

## Supporting Information

### **Systematic copolymer screening for foaming experiments**

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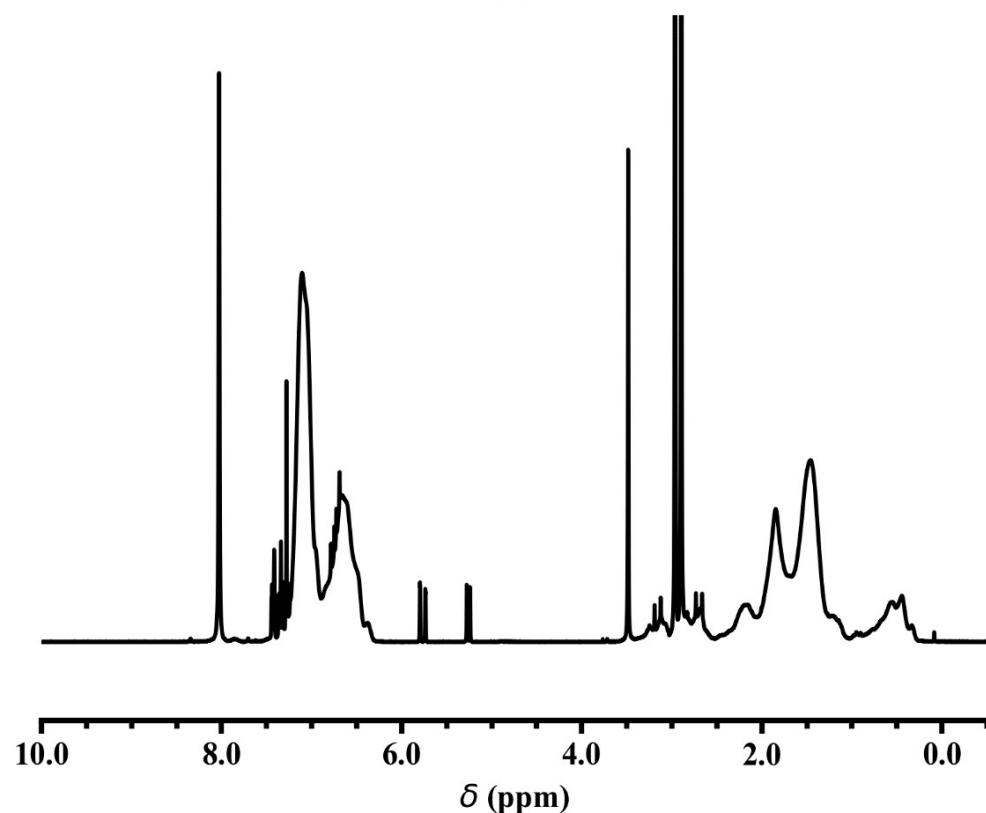
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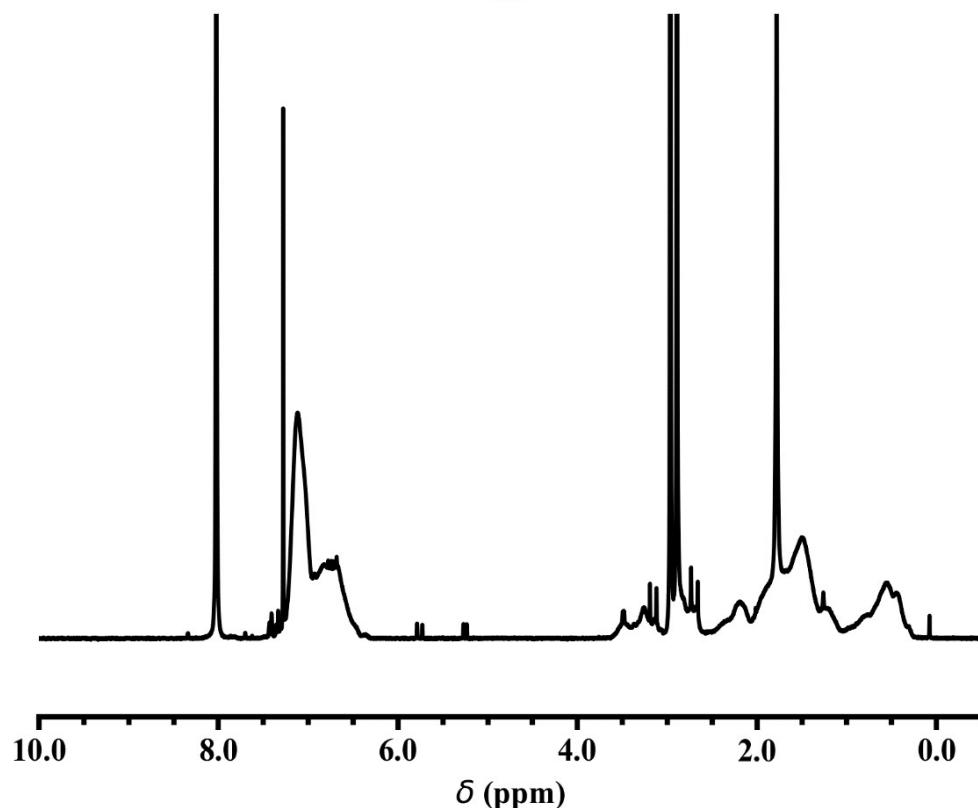
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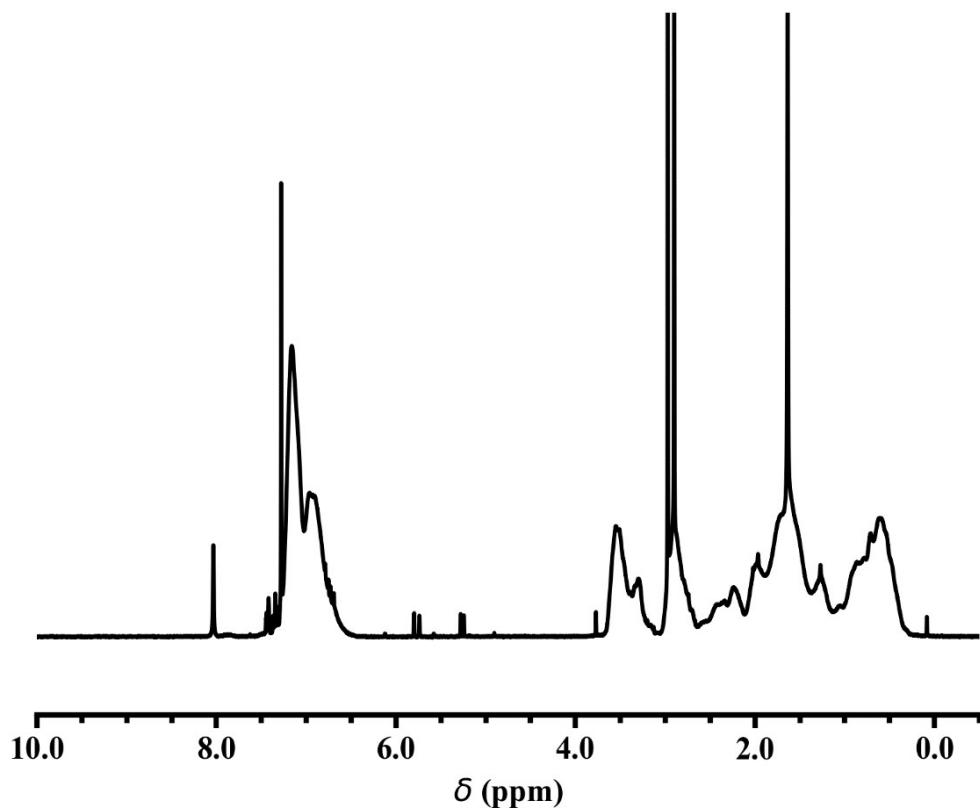
**$^1\text{H}$  NMR spectra**



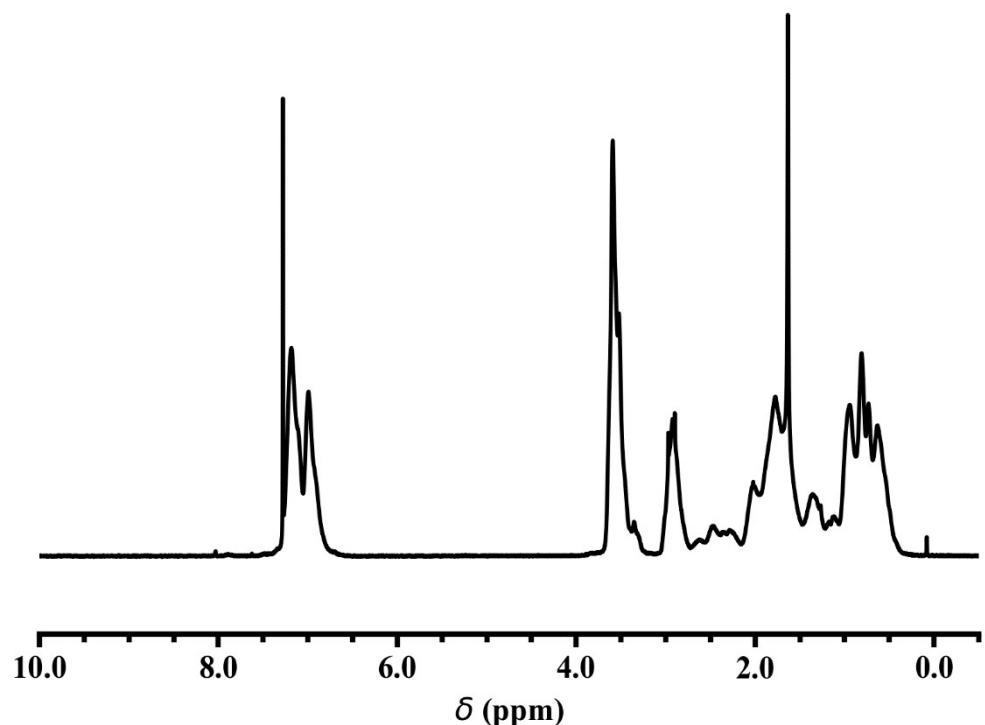
**Figure S1.**  $^1\text{H}$  NMR spectrum of polymer **P1** (300 MHz,  $\text{CDCl}_3$ ).



