

## *Supporting Information*

# **The intriguing di-tripodal amine calix[4]arene possessing allosteric anion sensing properties using Cu(II) ions as effectors to induce Donnan exclusion failure in polymeric membrane ion-selective electrodes**

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**Figure S1.**  $^1\text{H-NMR}$  spectrum of compound **a** in  $\text{CDCl}_3$ .

**Figure S2.**  $^{13}\text{C-NMR}$  spectrum of compound **a** in  $\text{CDCl}_3$ .

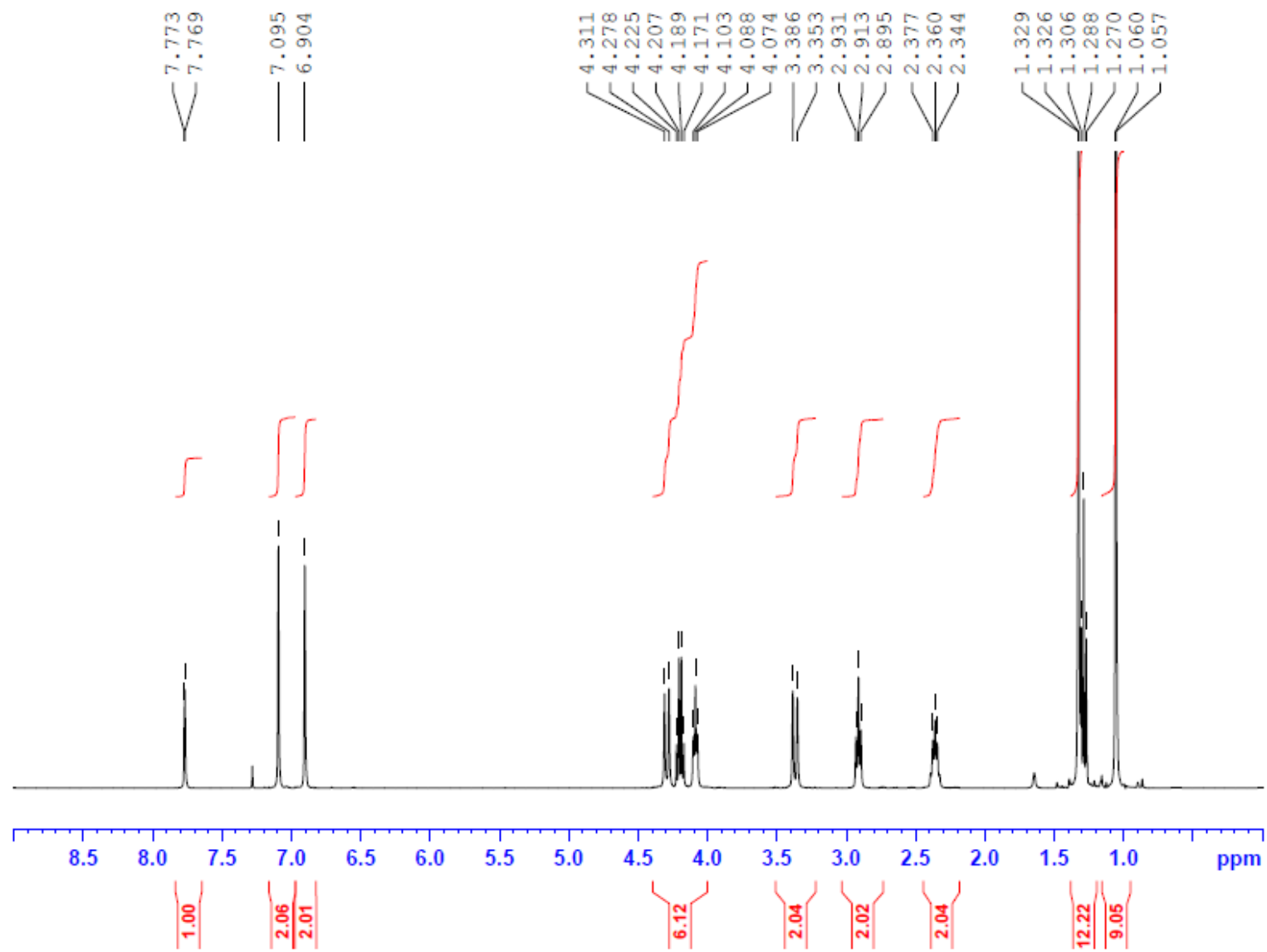
**Figure S3.**  $^1\text{H-NMR}$  spectrum of compound **b** in  $\text{CDCl}_3$ .

