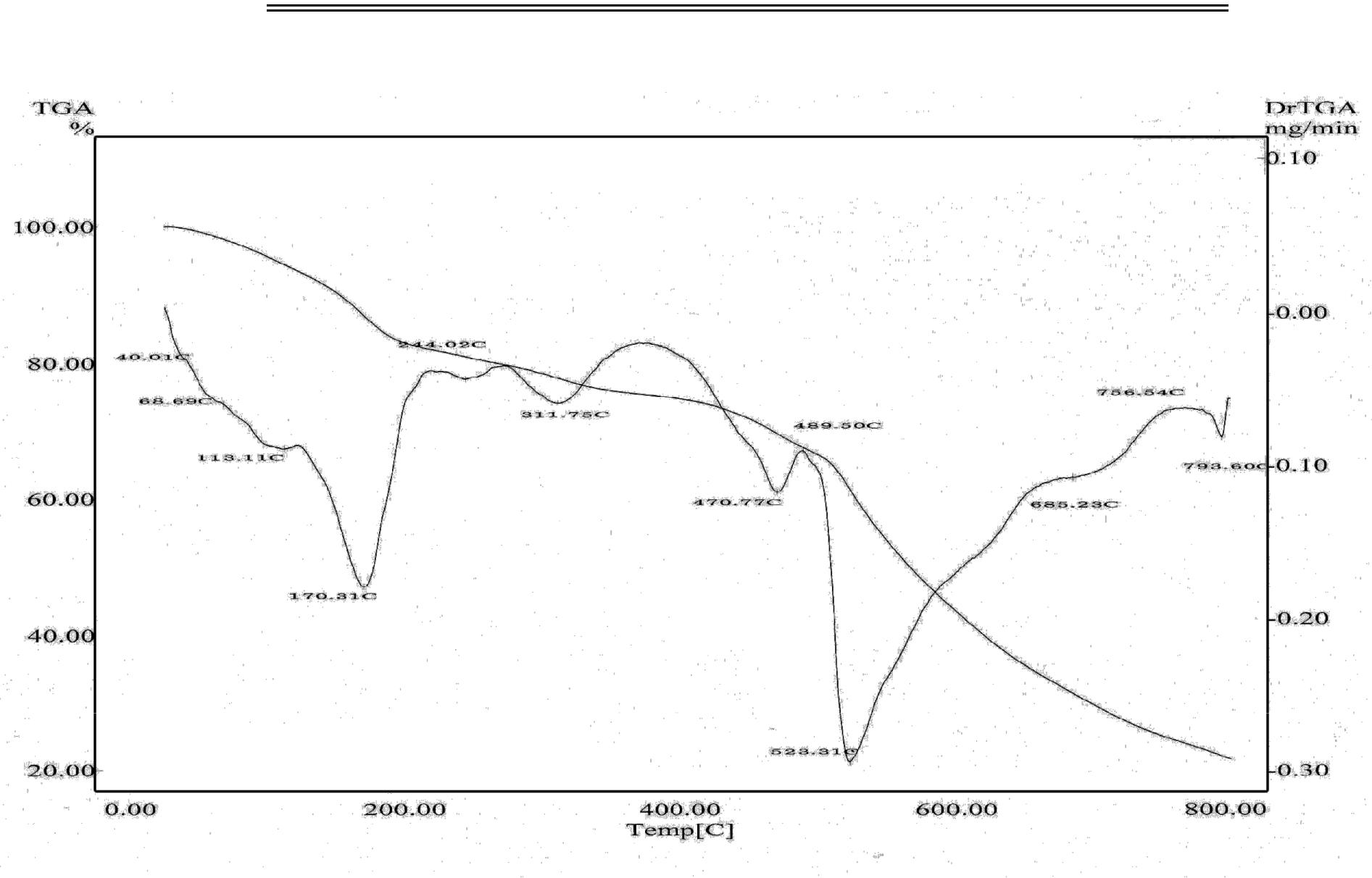


**5c**

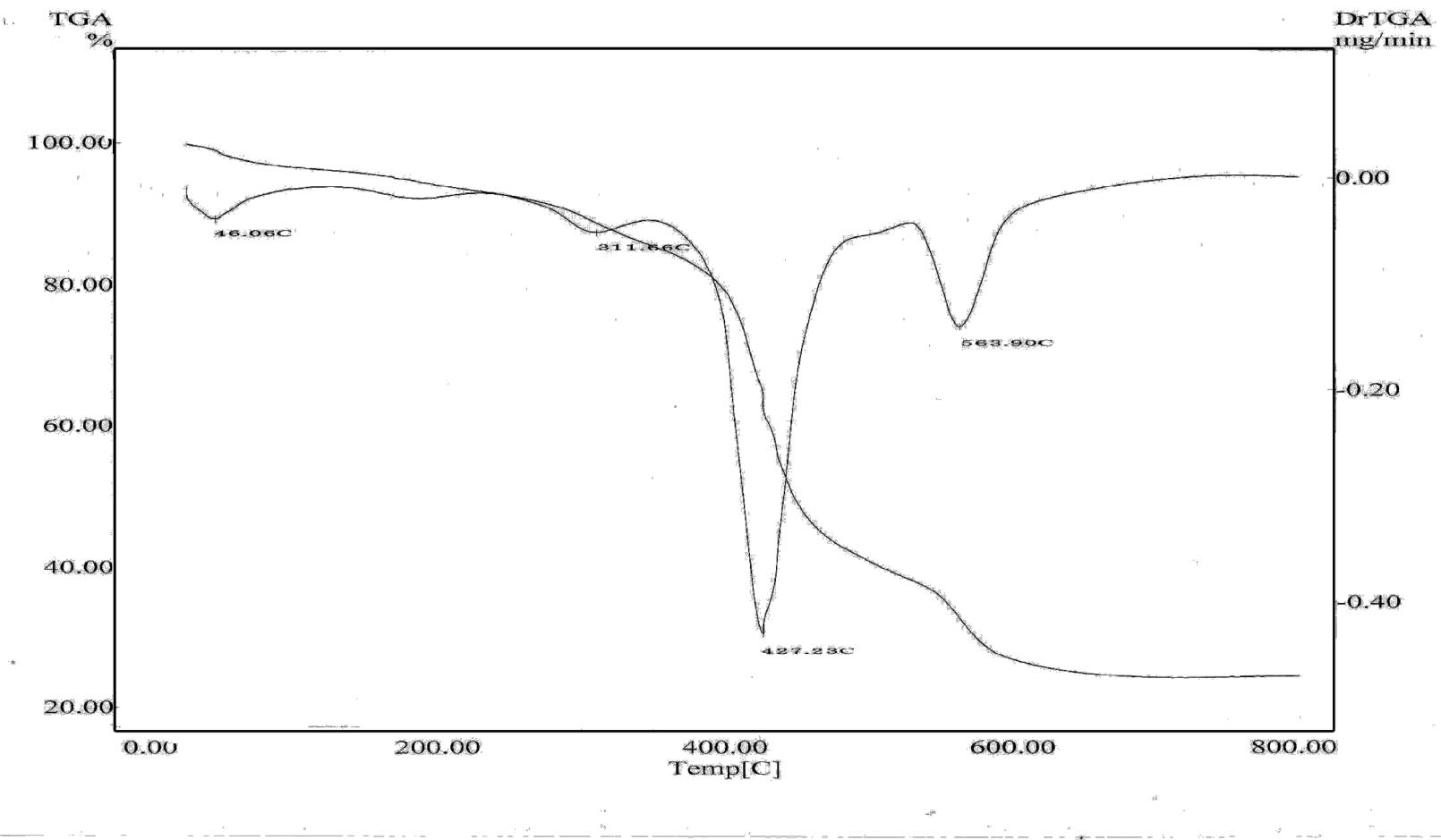


**7a**

**Figure S 14:** TG/ DTG curve of the copper(II) complexes **5c, 7a**.



**7b**



**7d**

**Figure S 15:** TG/ DTG curve of the copper(II) complexes **7b, 7d**.