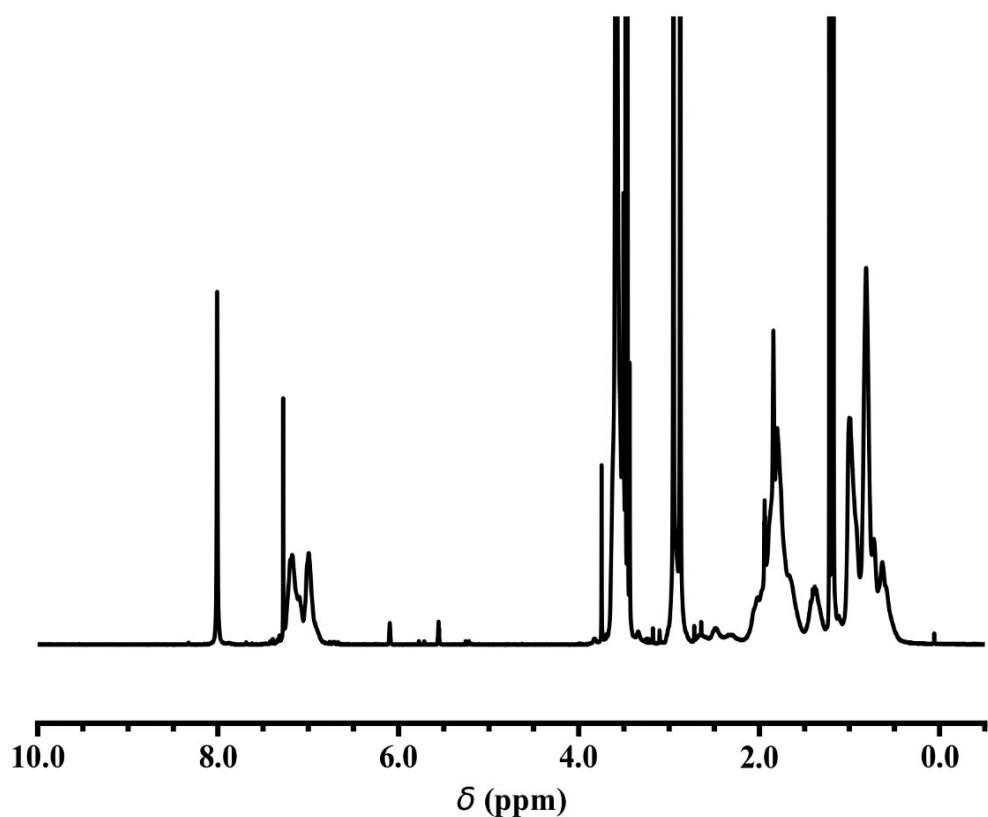
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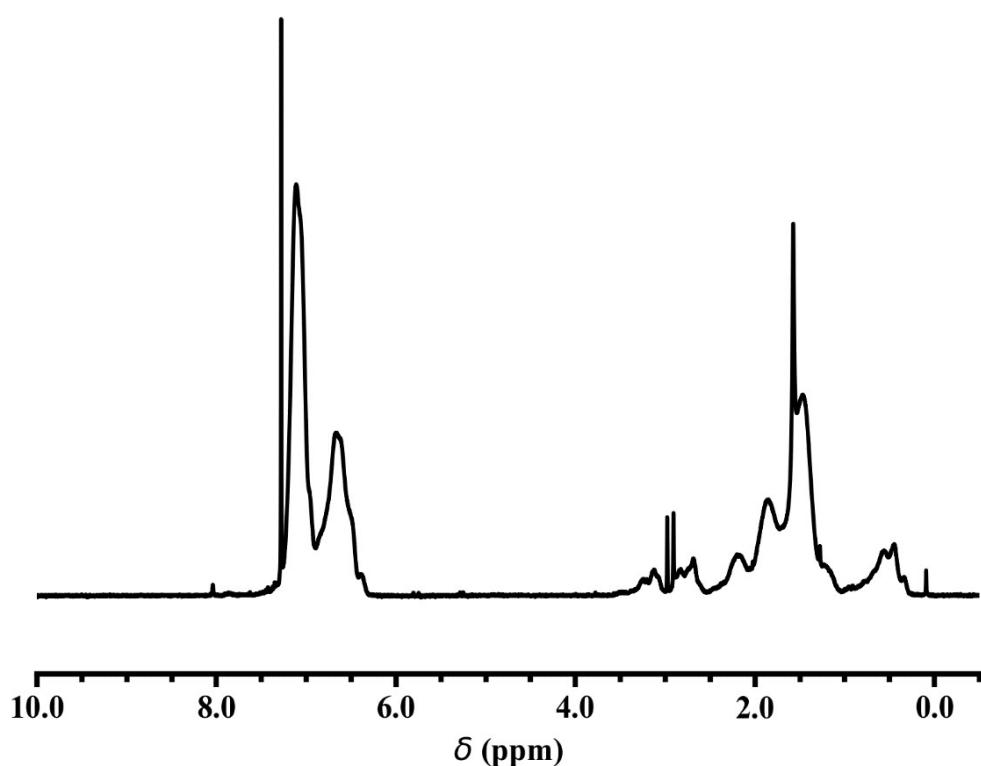
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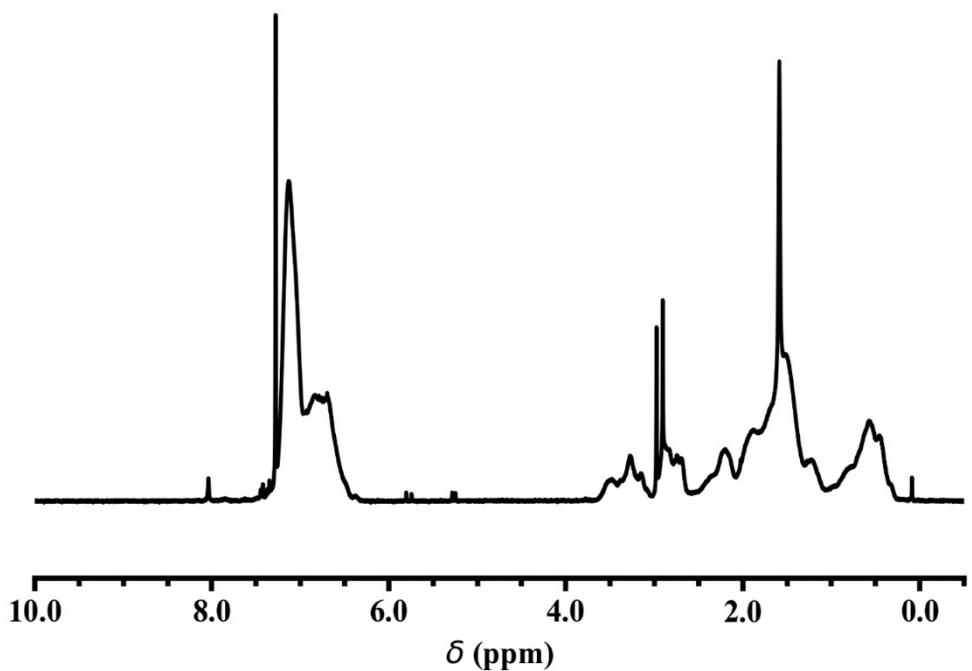
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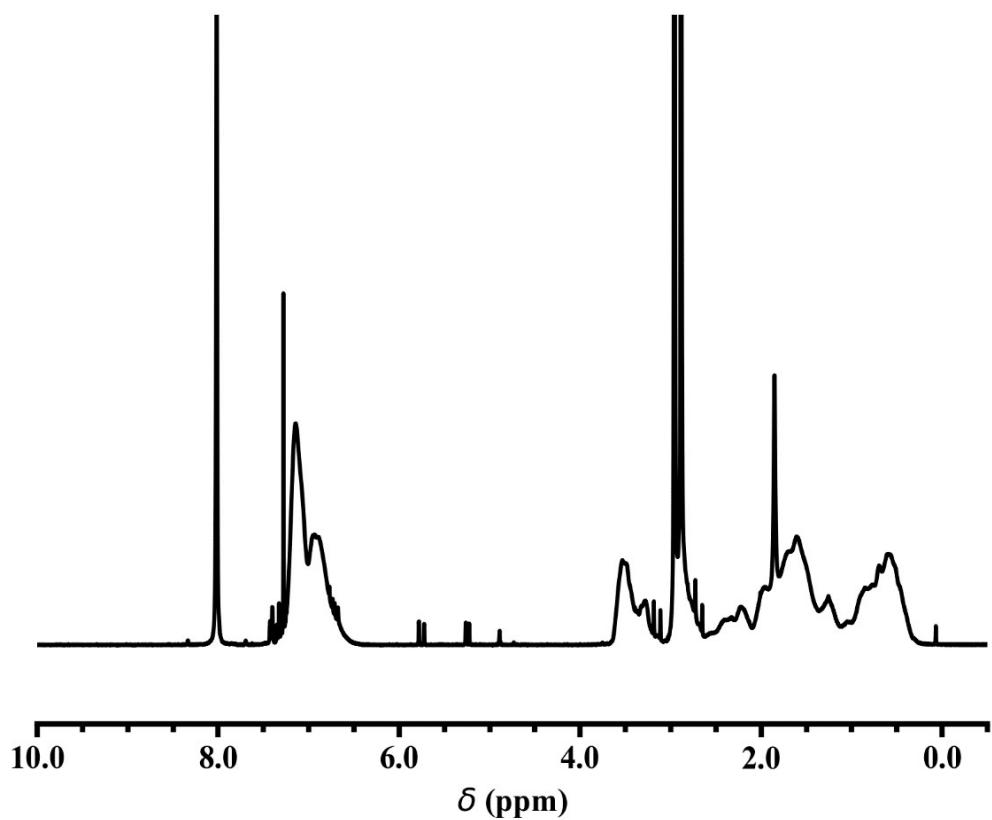
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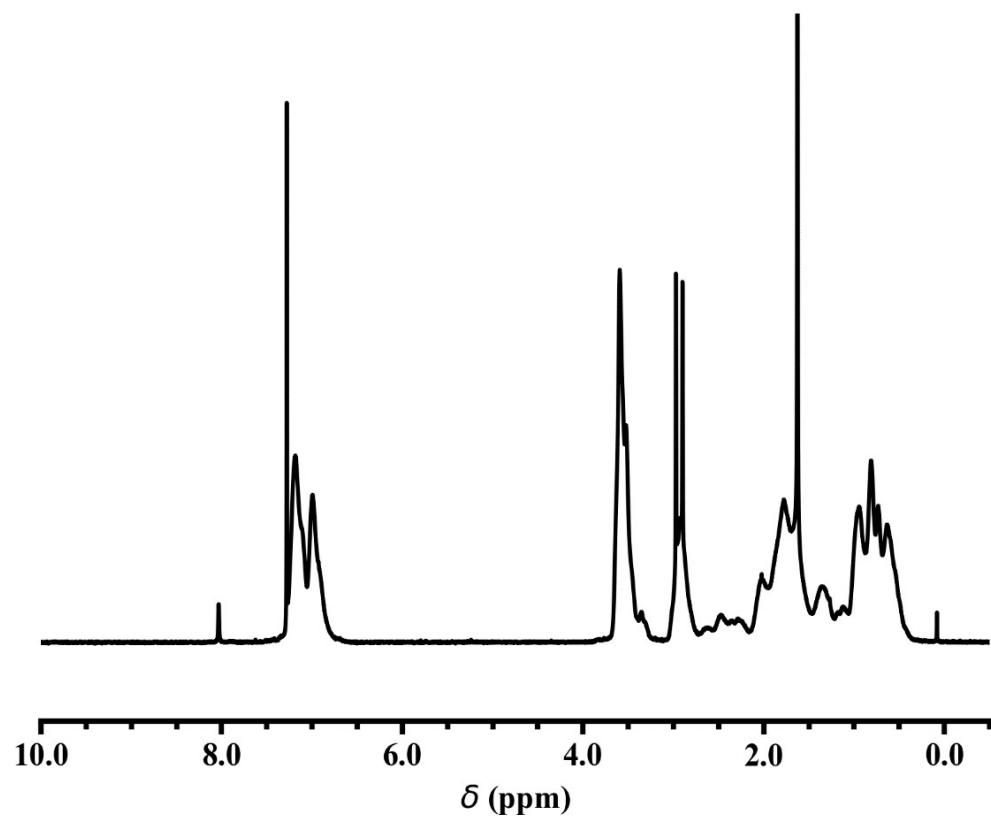
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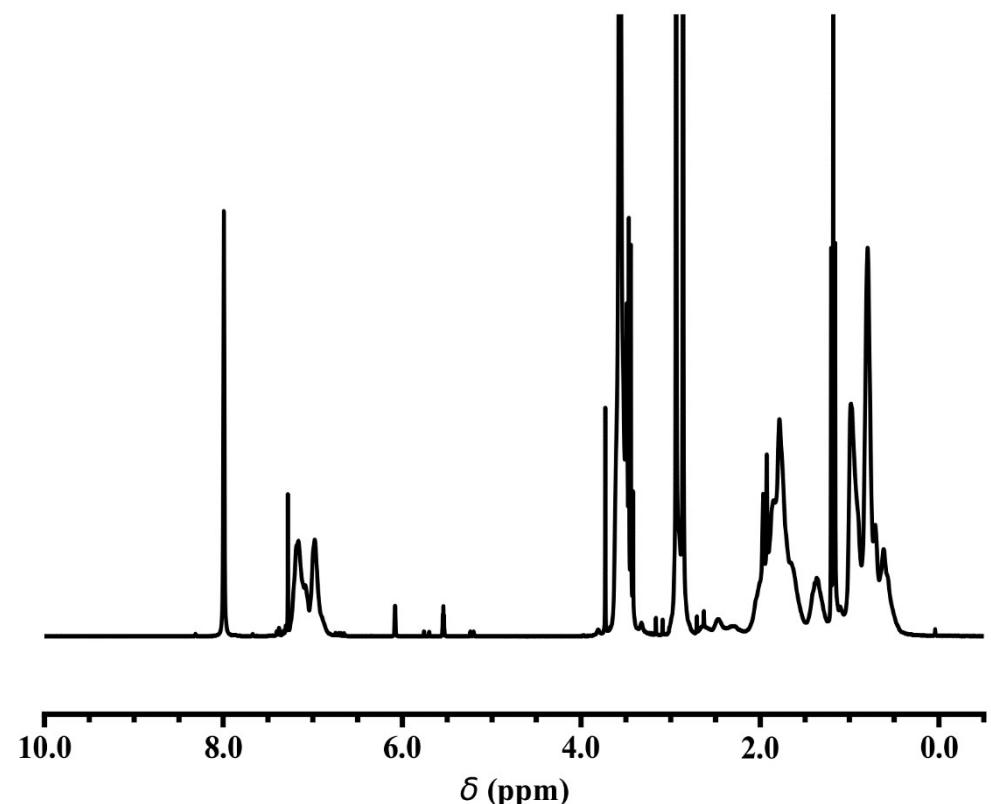
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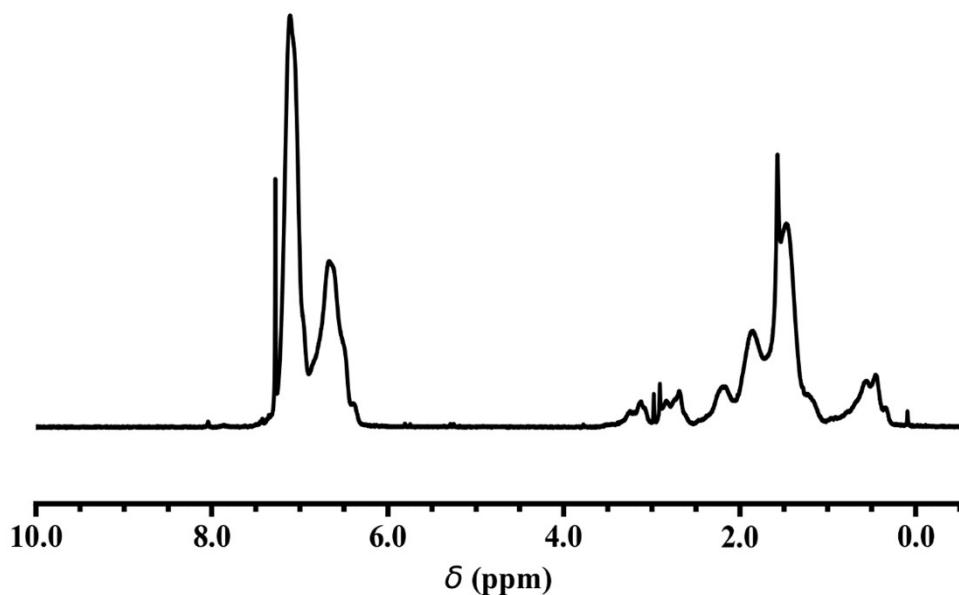
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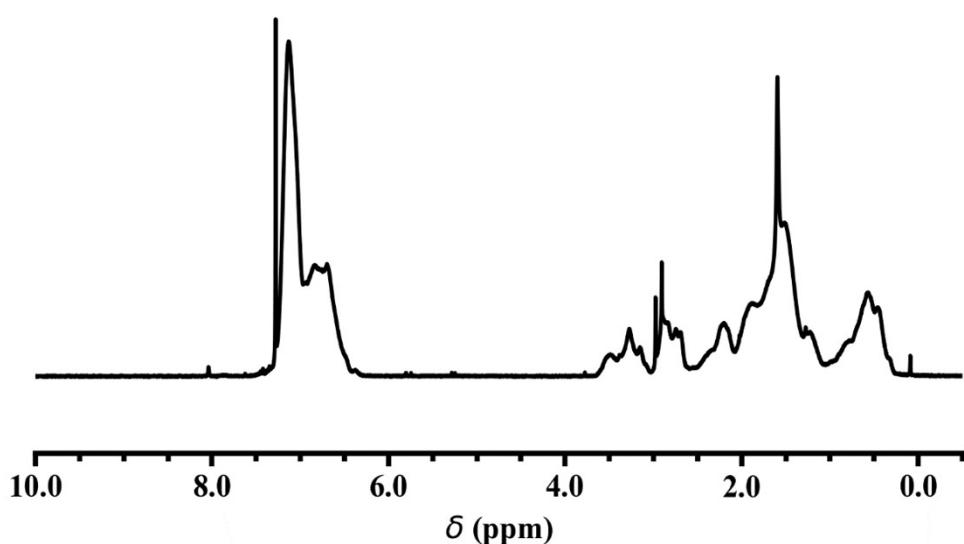
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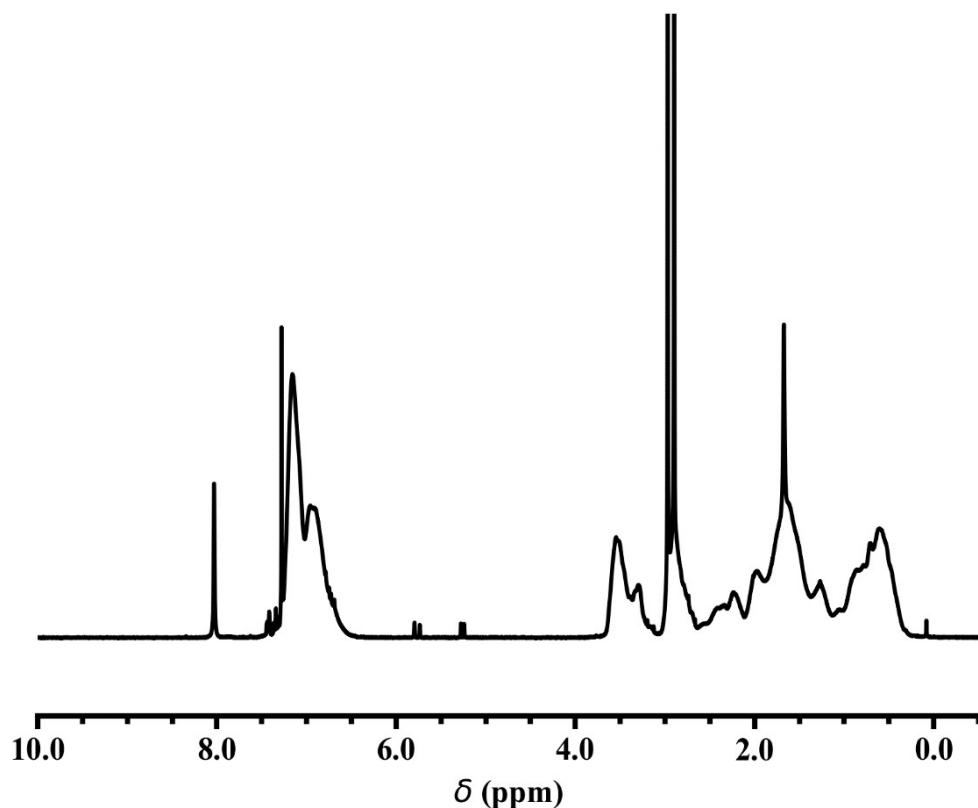
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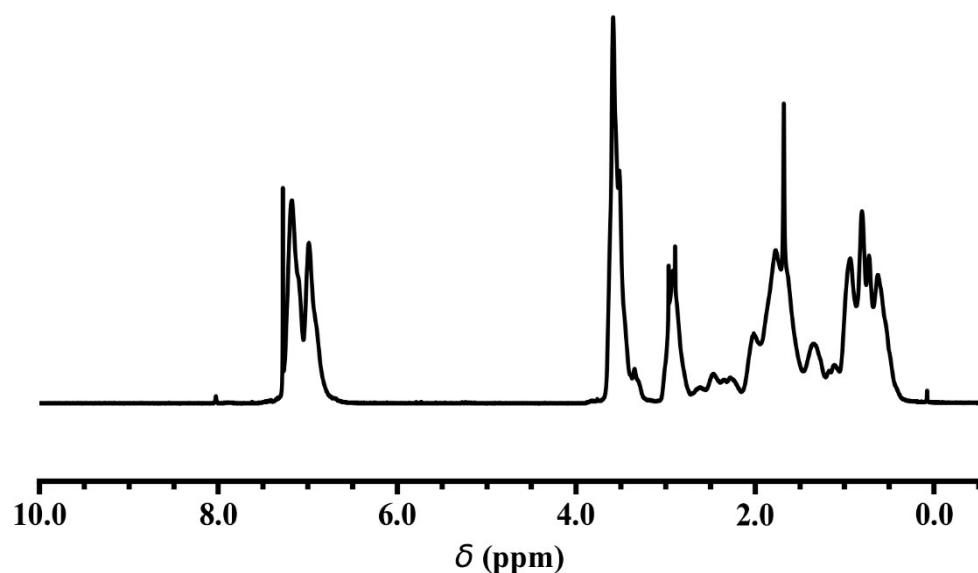
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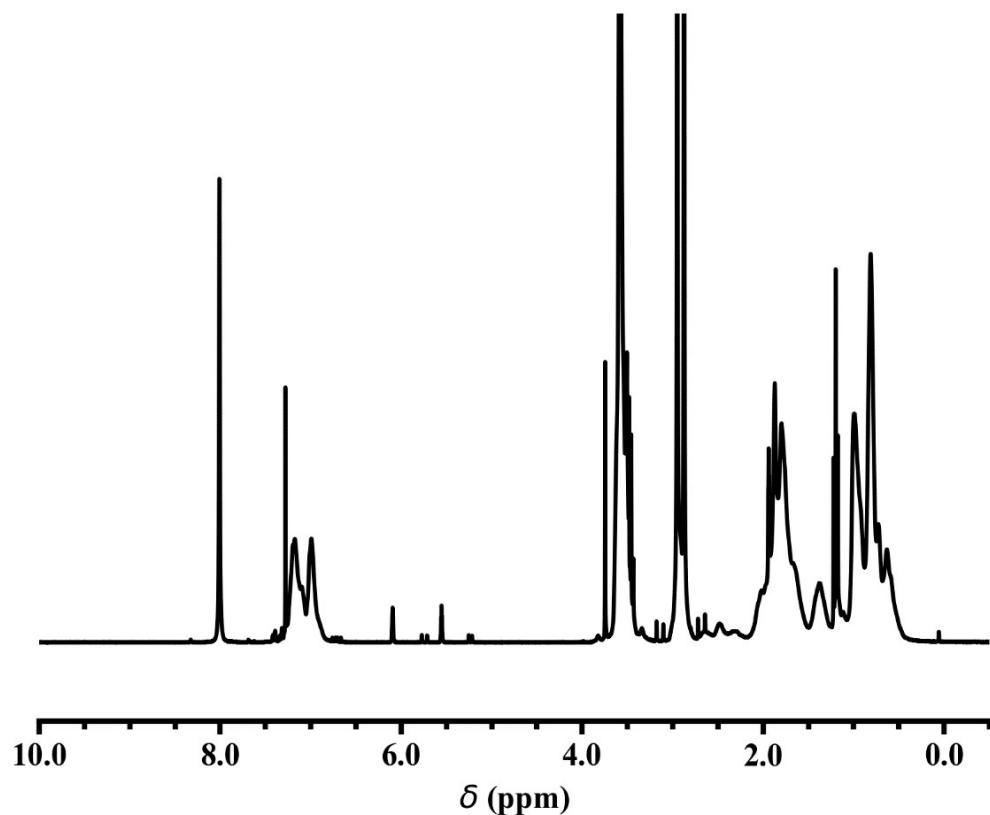
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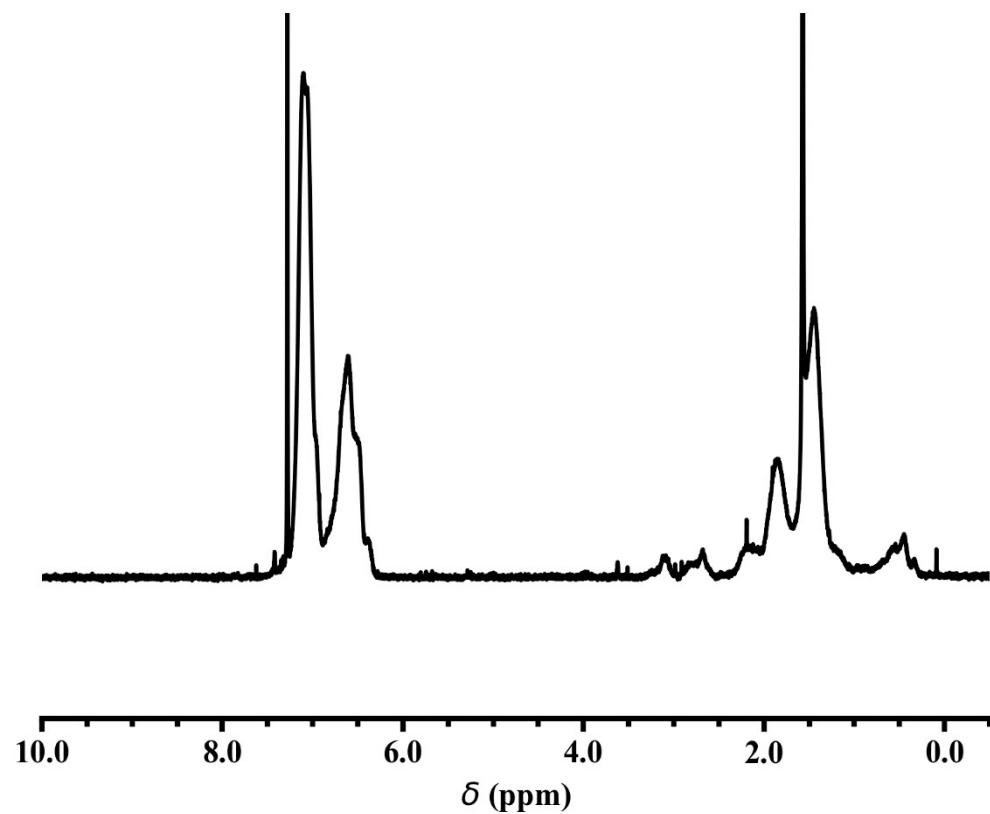
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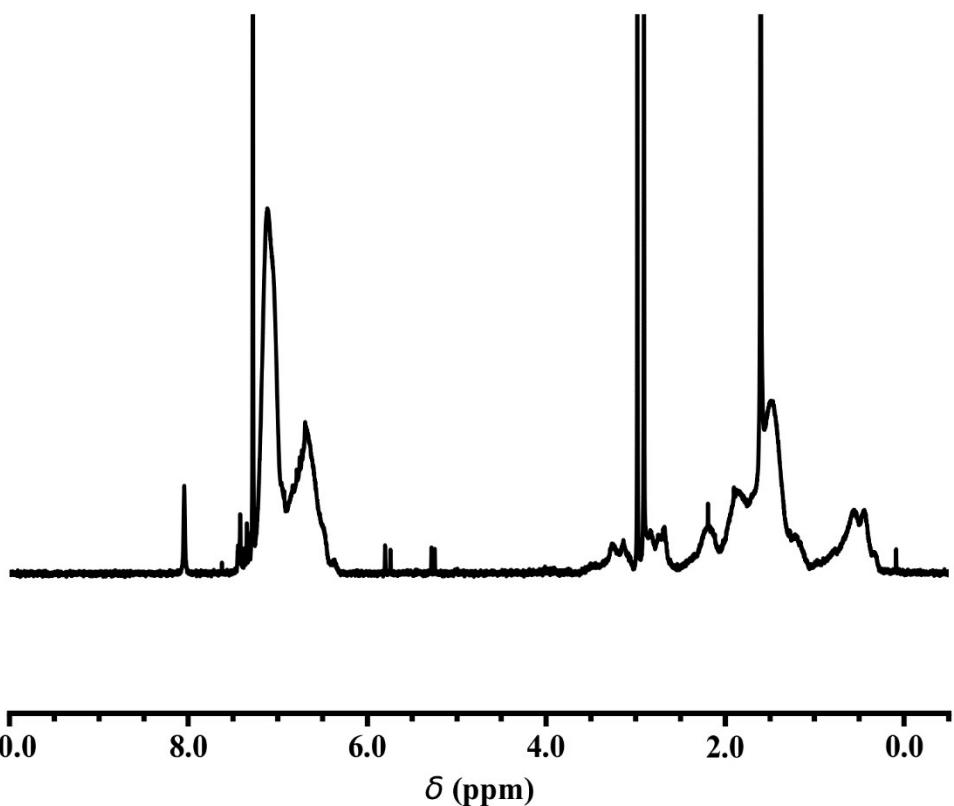
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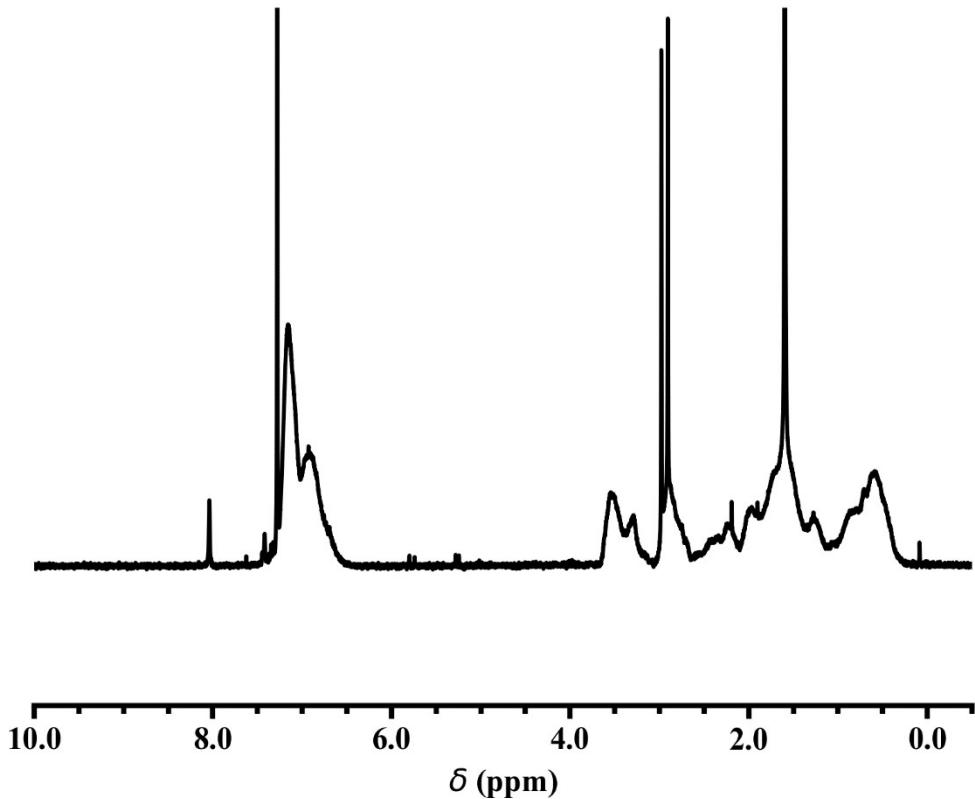
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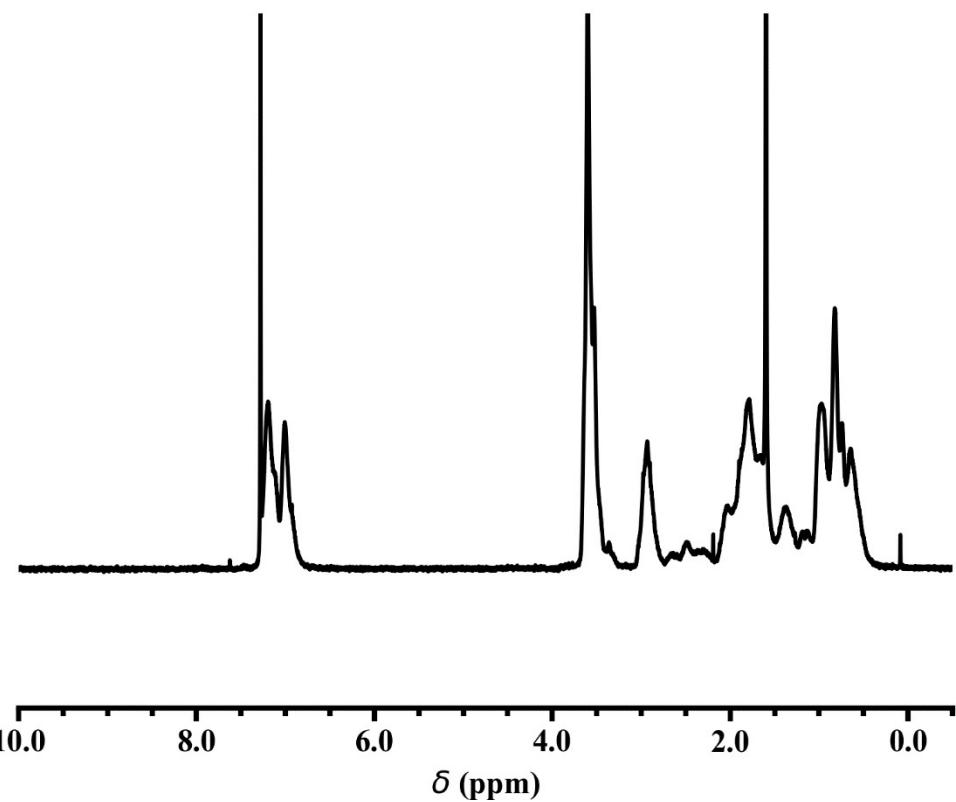
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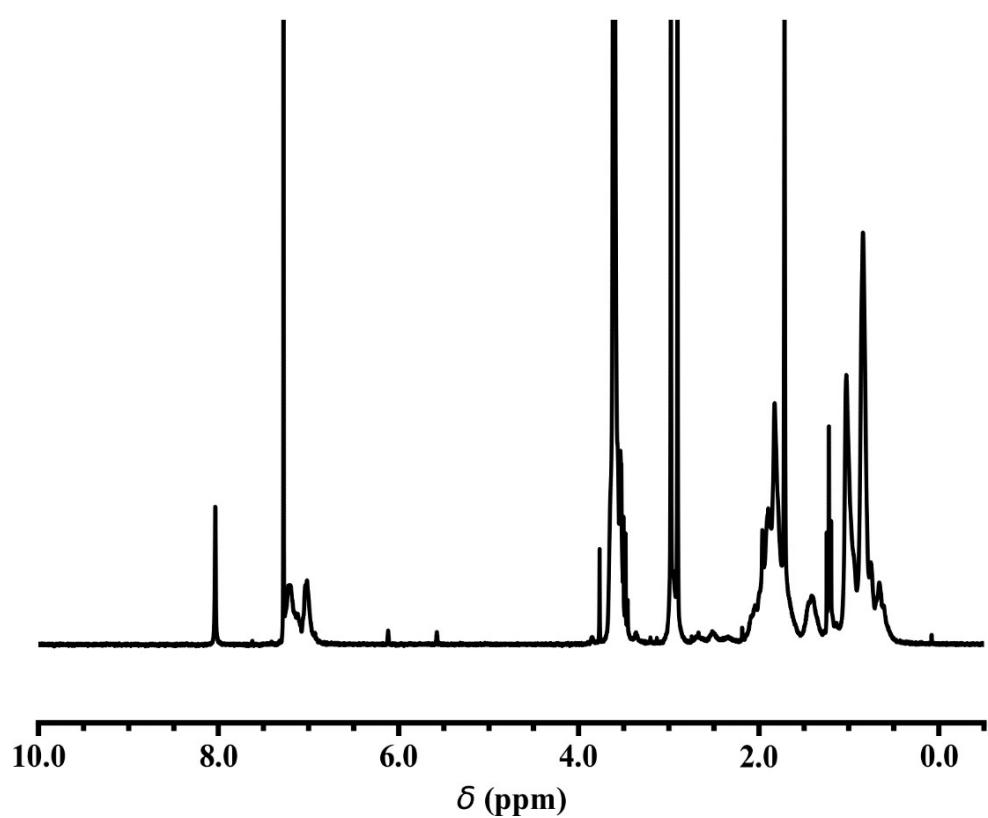
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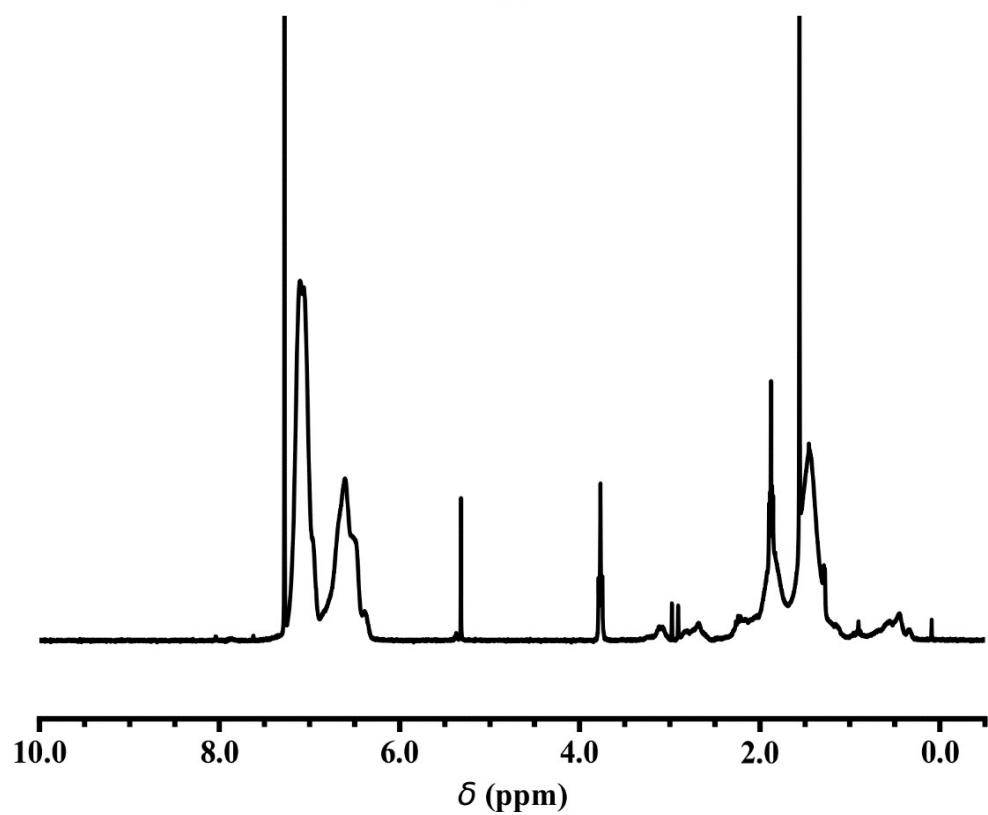
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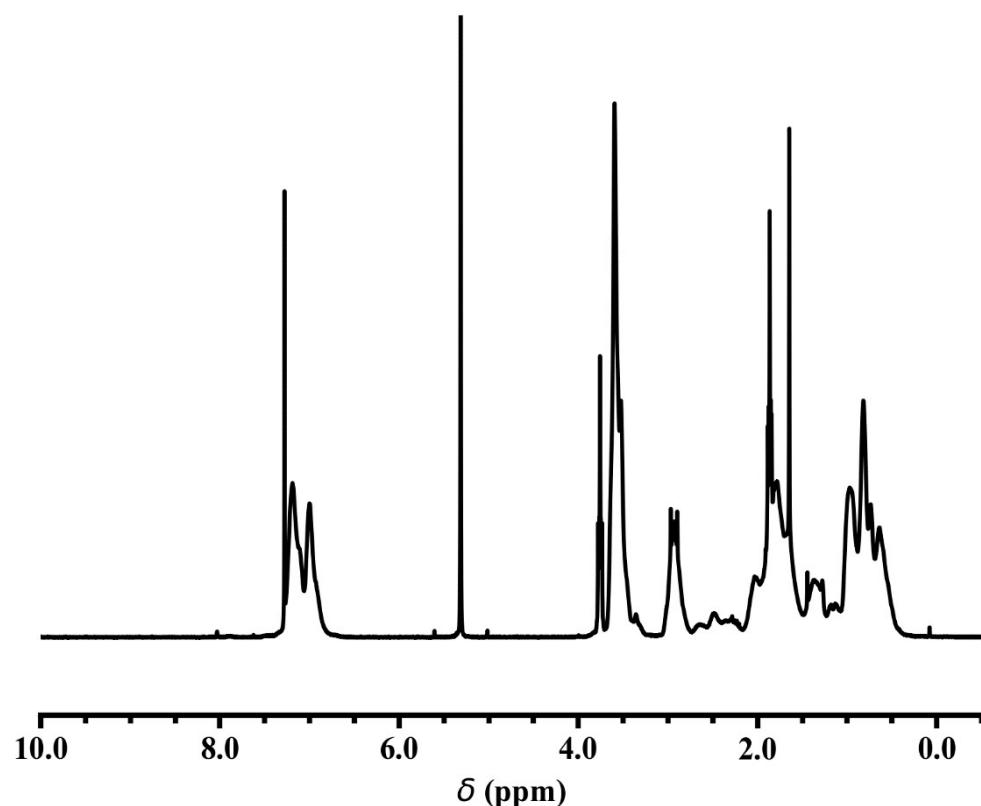
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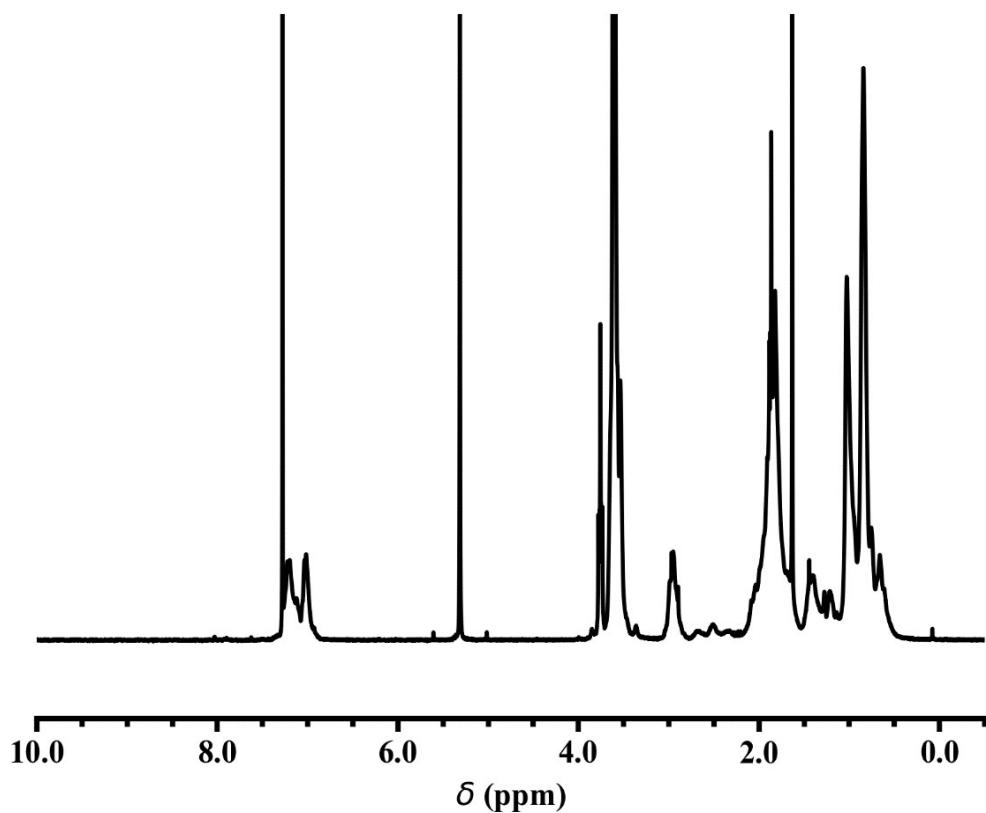
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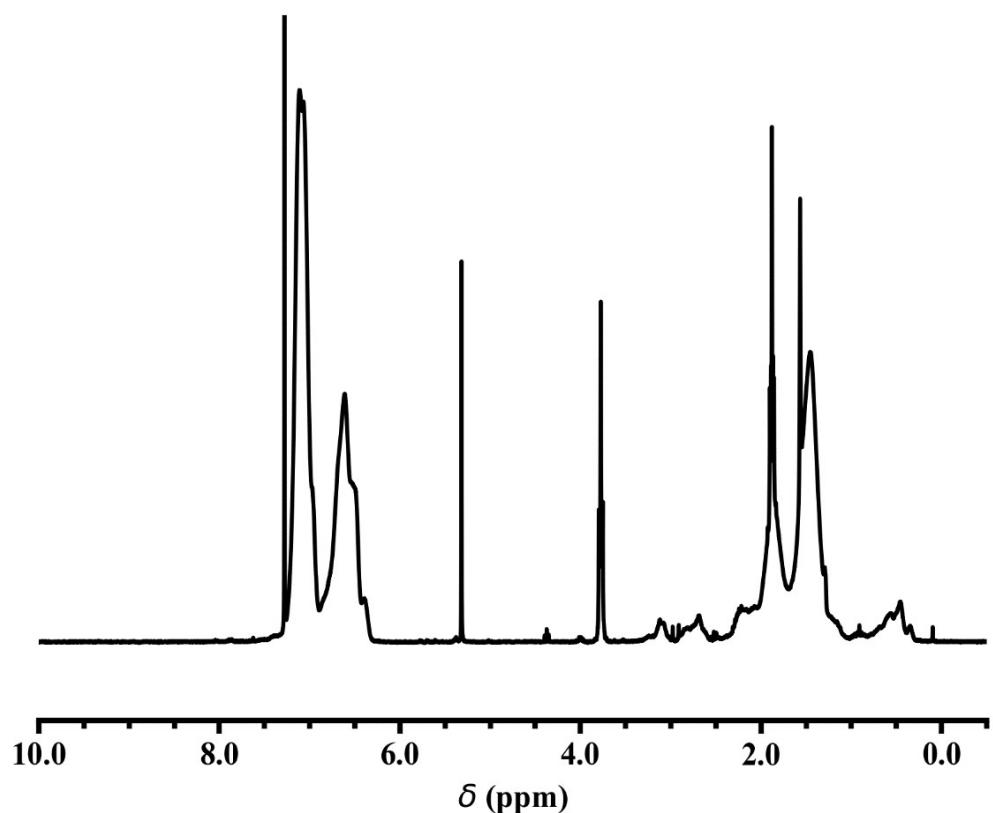
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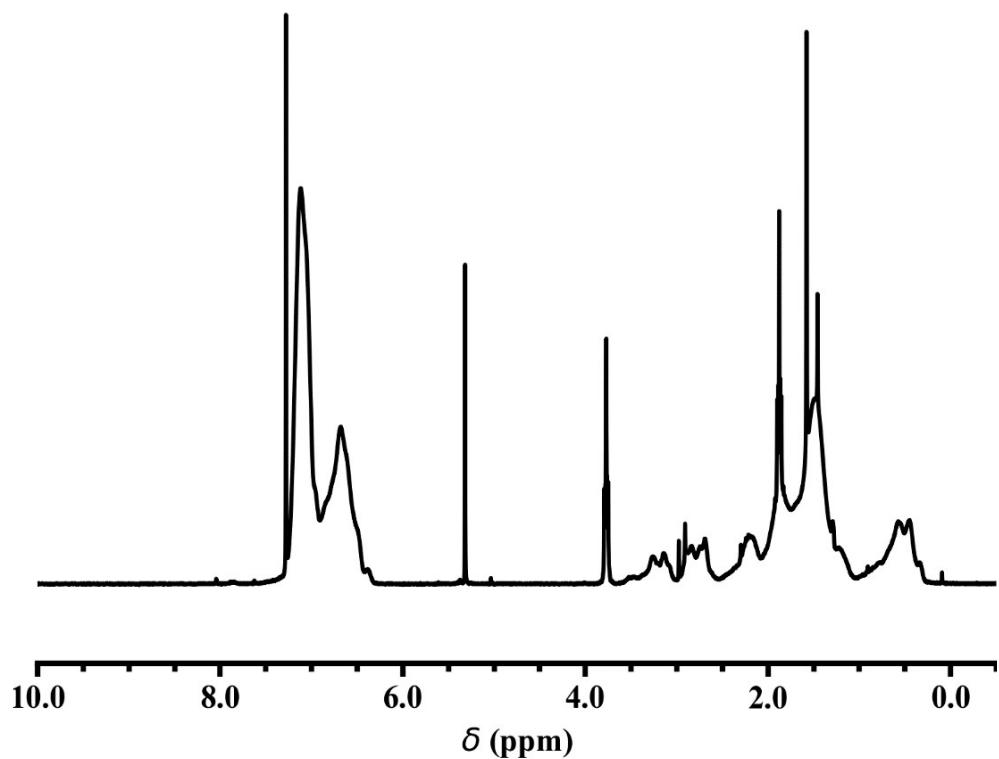
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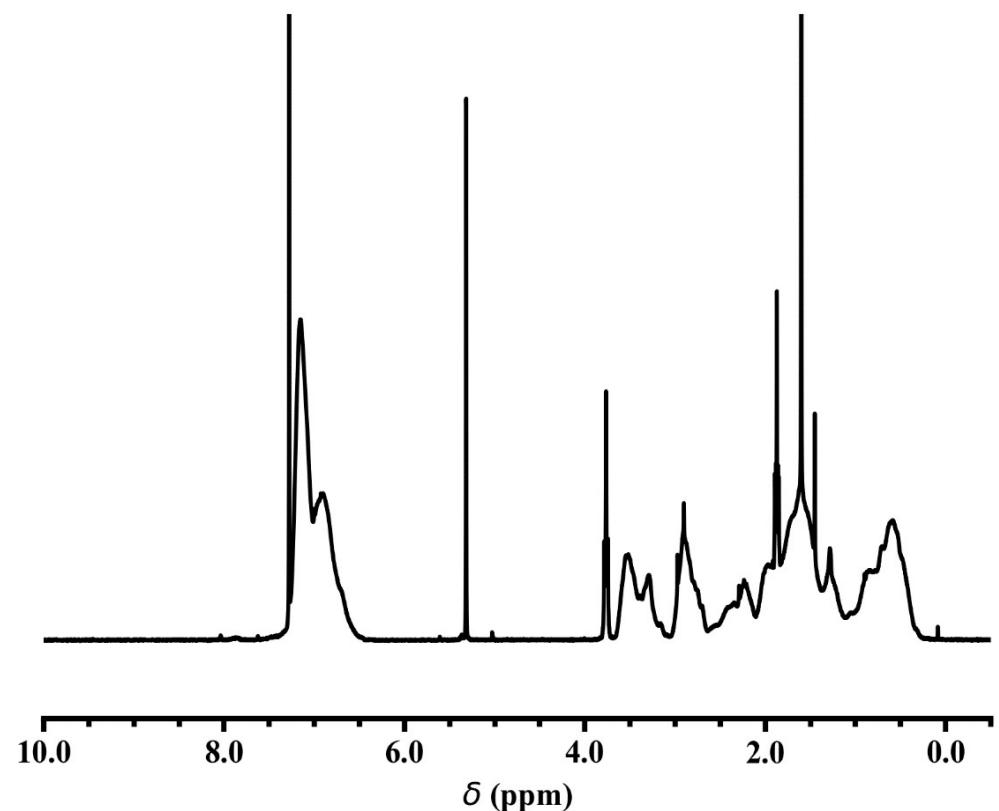
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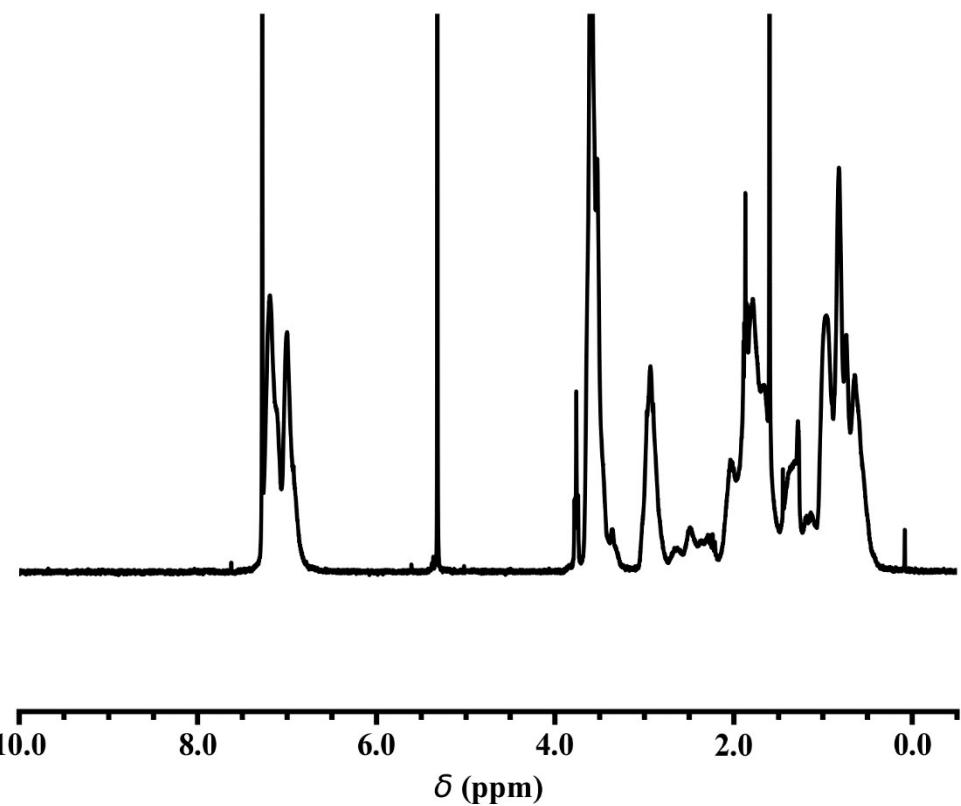
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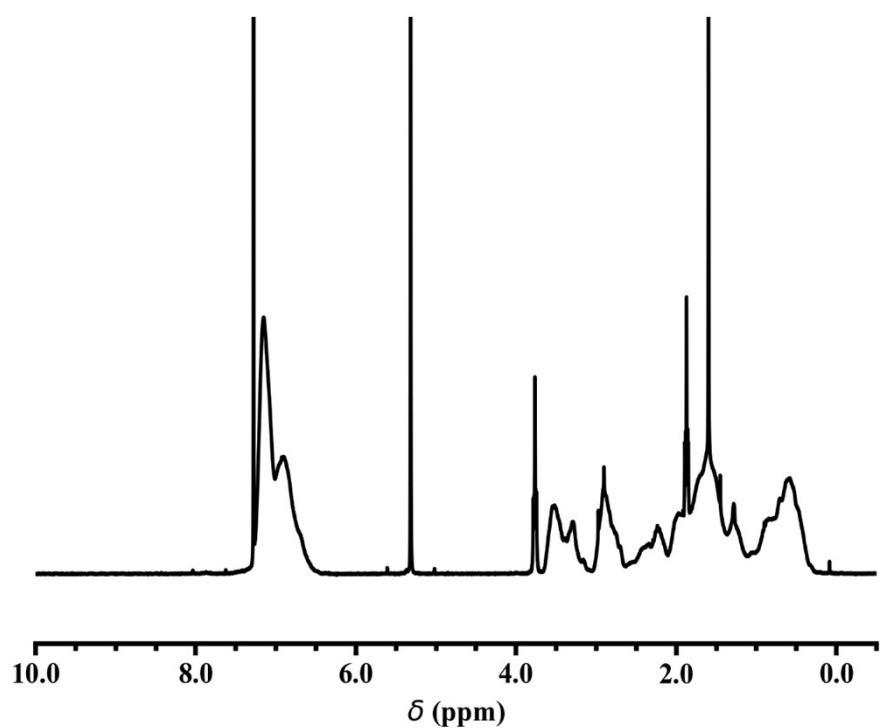
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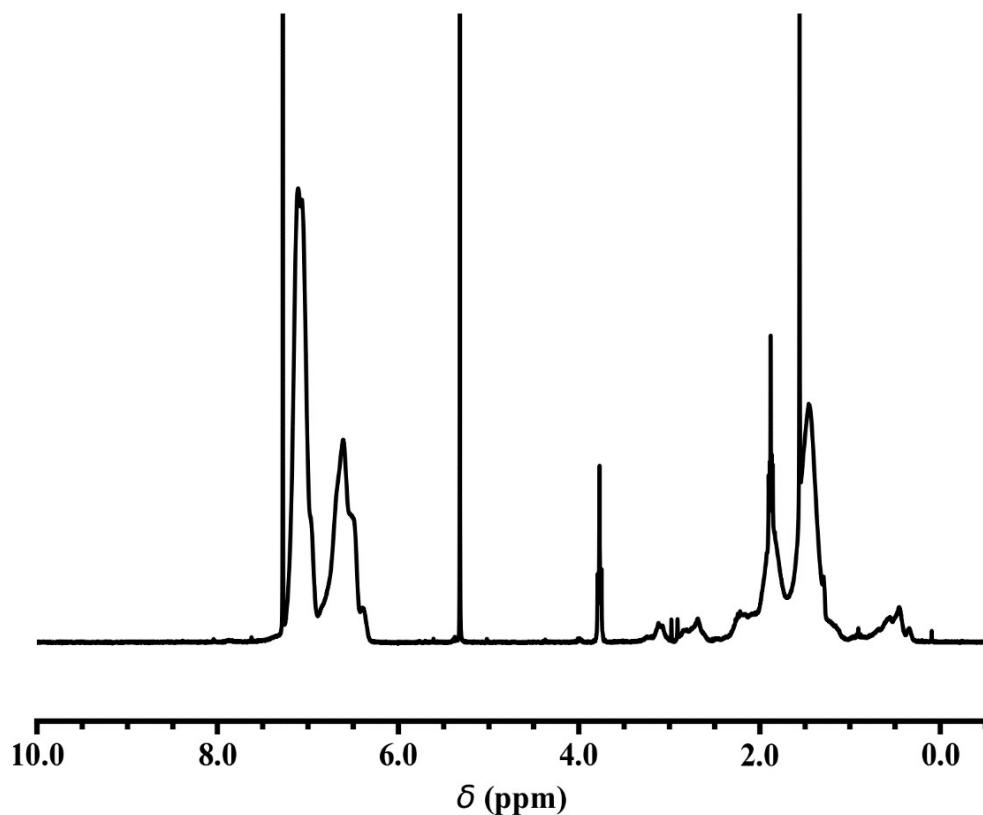
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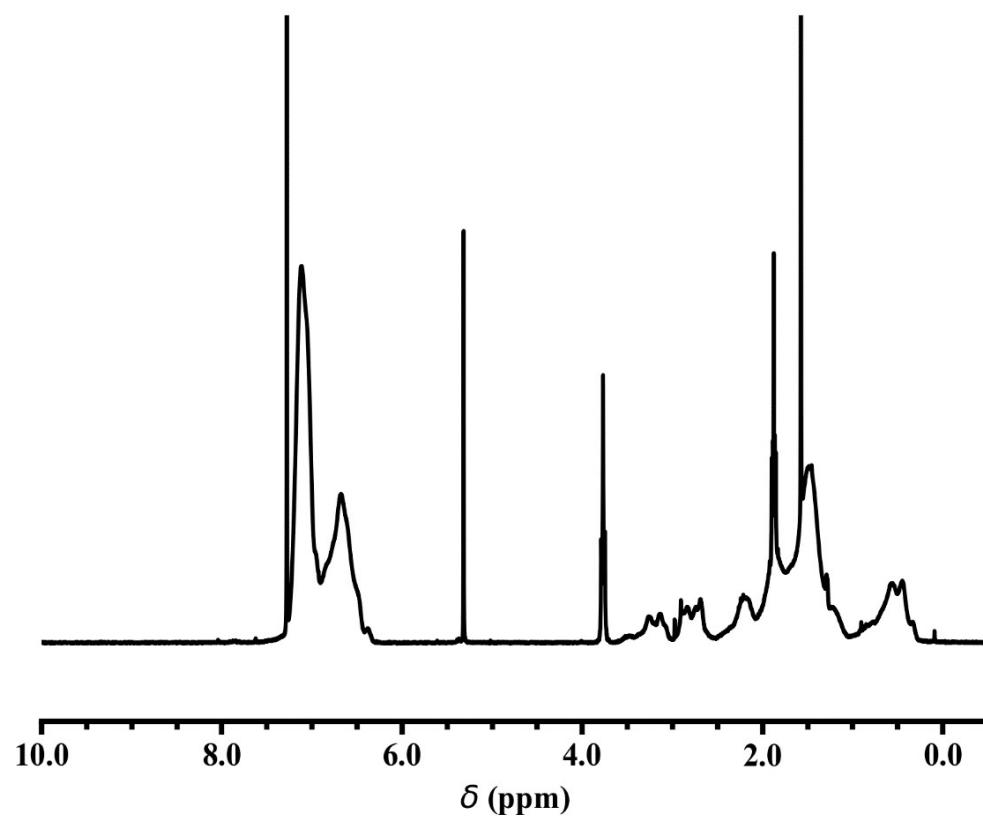
**Figure S27.** <sup>1</sup>H NMR spectrum of polymer U7 (300 MHz, CDCl<sub>3</sub>).