**Figure S4.**  $^{13}\text{C-NMR}$  spectrum of compound **b** in  $\text{CDCl}_3$ .

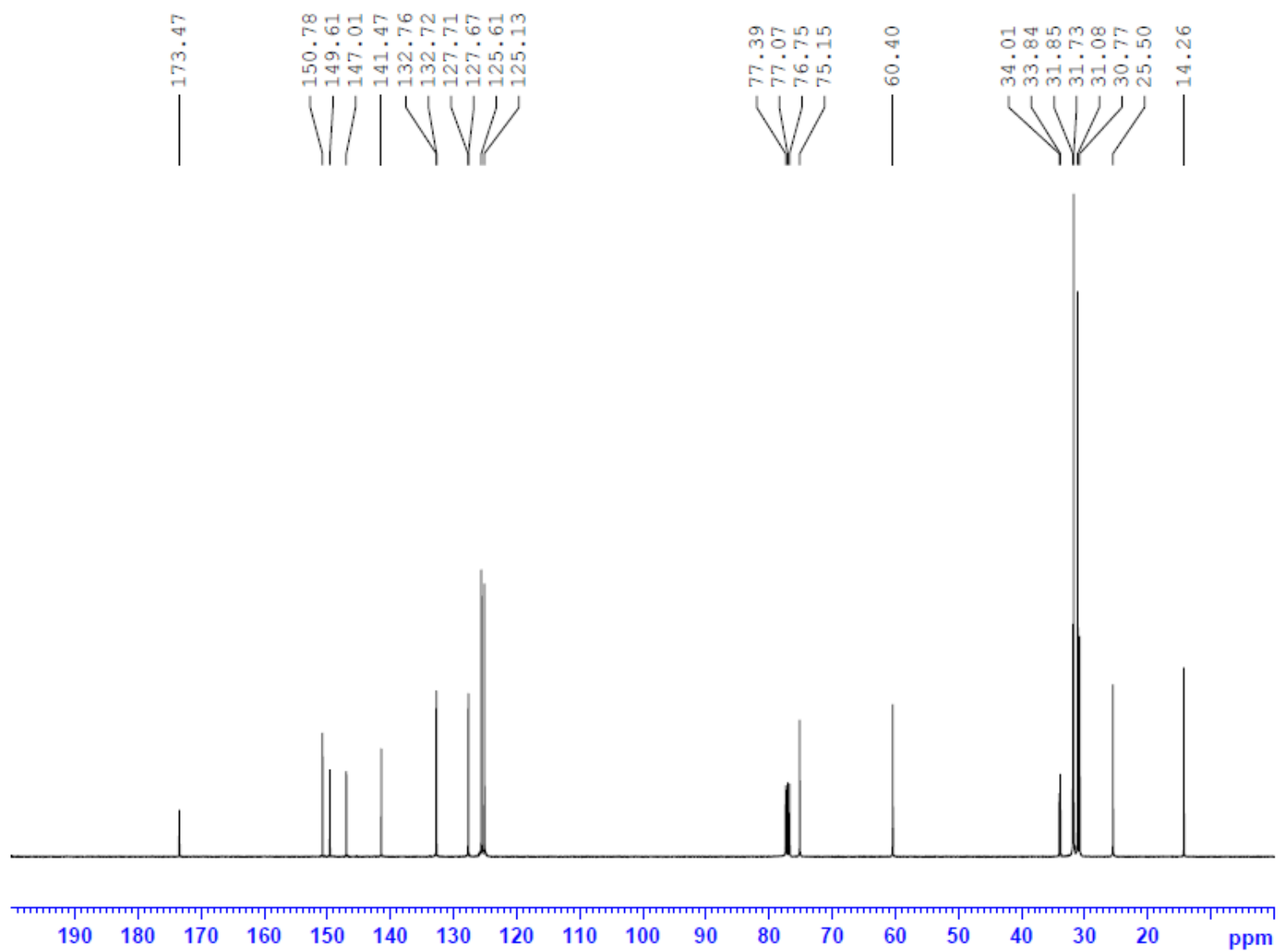
**Figure S5.**  $^1\text{H-NMR}$  spectrum of **L1** in  $\text{CDCl}_3$ .