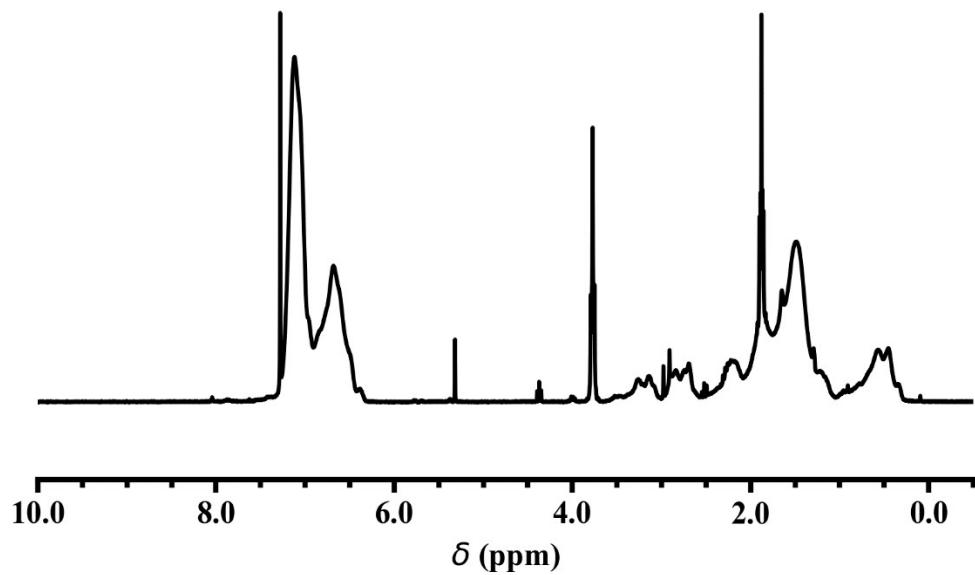
**Figure S28.** <sup>1</sup>H NMR spectrum of polymer U8 (300 MHz, CDCl<sub>3</sub>).



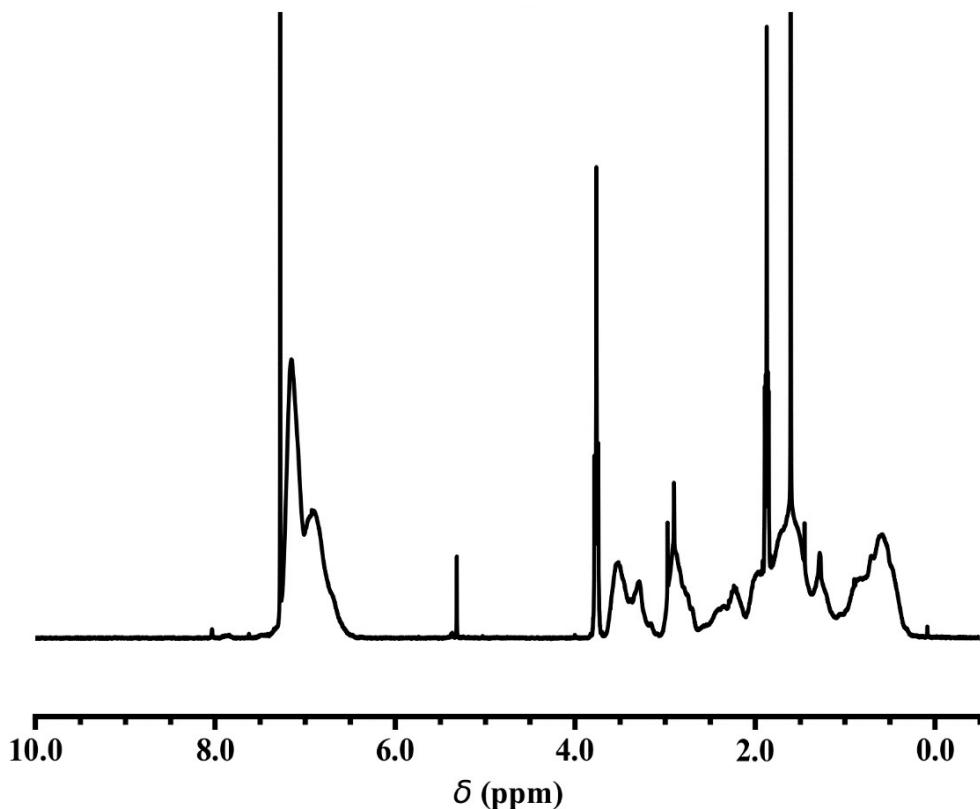
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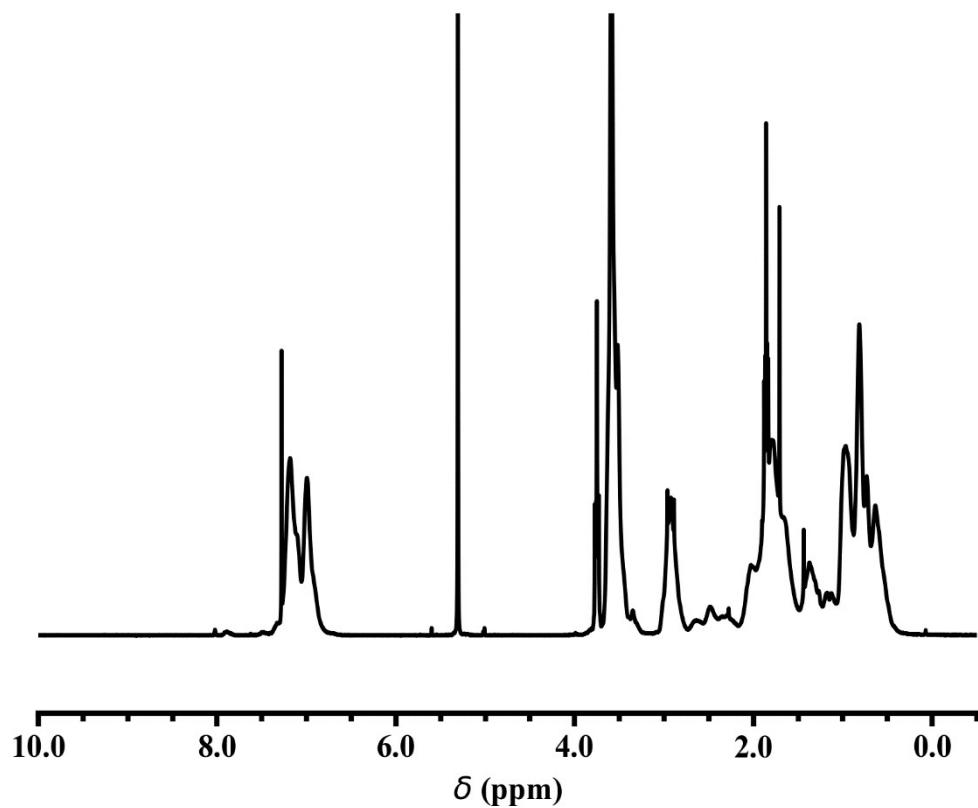
**Figure S30.** <sup>1</sup>H NMR spectrum of polymer **U10** (300 MHz, CDCl<sub>3</sub>).



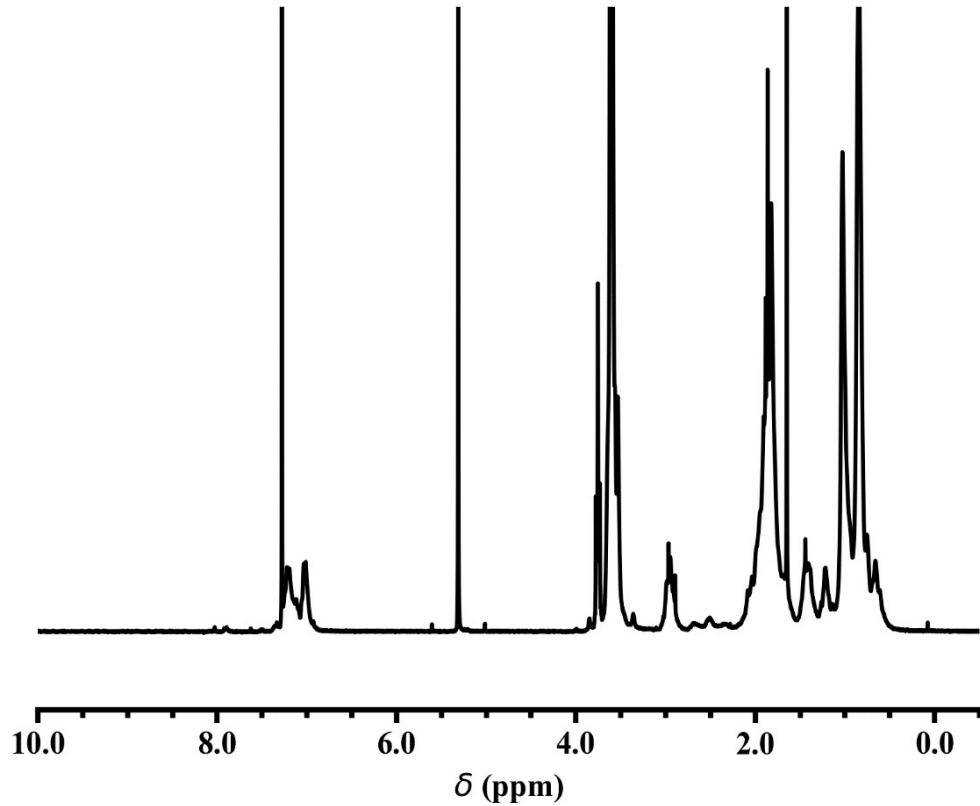
**Figure S31.** <sup>1</sup>H NMR spectrum of polymer **U11** (300 MHz, CDCl<sub>3</sub>).



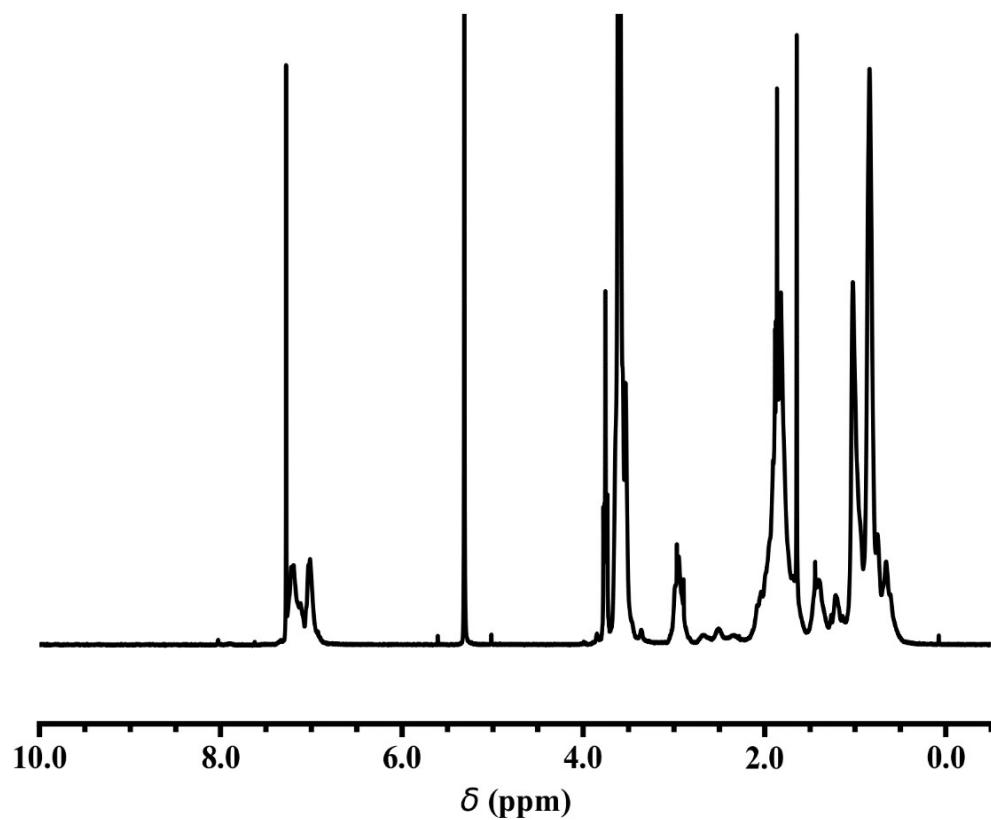
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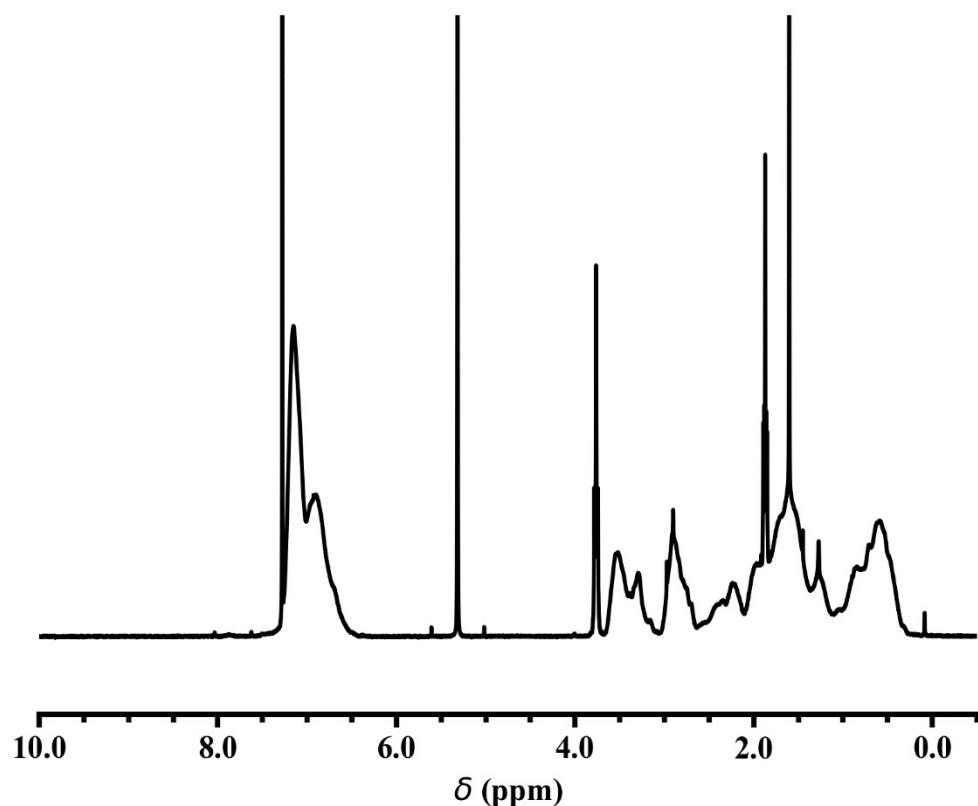
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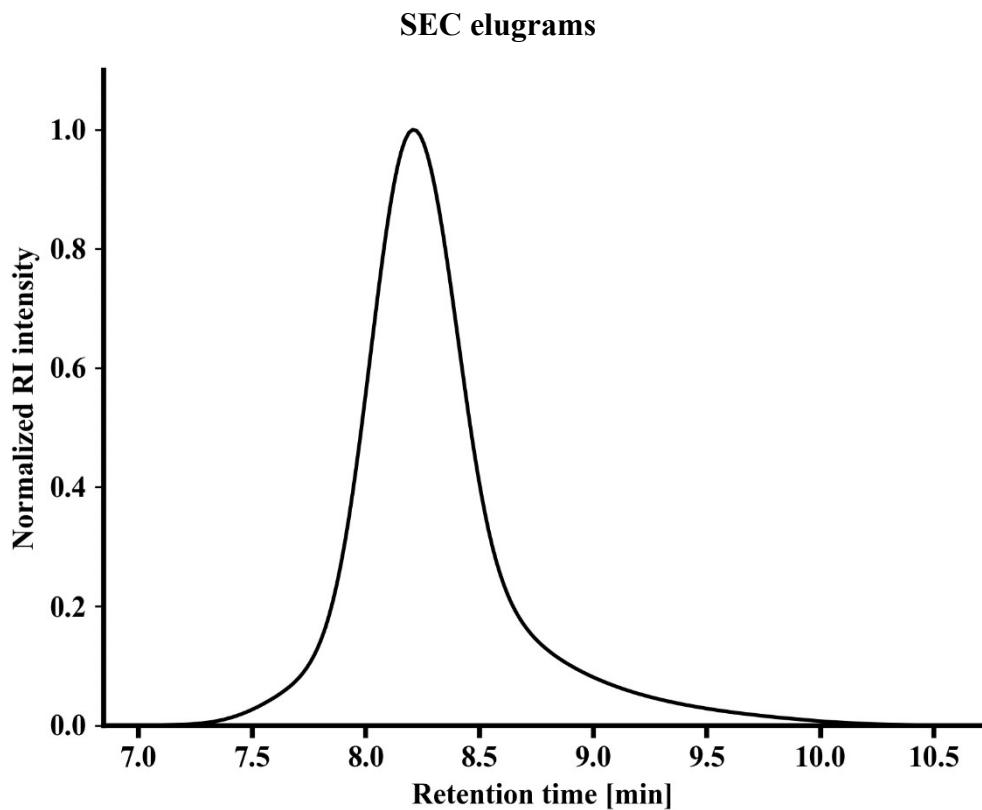
**Figure S34.** <sup>1</sup>H NMR spectrum of polymer **U14** (300 MHz, CDCl<sub>3</sub>).