**Figure S6.**  $^{13}\text{C-NMR}$  spectrum of **L1** in  $\text{CDCl}_3$ .

**Figure S7.** A comparison of selectivity coefficients ( $\log \kappa_{ij}^{pot}$ ) of the membranes containing **L1** and 75 mol% *KTp*ClPB preconditioned in  $10^{-2}$  M of  $\text{Cu}(\text{ClO}_4)_2$ ,  $\text{Cu}(\text{NO}_3)_2$  and  $\text{CuCl}_2$ .



**Figure S1.**  $^1\text{H-NMR}$  spectrum of compound **a** in  $\text{CDCl}_3$ .



**Figure S2.**  $^{13}\text{C}$ -NMR spectrum of compound **a** in  $\text{CDCl}_3$ .

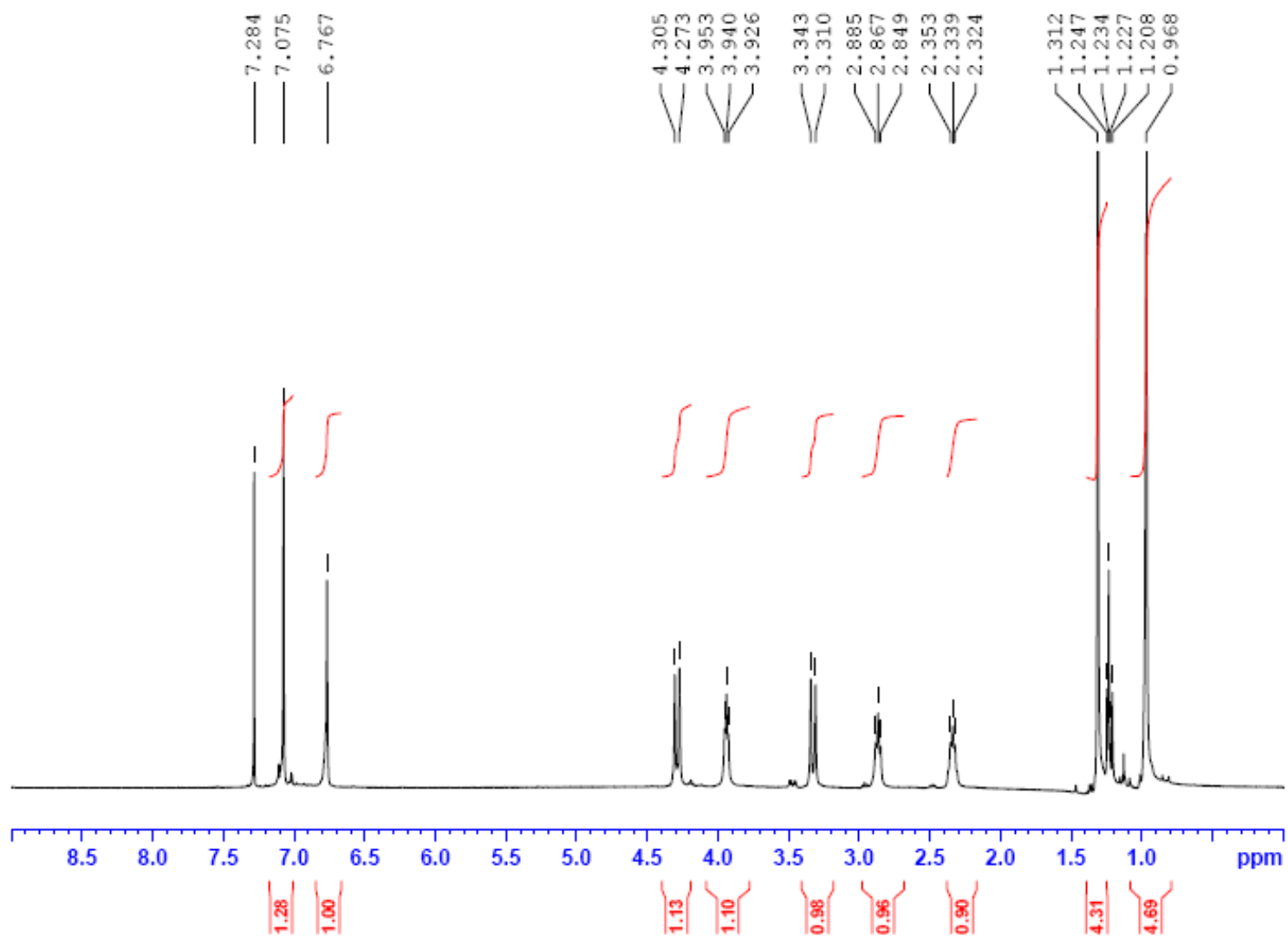
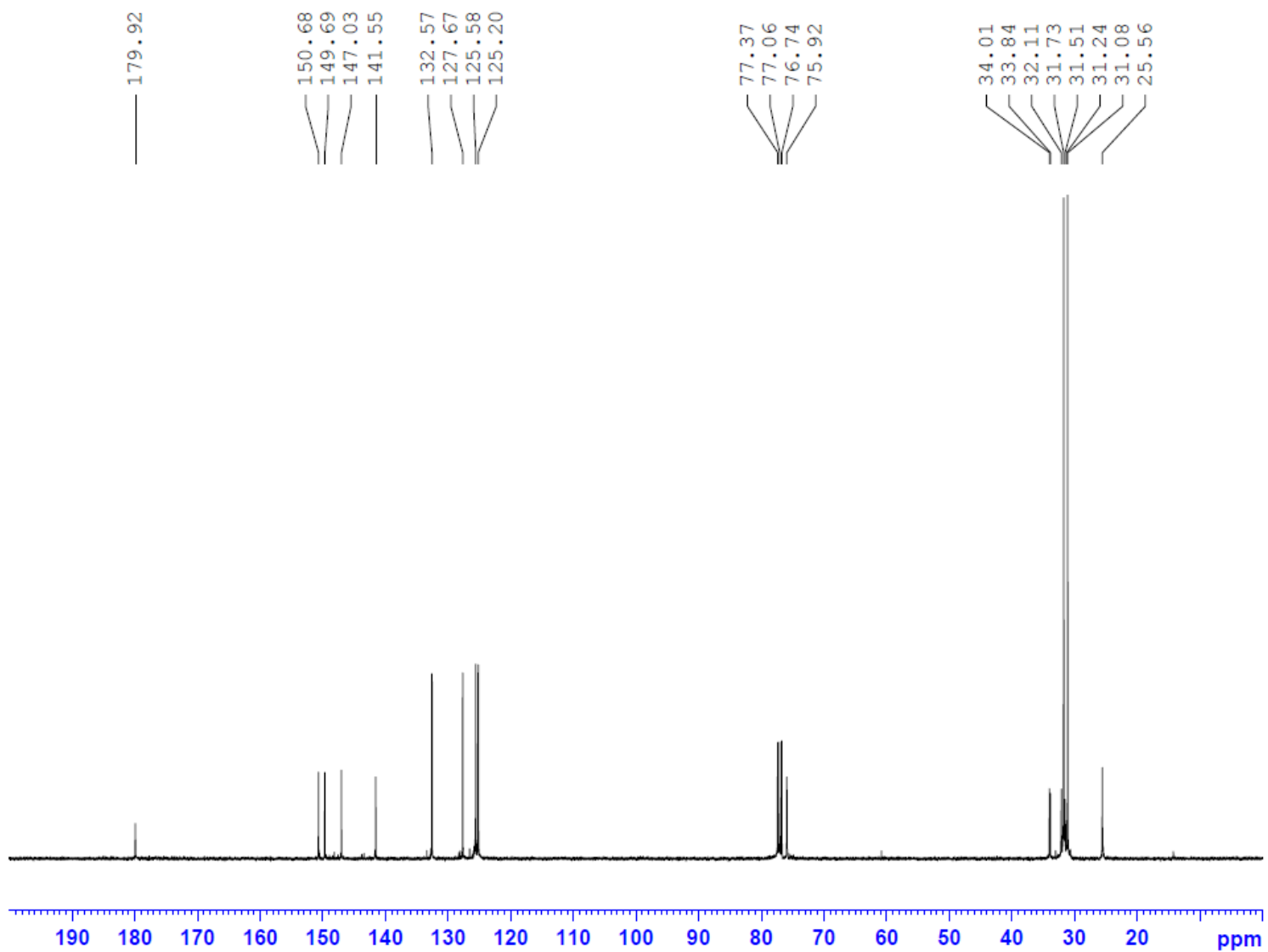