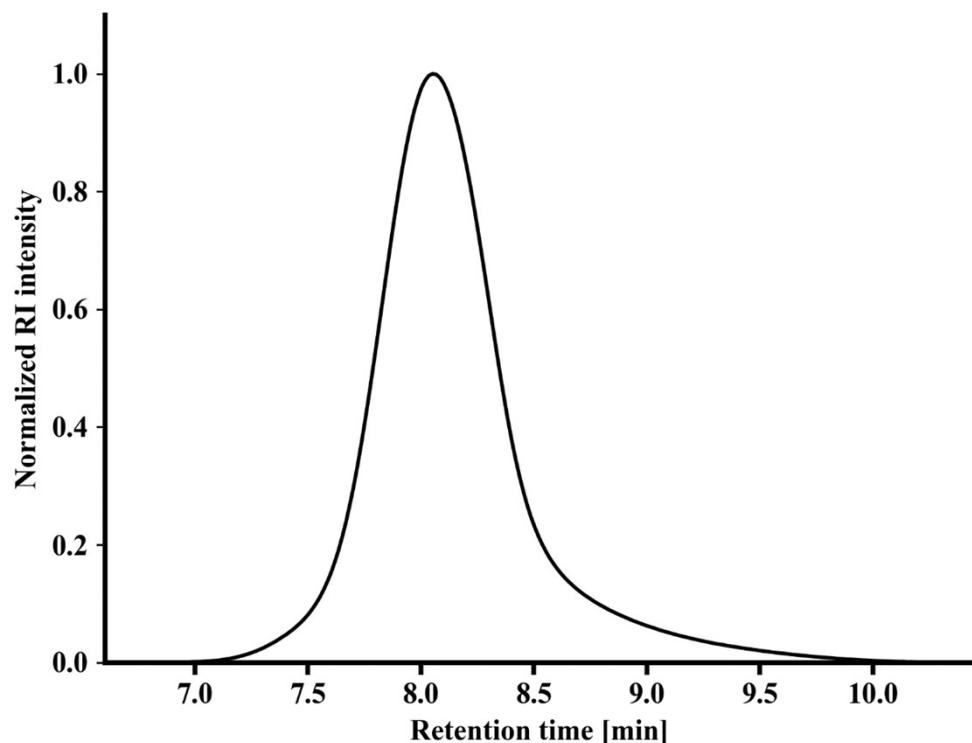
**Figure S35.**  $^1\text{H}$  NMR spectrum of polymer **U15** (300 MHz,  $\text{CDCl}_3$ ).



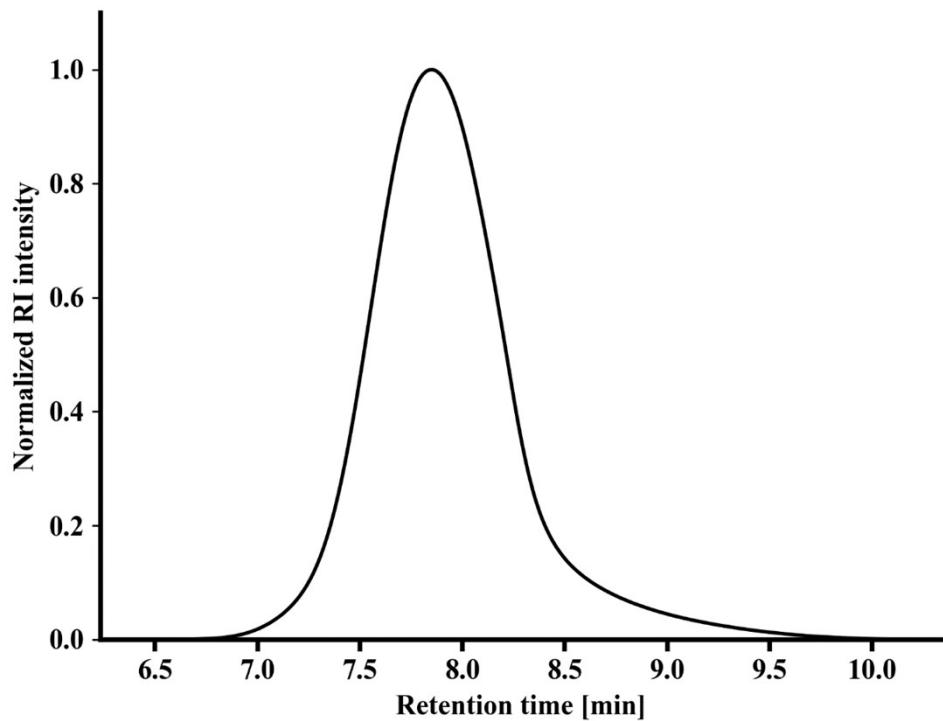
**Figure S36.**  $^1\text{H}$  NMR spectrum of polymer **U16** (300 MHz,  $\text{CDCl}_3$ ).



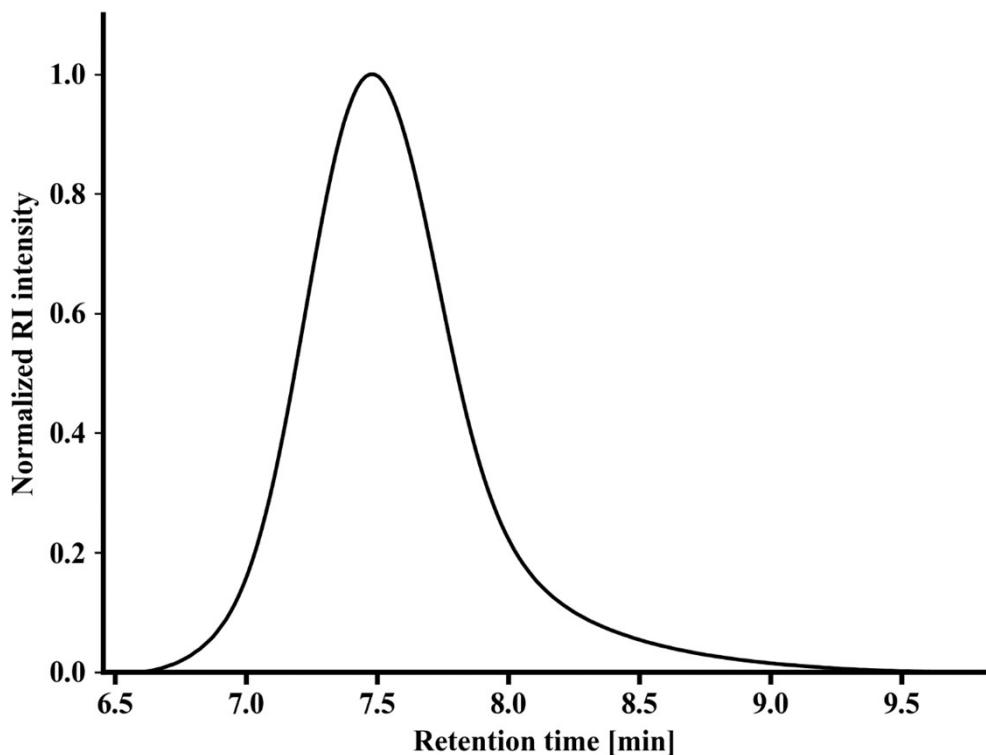
**Figure S37.** SEC-curve of polymer **P1** (chloroform/isopropanol/triethylamine [94/2/4], PS-standard).