Figure S3. <sup>1</sup>H-NMR spectrum of compound **b** in CDCl<sub>3</sub>.



**Figure S4.**  $^{13}\text{C}$ -NMR spectrum of compound **b** in  $\text{CDCl}_3$ .

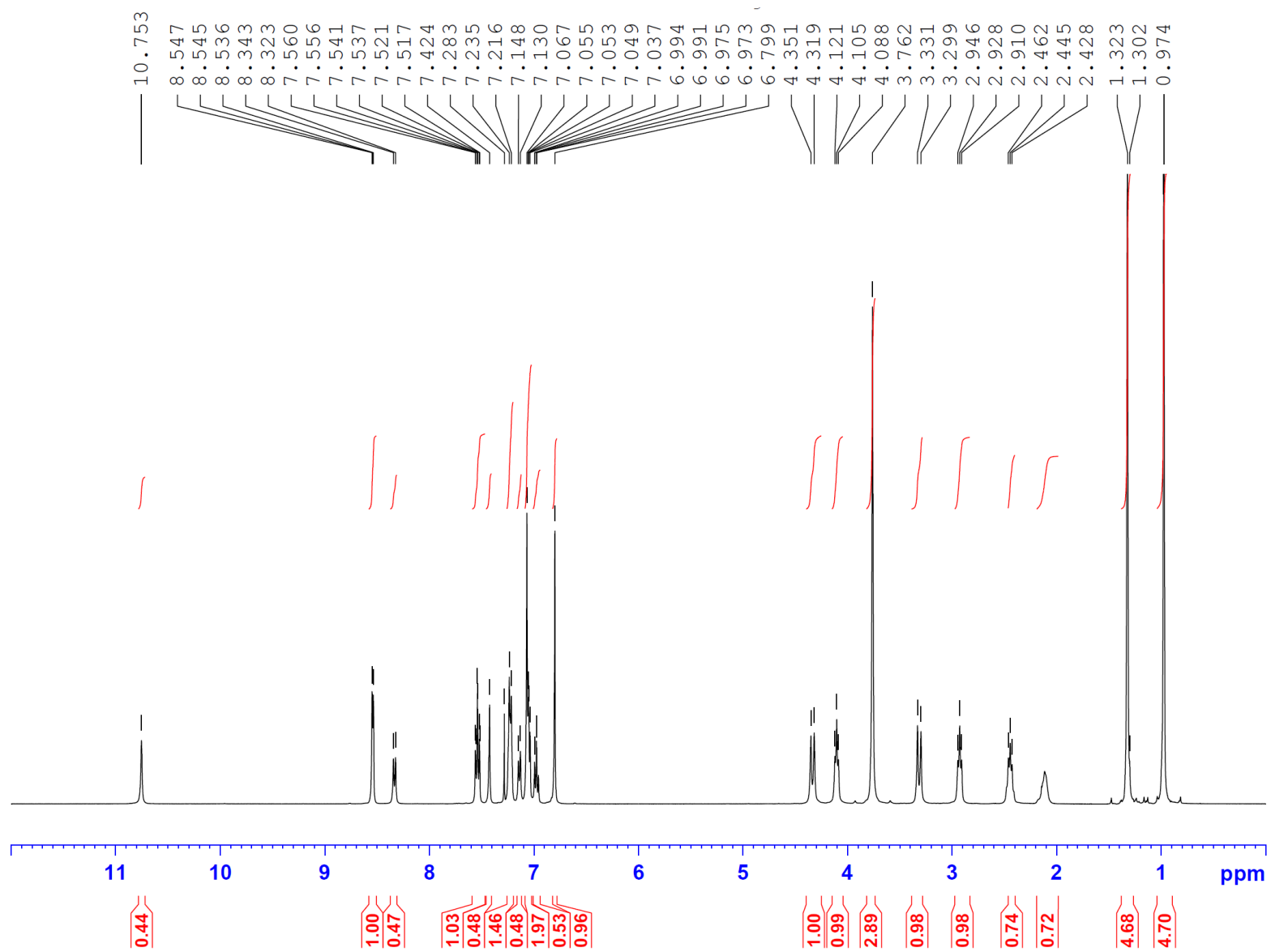