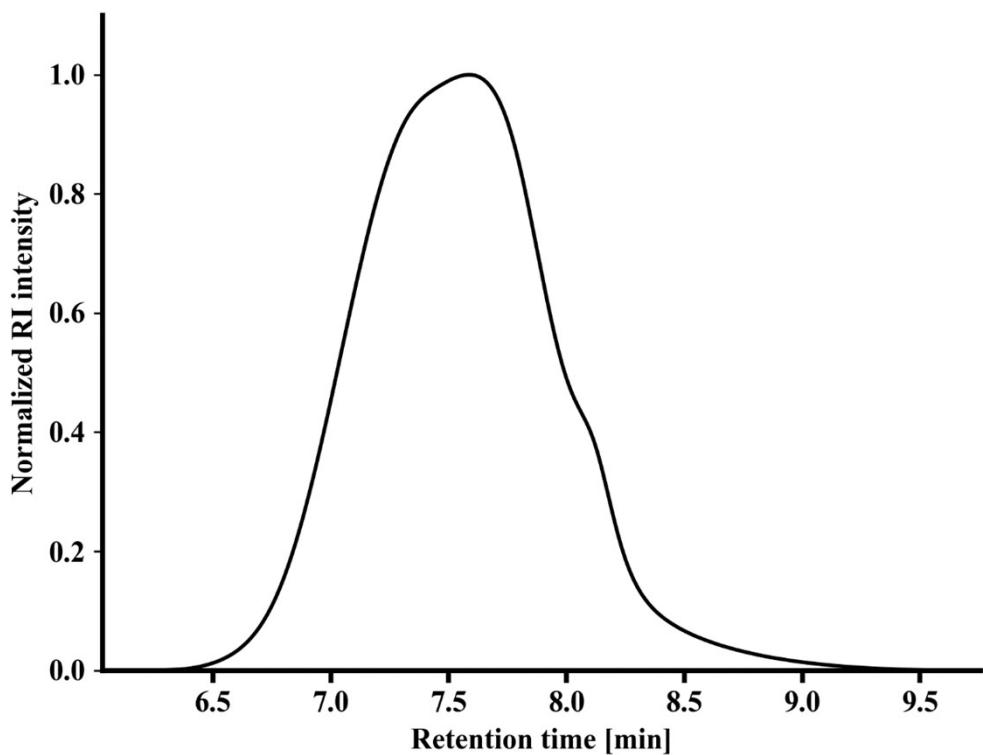
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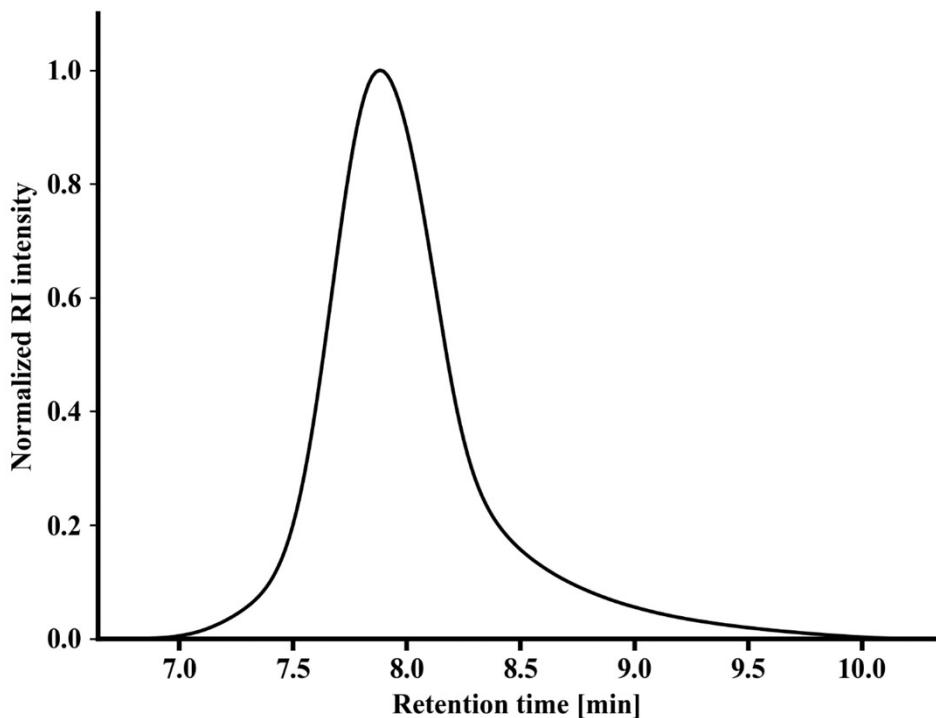
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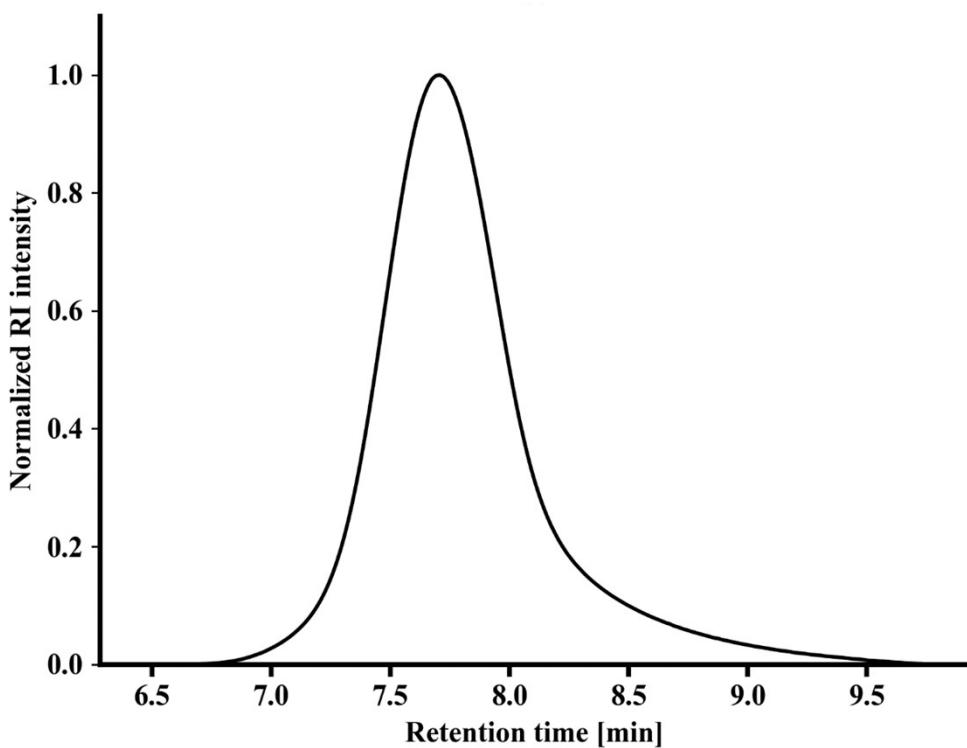
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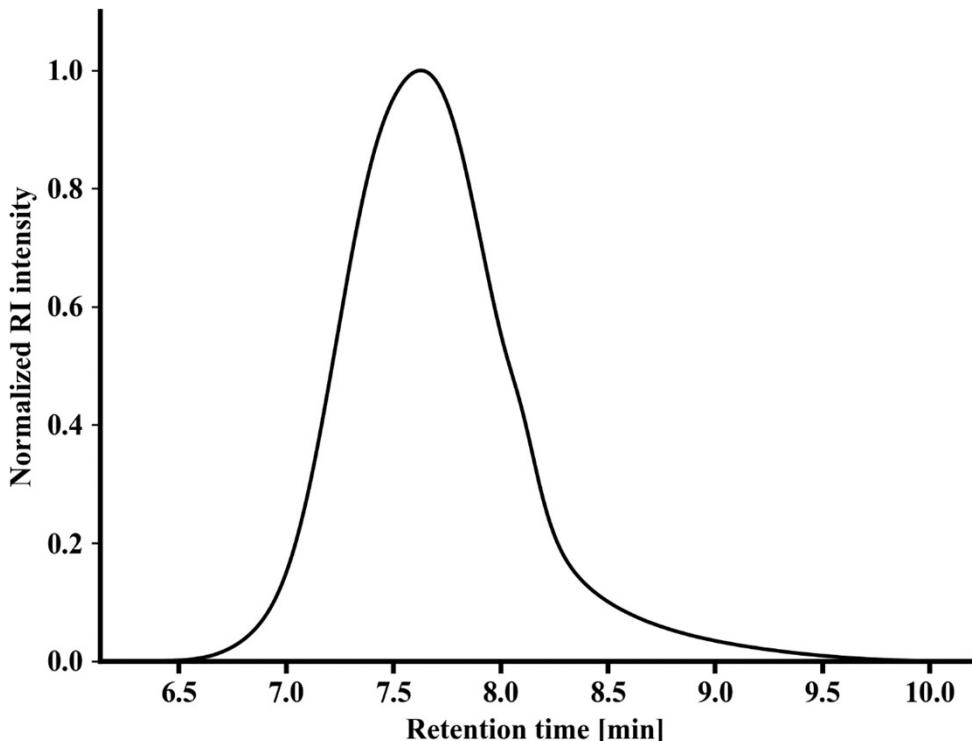
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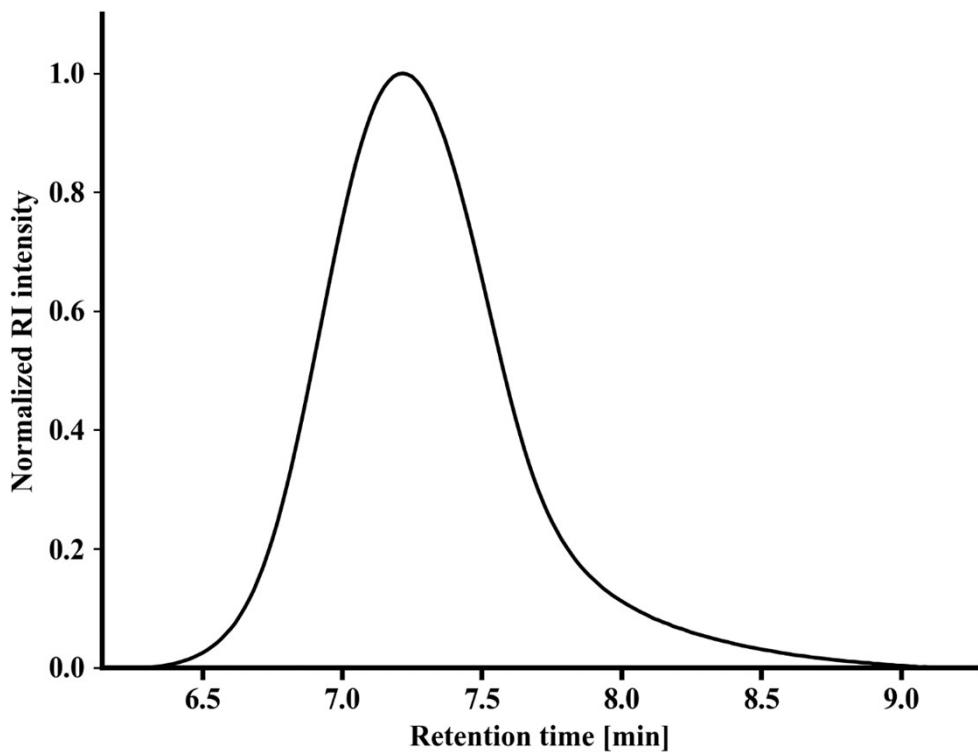
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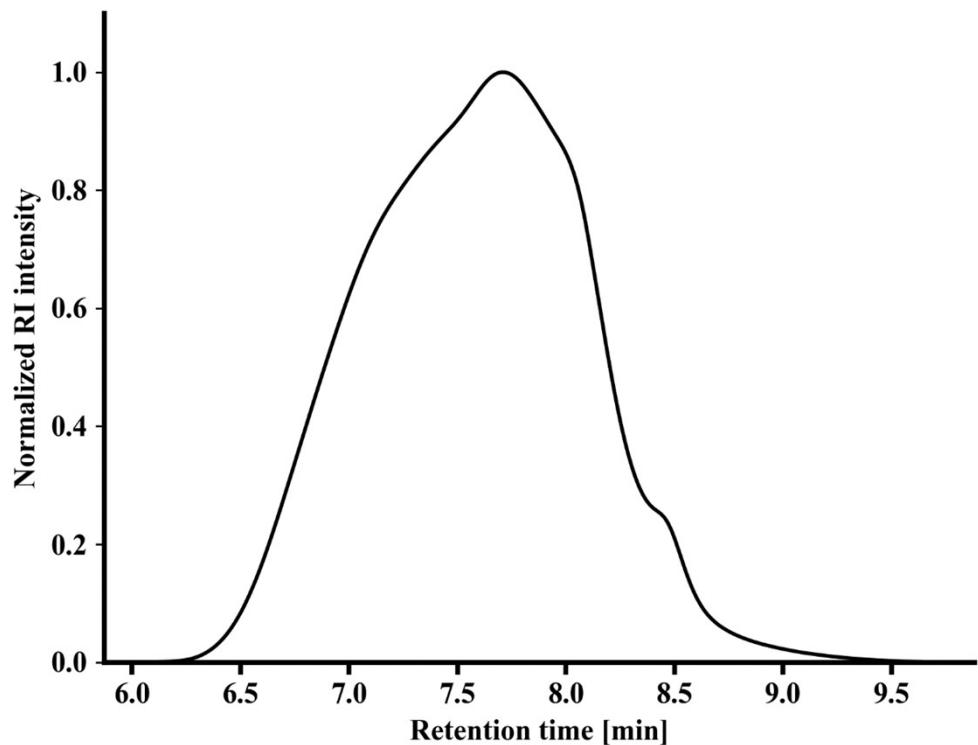
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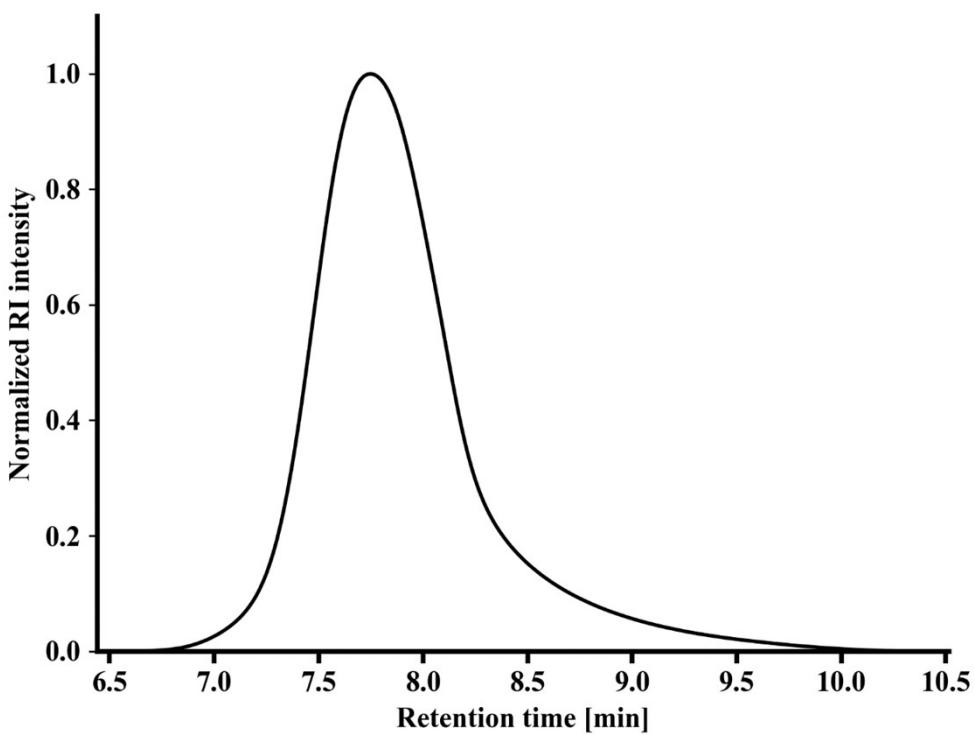
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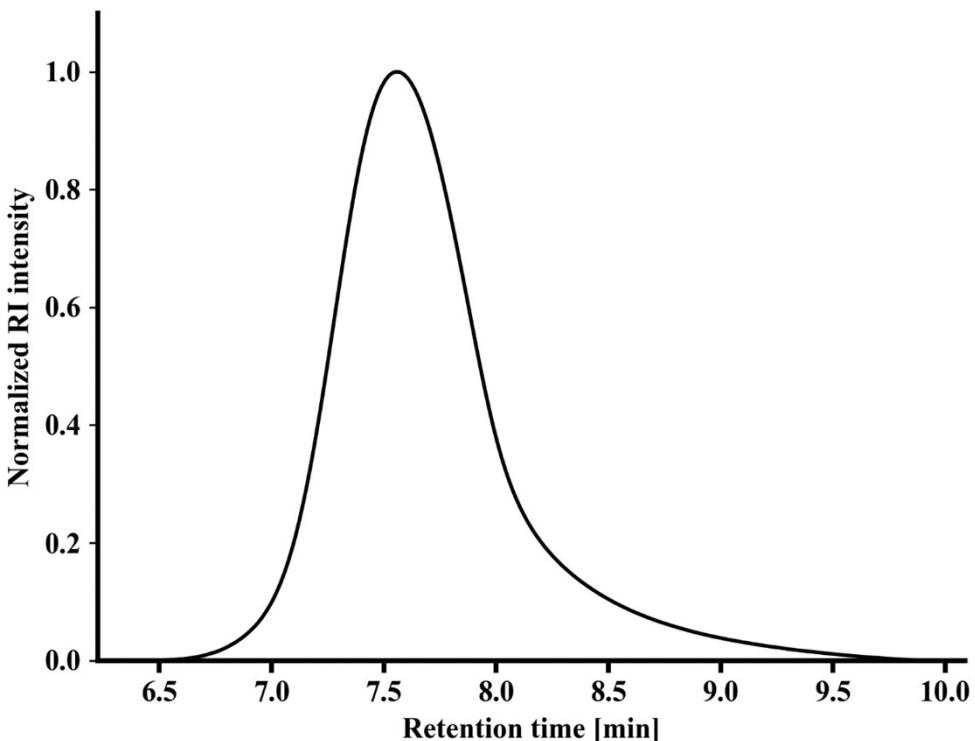
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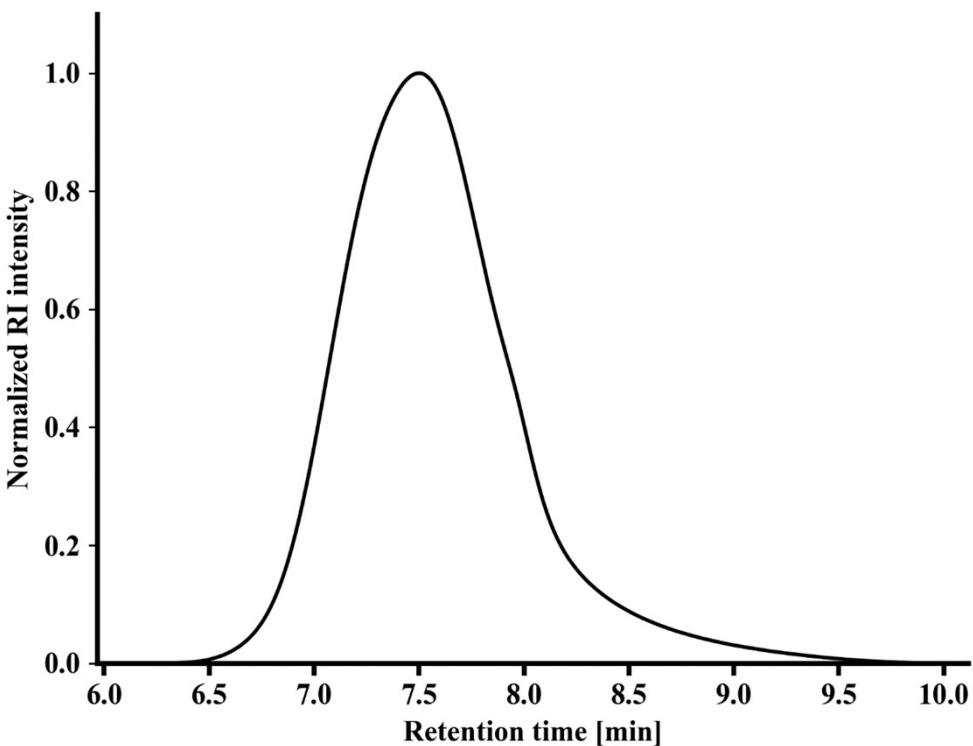
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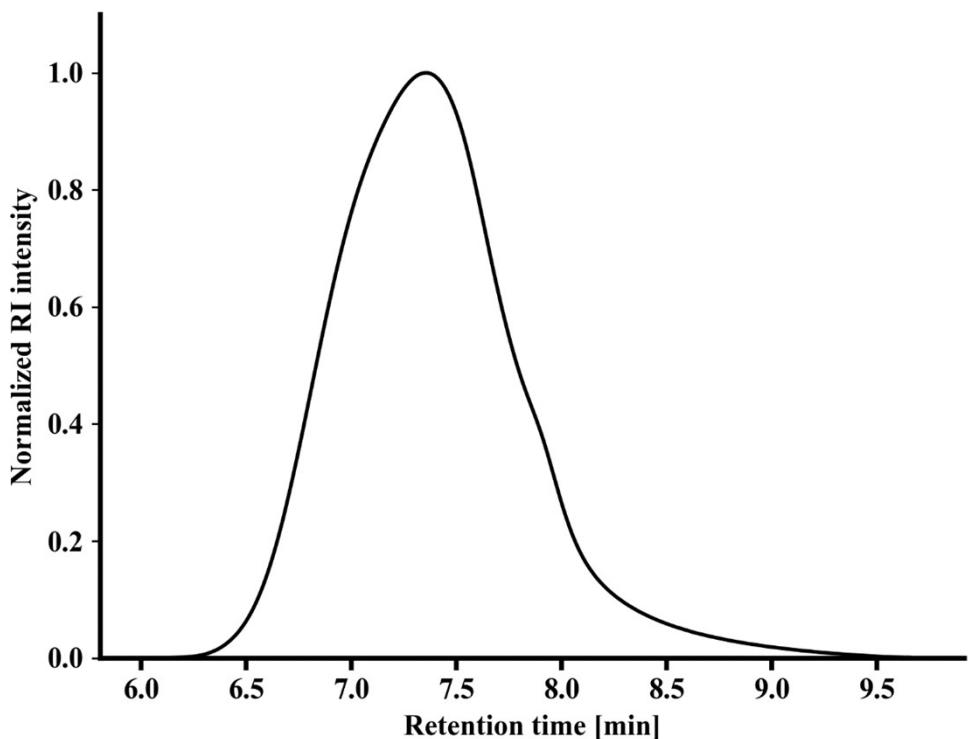
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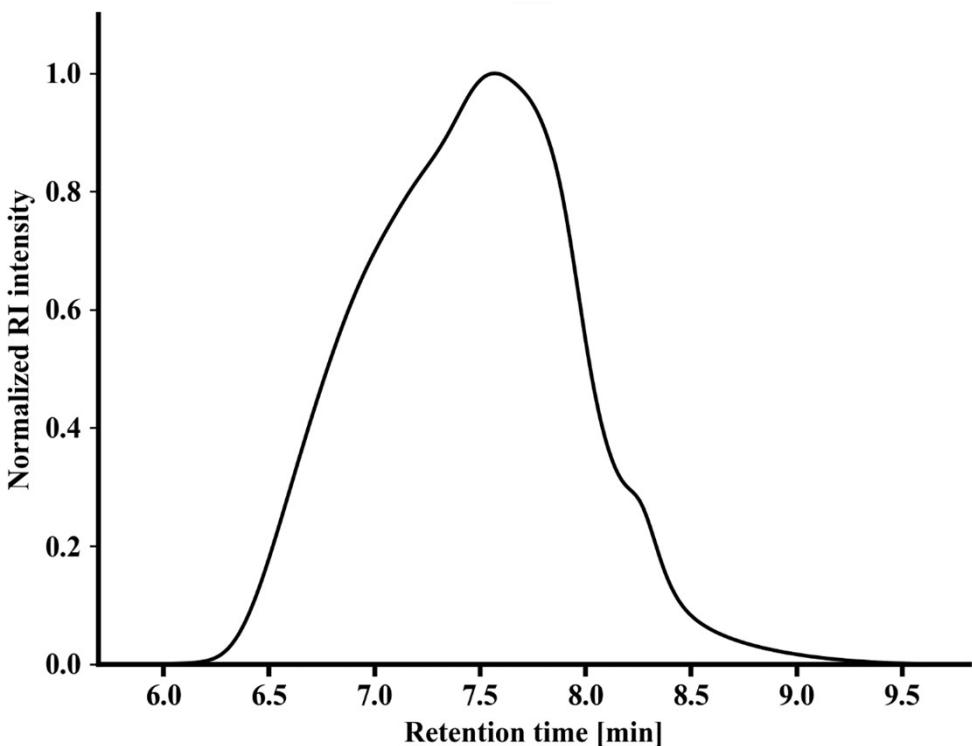
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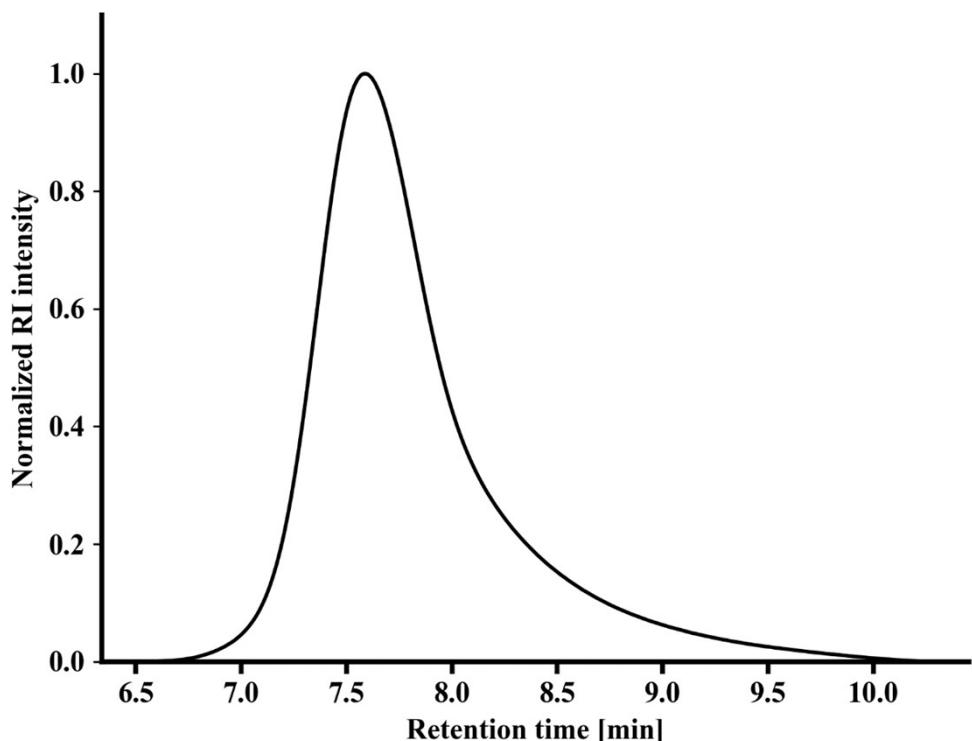
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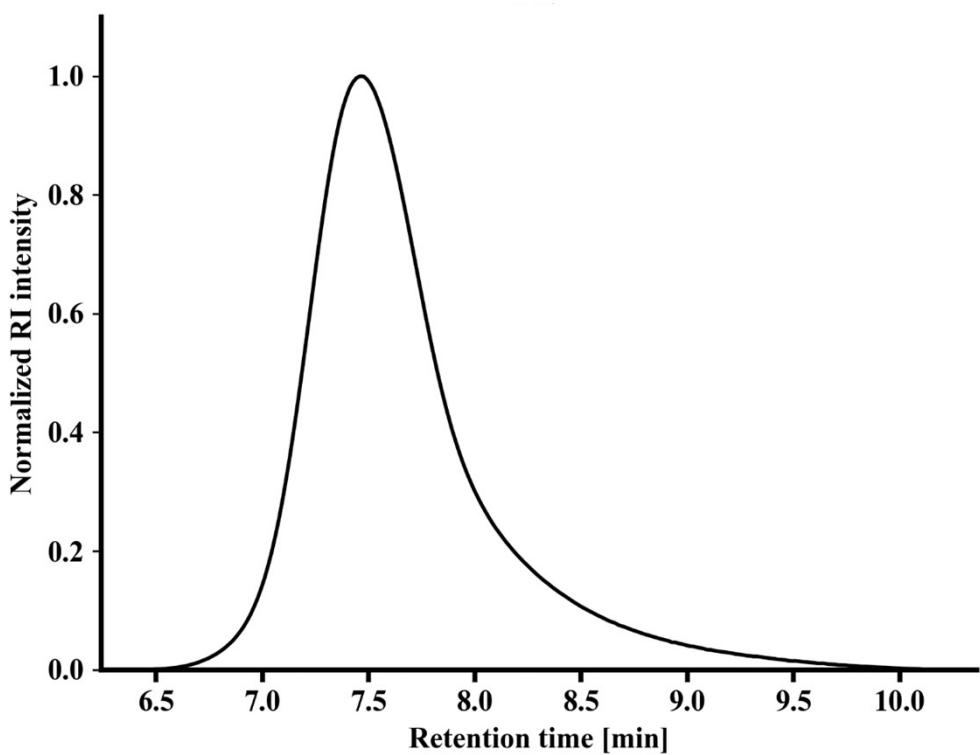
**Figure S50.** SEC-curve of polymer **P14** (chloroform/isopropanol/triethylamine [94/2/4], PMMA-standard).



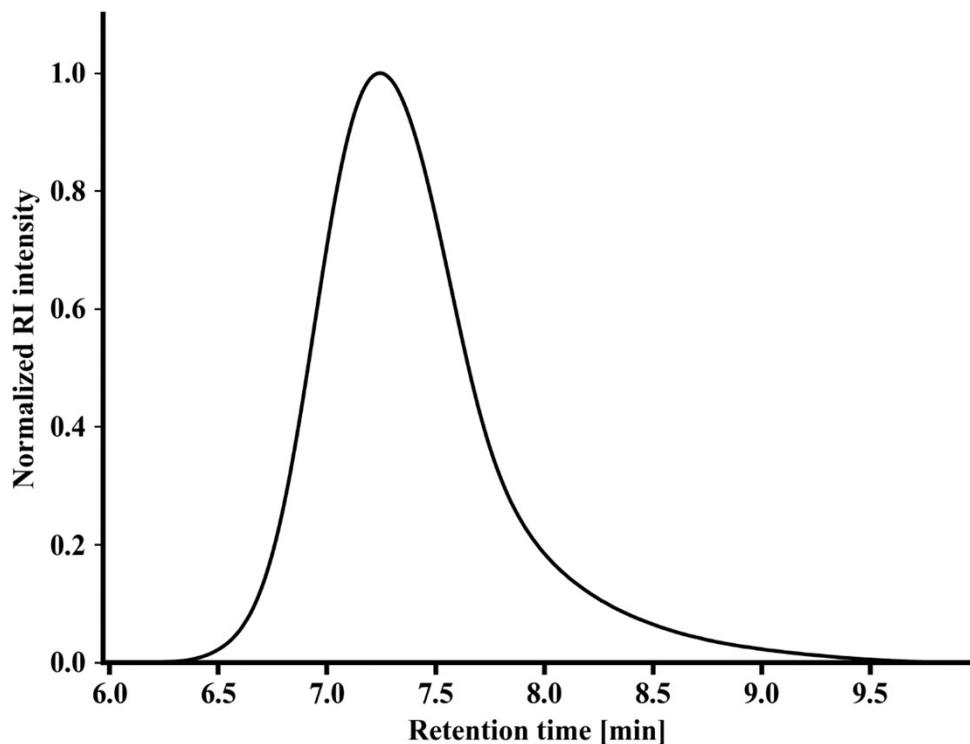
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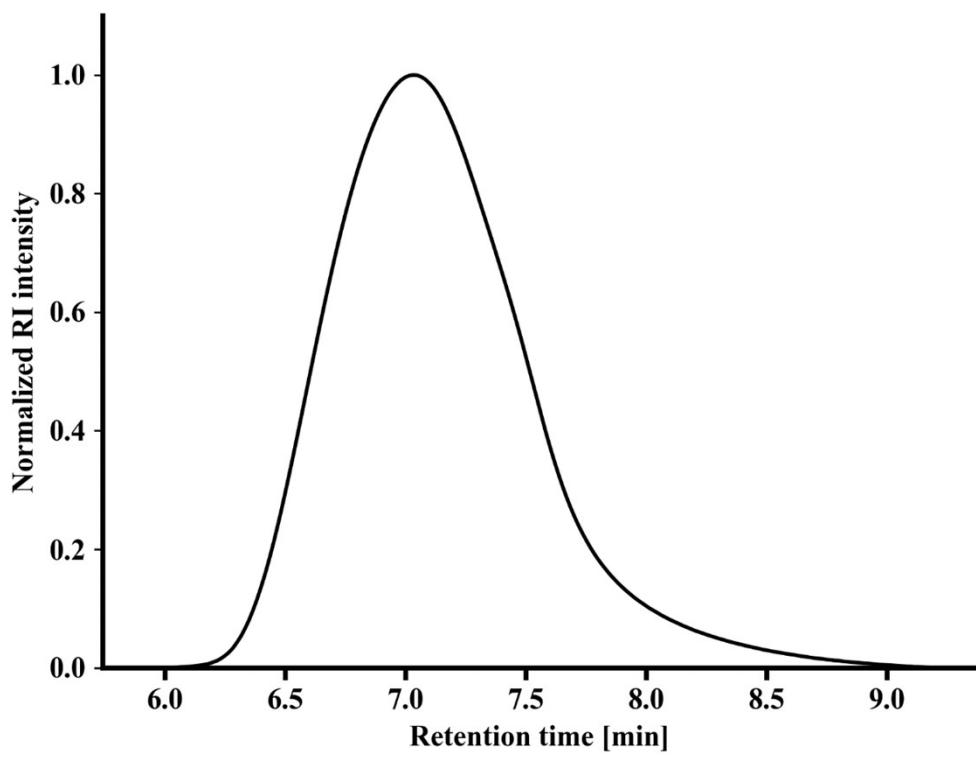
**Figure S52.** SEC-curve of polymer **P16** (chloroform/isopropanol/triethylamine [94/2/4], PS-standard).