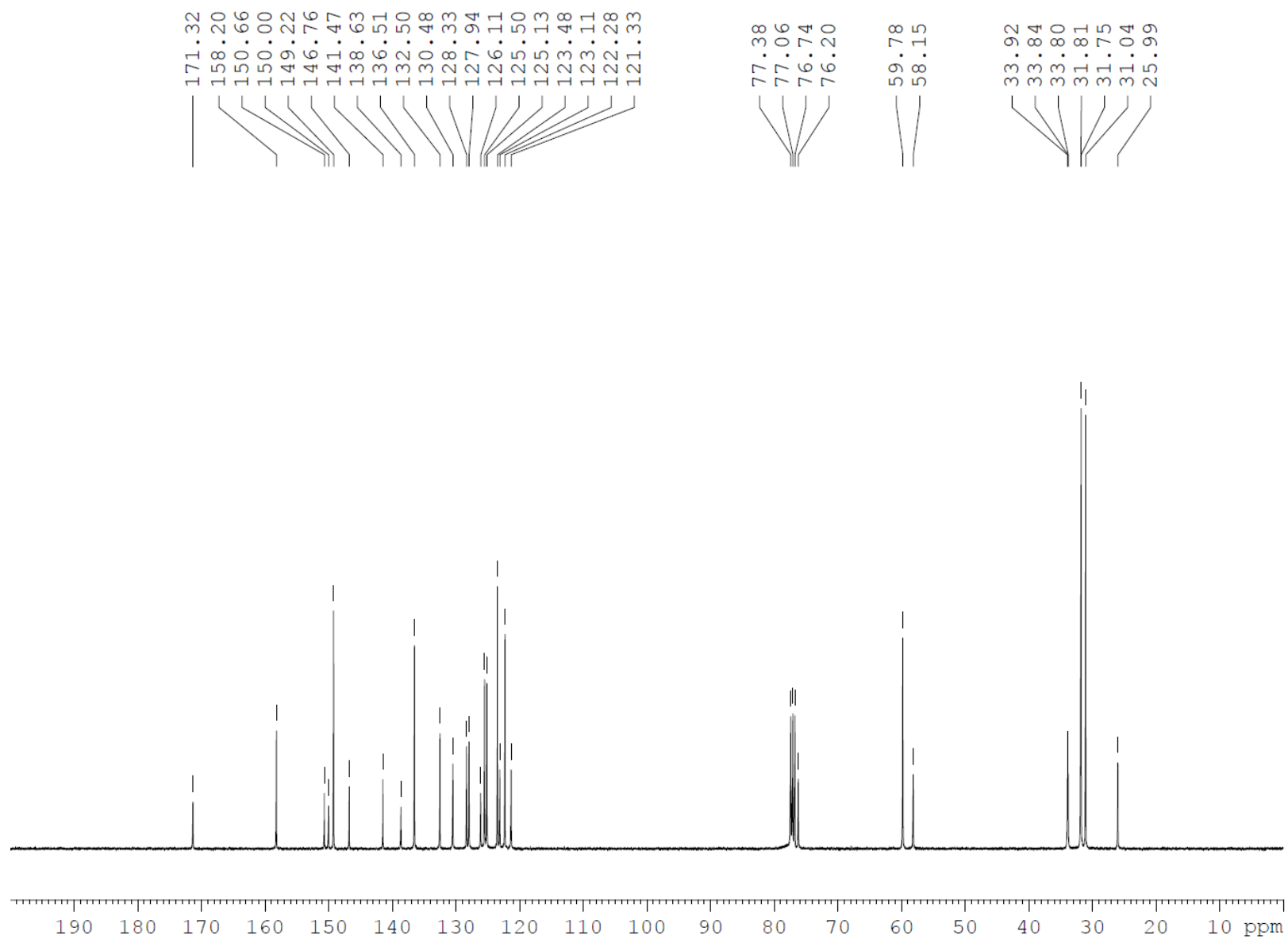
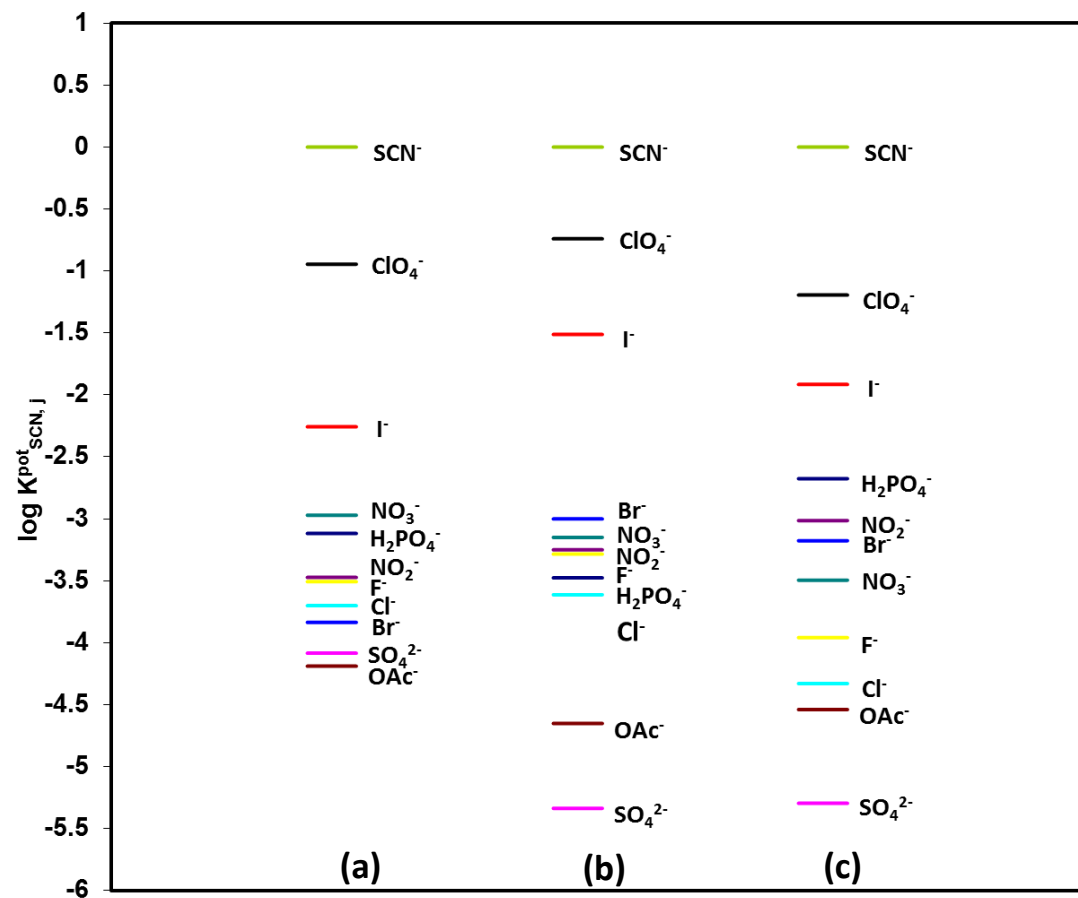


Figure S5.  $^1\text{H-NMR}$  spectrum of L1 in  $\text{CDCl}_3$ .



**Figure S6.**  $^{13}\text{C}$ -NMR spectrum of L1 in  $\text{CDCl}_3$ .



**Figure S7.** A comparison of selectivity coefficients ( $\log K_{I, J}^{pot}$ ) of the membranes containing L1 and 75 mol% KTpCIPB preconditioned in  $10^{-2}$  M of  $Cu(ClO_4)_2$  (a),  $Cu(NO_3)_2$  (b), and  $CuCl_2$  (c).