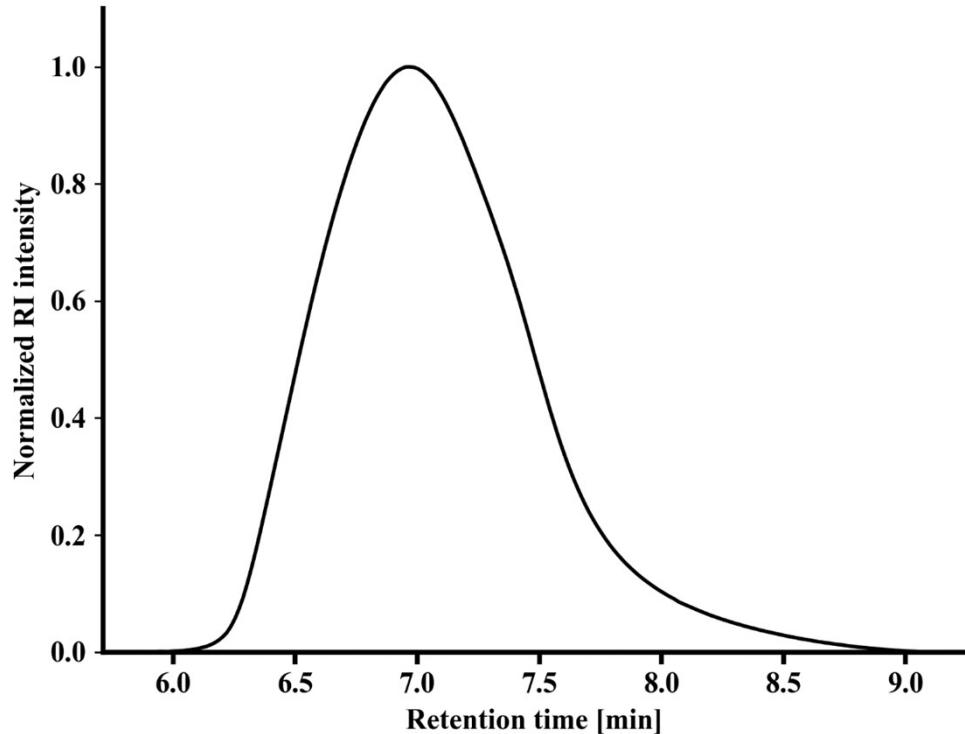
**Figure S53.** SEC-curve of polymer **P17** (chloroform/isopropanol/triethylamine [94/2/4], PS-standard).



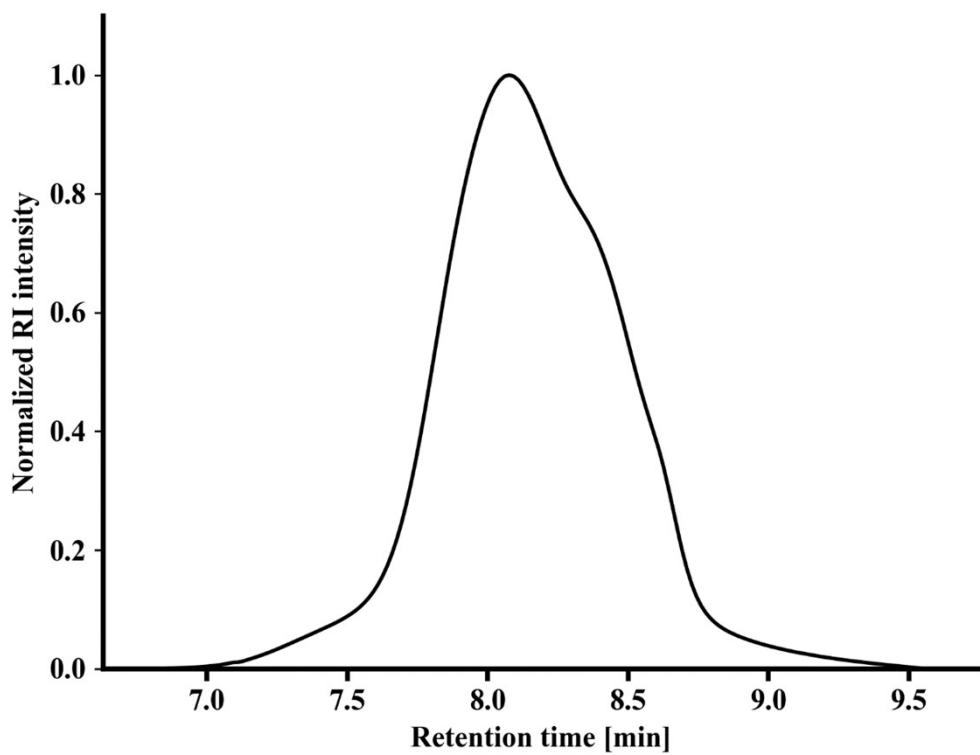
**Figure S54.** SEC-curve of polymer **P18** (chloroform/isopropanol/triethylamine [94/2/4], PMMA-standard).



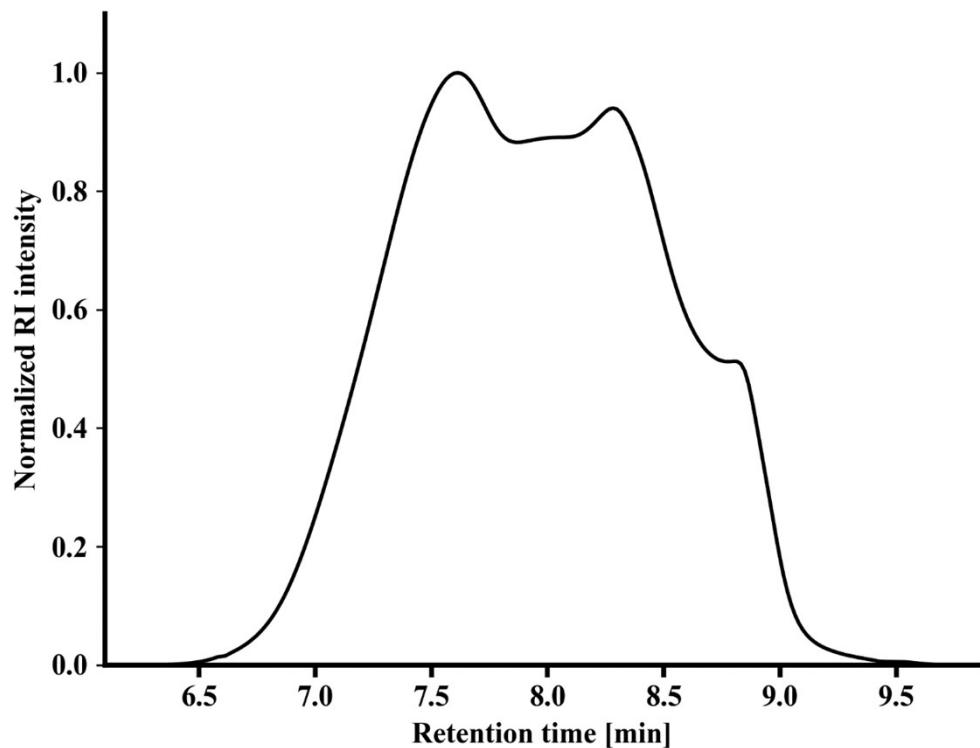
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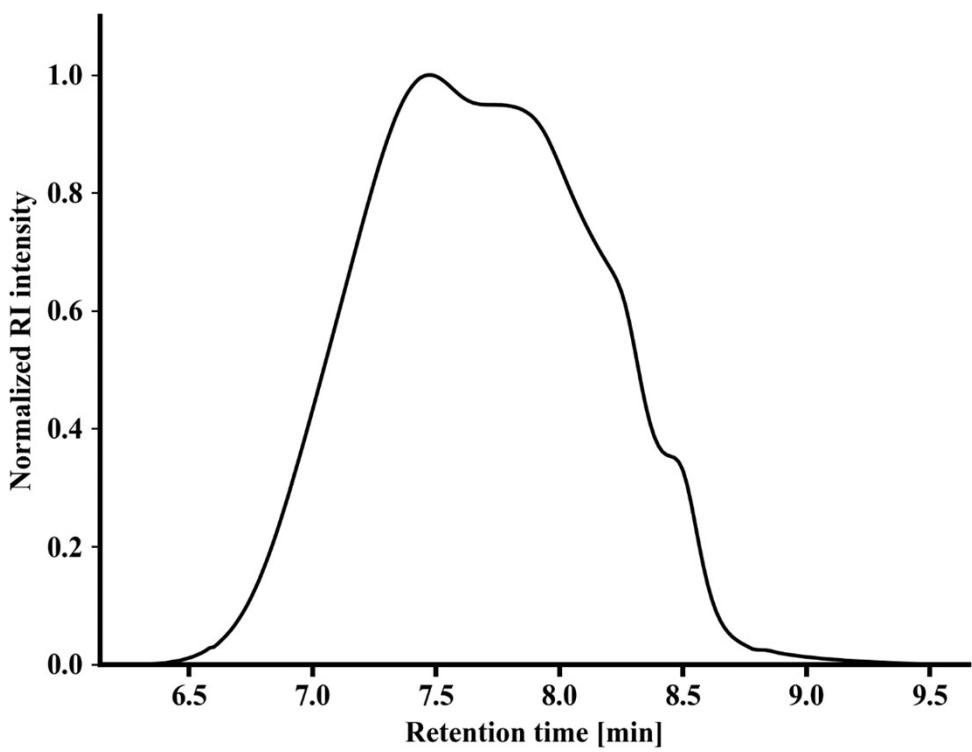
**Figure S56.** SEC-curve of polymer **P20** (chloroform/isopropanol/triethylamine [94/2/4], PMMA-standard).



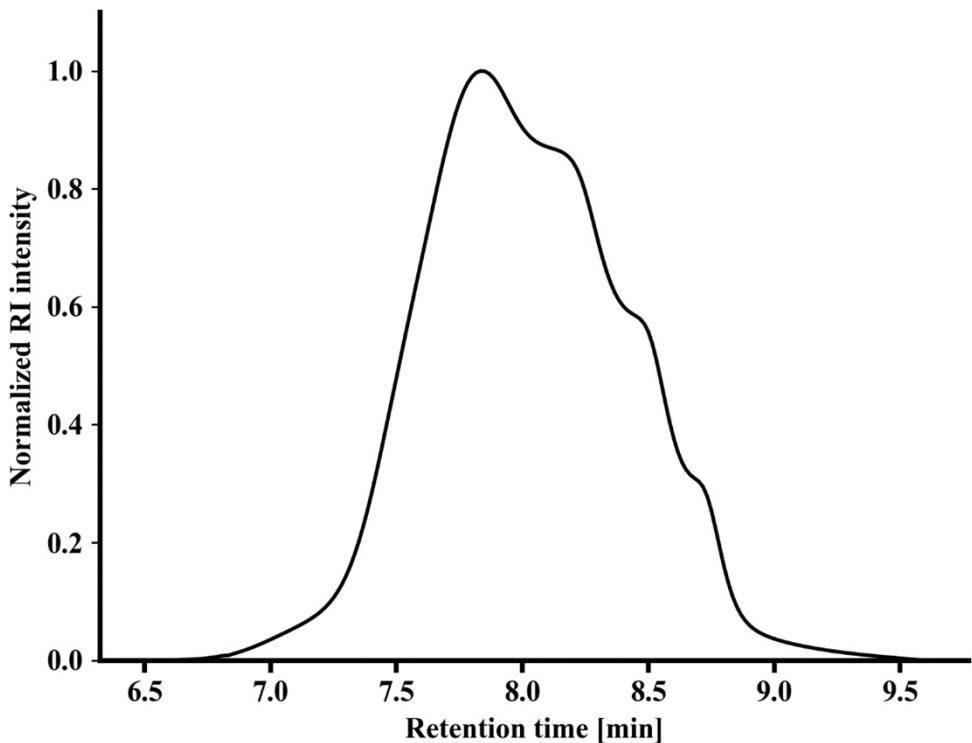
**Figure S57.** SEC-curve of polymer **U1** (chloroform/isopropanol/triethylamine [94/2/4], PS-standard).



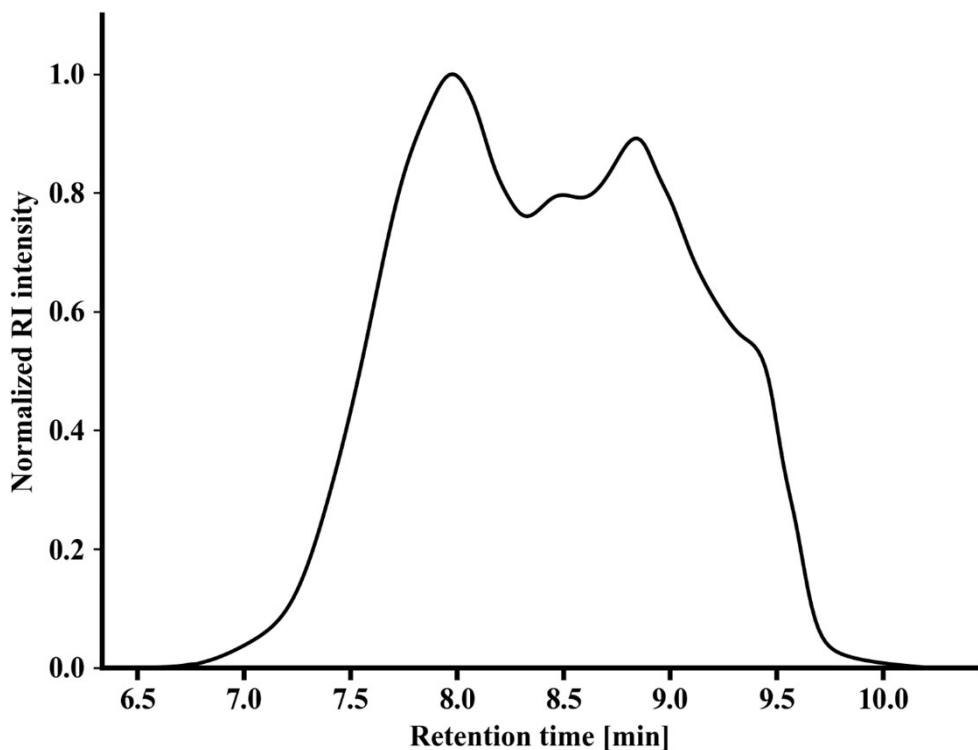
**Figure S58.** SEC-curve of polymer **U2** (chloroform/isopropanol/triethylamine [94/2/4], PMMA-standard).



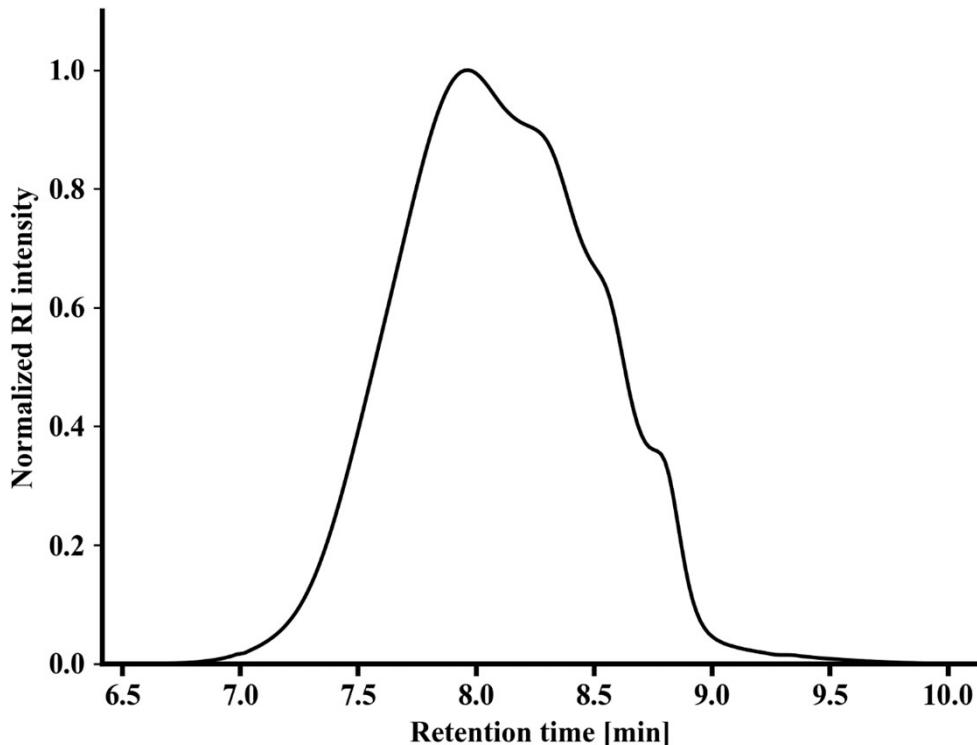
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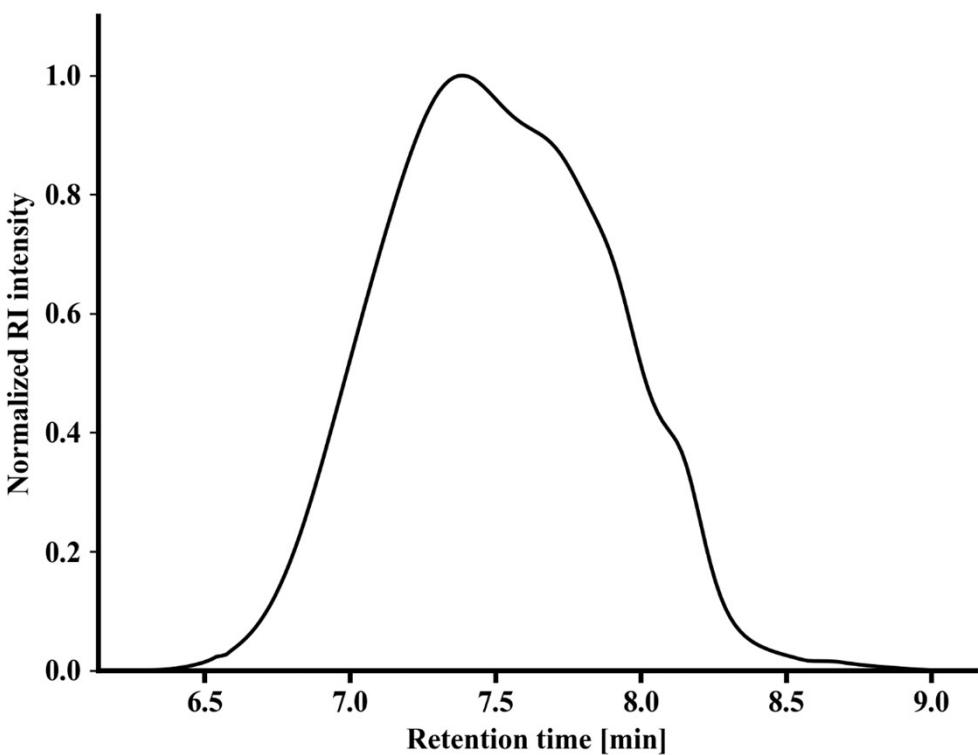
**Figure S60** SEC-curve of polymer **U4** (chloroform/isopropanol/triethylamine [94/2/4], PS-standard).



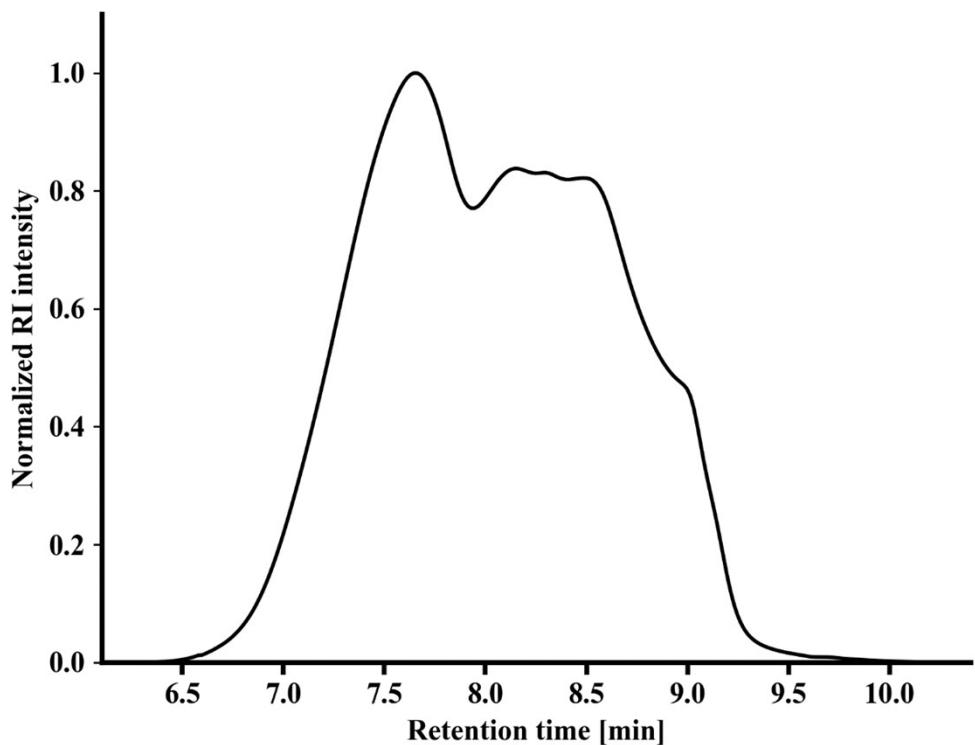
**Figure S61.** SEC-curve of polymer **U5** (chloroform/isopropanol/triethylamine [94/2/4], PS-standard).



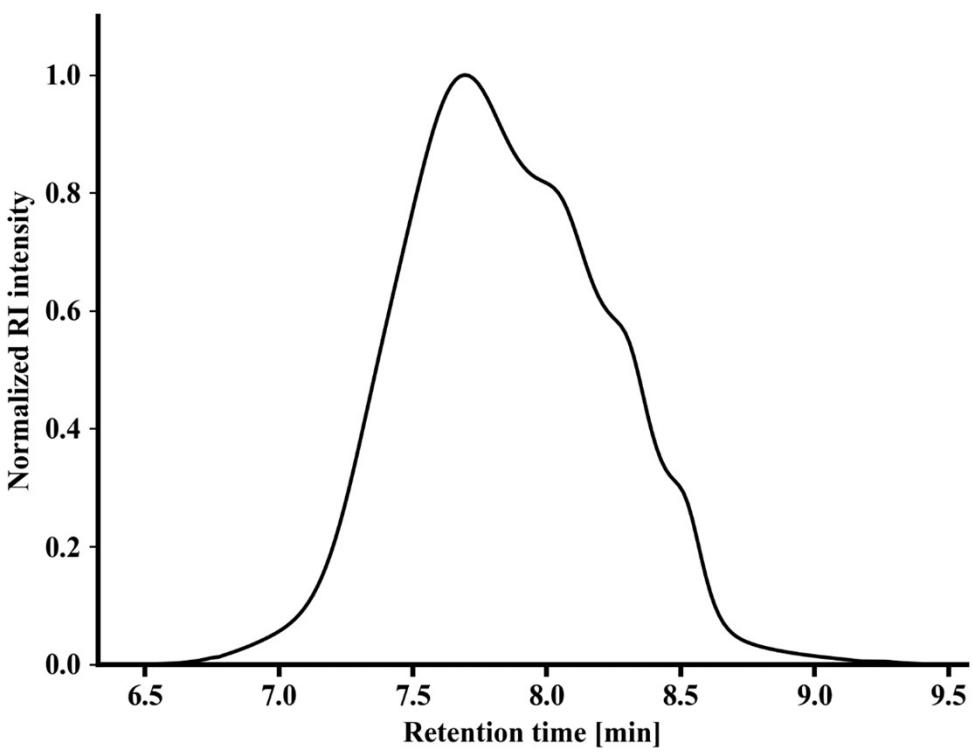
**Figure S62.** SEC-curve of polymer **U6** (chloroform/isopropanol/triethylamine [94/2/4], PMMA-standard).



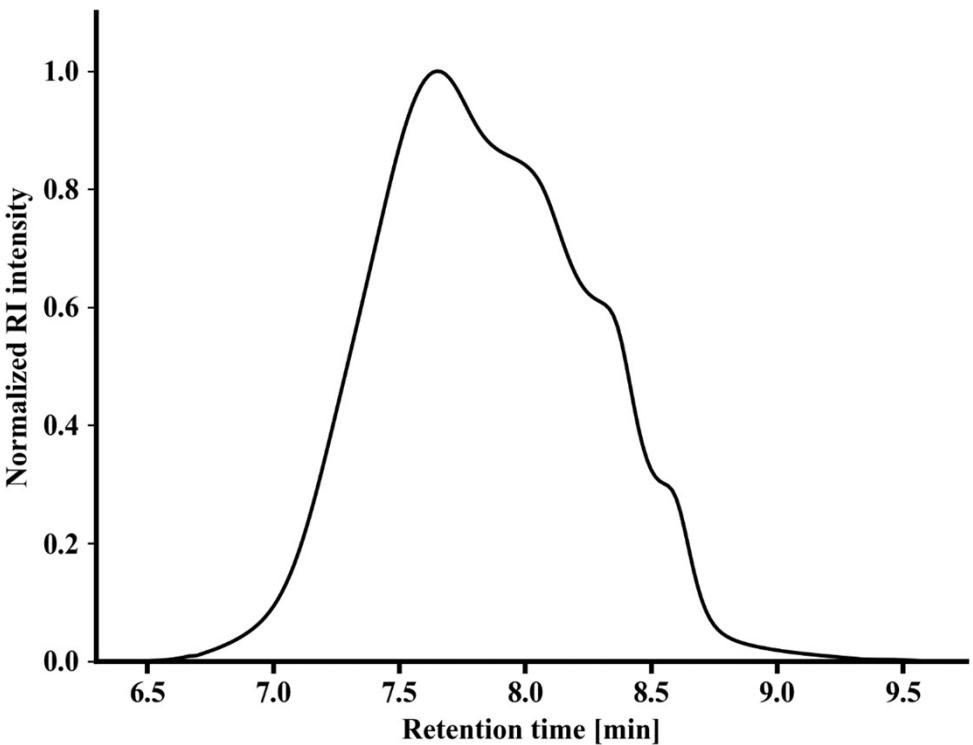
**Figure S63.** SEC-curve of polymer **U7** (chloroform/isopropanol/triethylamine [94/2/4], PMMA-standard).



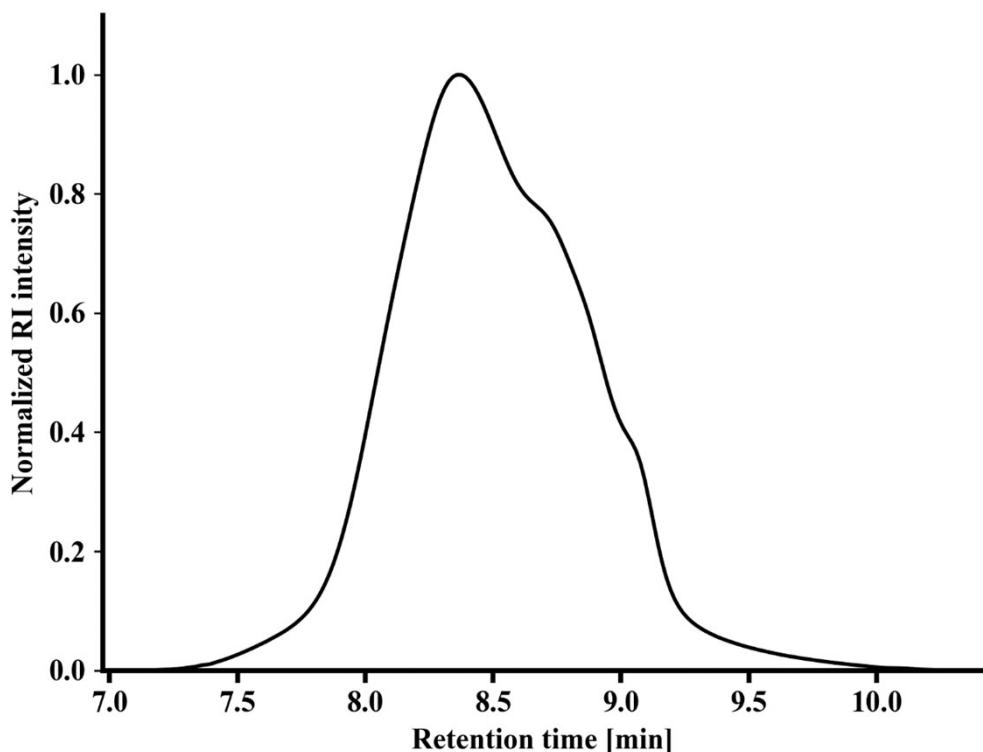
**Figure S64.** SEC-curve of polymer **U8** (chloroform/isopropanol/triethylamine [94/2/4], PMMA-standard).



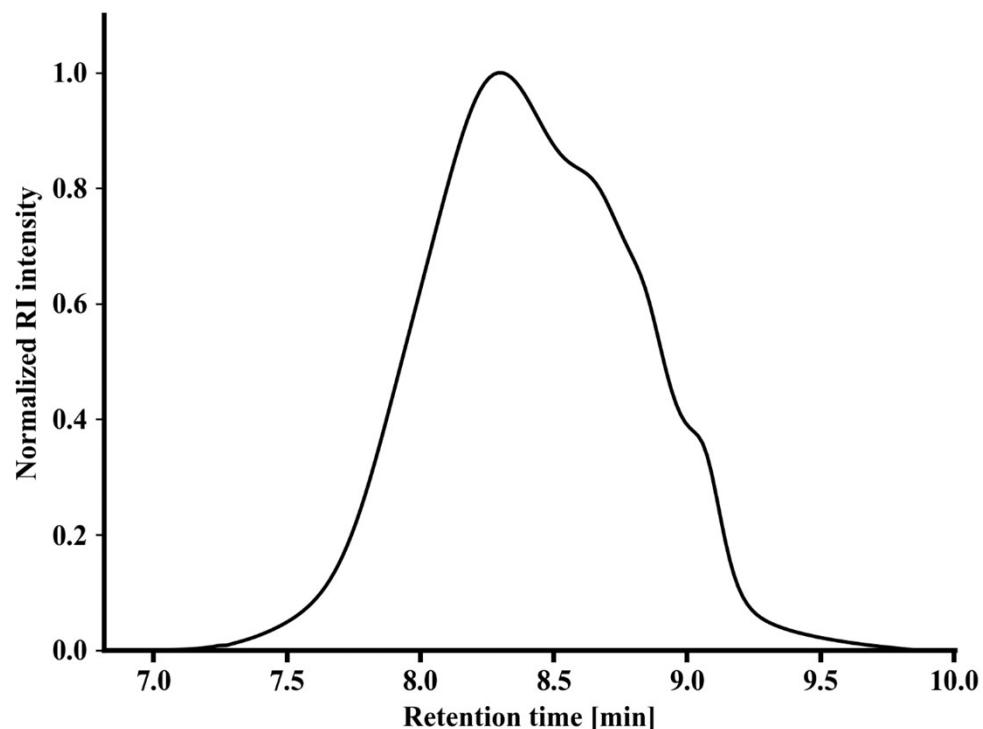
**Figure S65.** SEC-curve of polymer **U9** (chloroform/isopropanol/triethylamine [94/2/4], PS-standard).



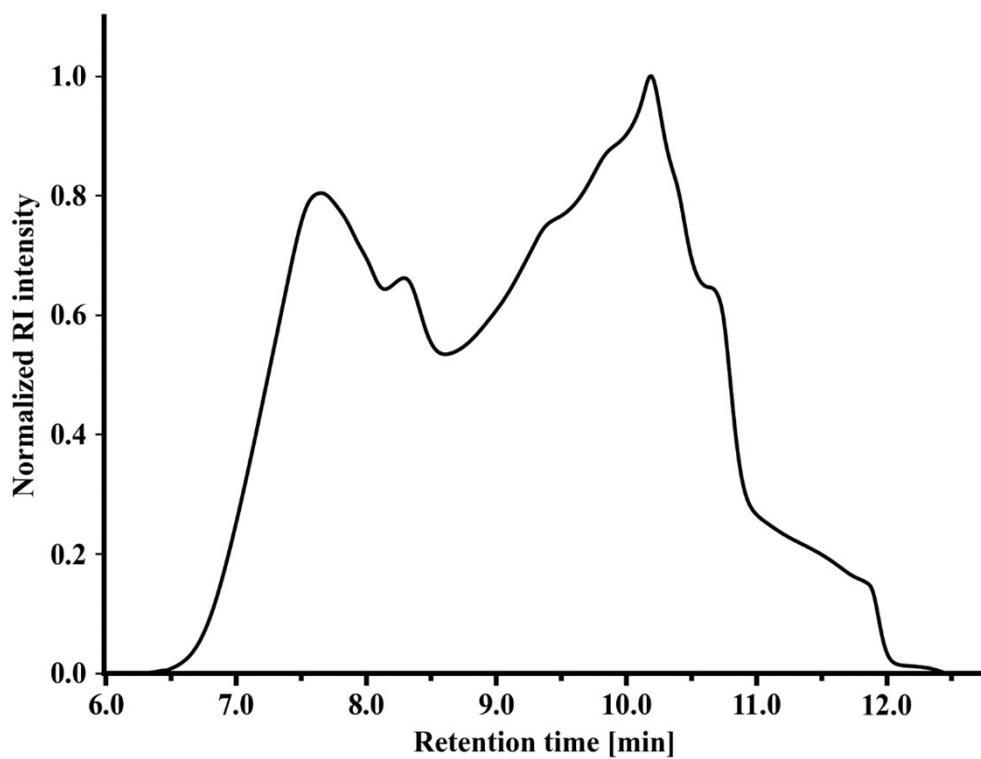
**Figure S66.** SEC-curve of polymer **U10** (chloroform/isopropanol/triethylamine [94/2/4], PS-standard).



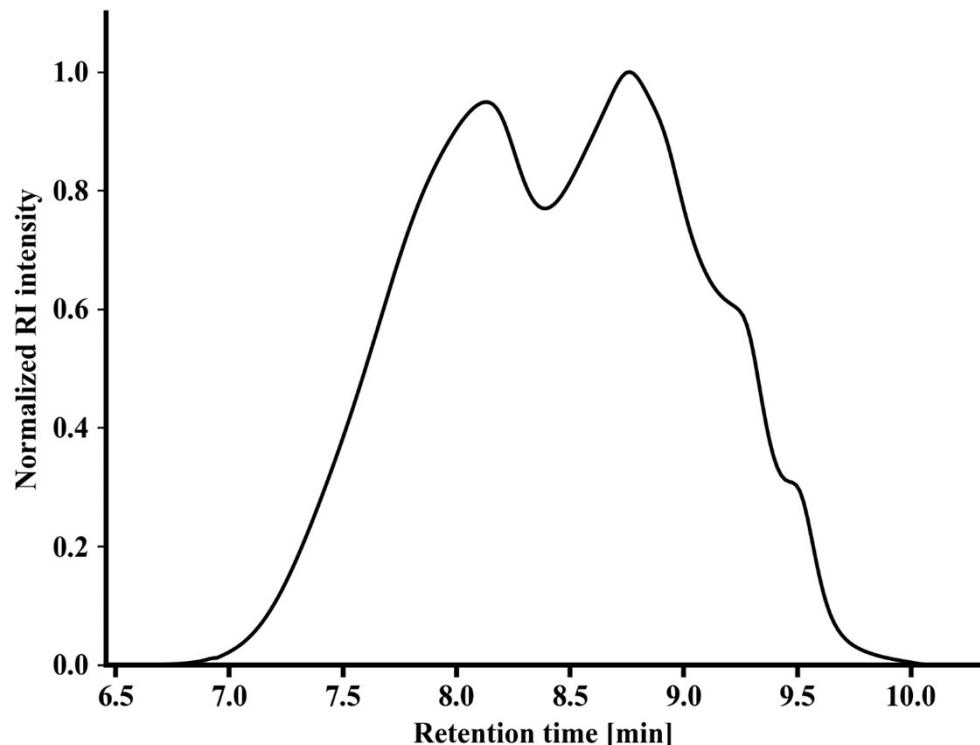
**Figure S67.** SEC-curve of polymer **U11** (chloroform/isopropanol/triethylamine [94/2/4], PS-standard).



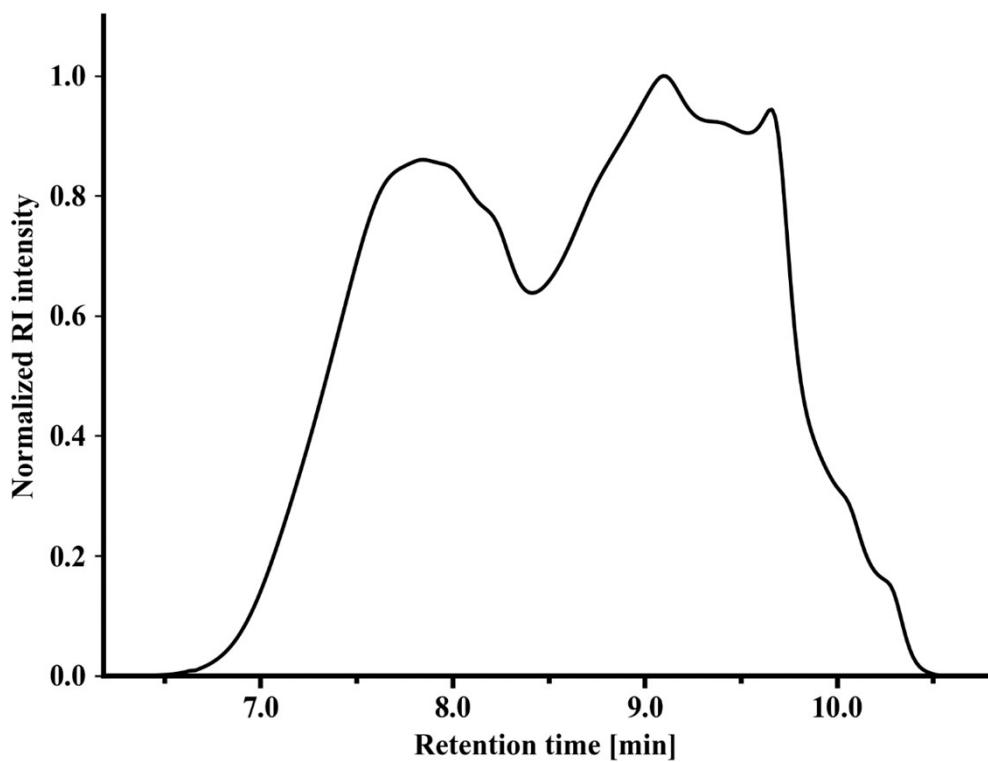
**Figure S68.** SEC-curve of polymer **U12** (chloroform/isopropanol/triethylamine [94/2/4], PMMA-standard).



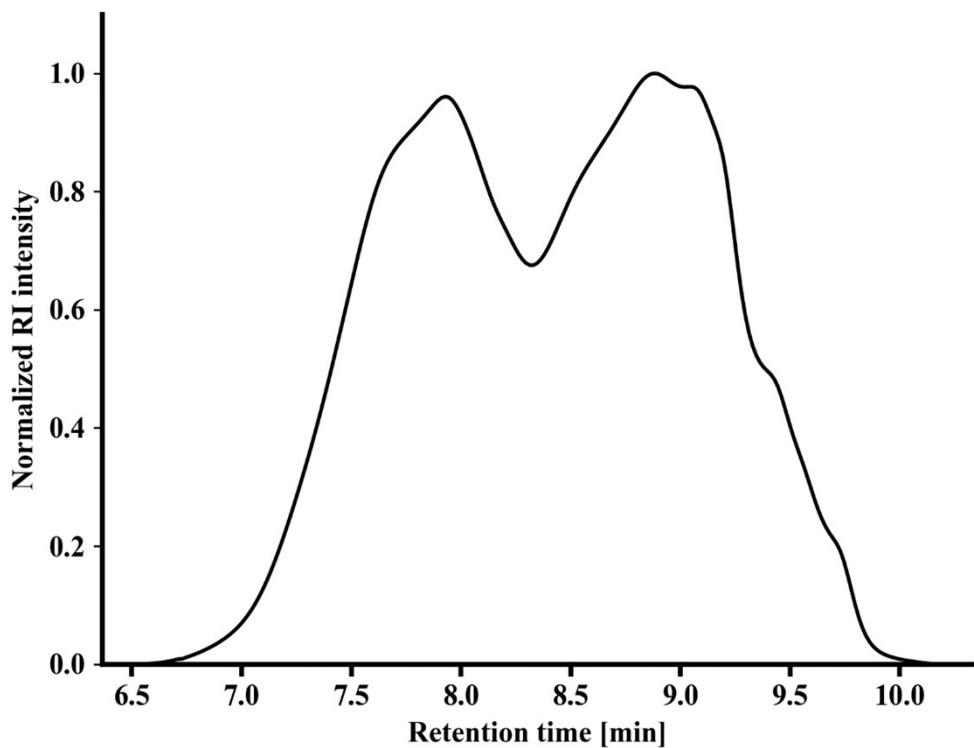
**Figure S69.** SEC-curve of polymer **U13** (chloroform/isopropanol/triethylamine [94/2/4], PMMA-standard).



**Figure S70.** SEC-curve of polymer **U14** (chloroform/isopropanol/triethylamine [94/2/4], PMMA-standard).



**Figure S71.** SEC-curve of polymer **U15** (chloroform/isopropanol/triethylamine [94/2/4], PMMA-standard).



**Figure S72.** SEC-curve of polymer **U16** (chloroform/isopropanol/triethylamine [94/2/4], PMMA-standard)