Electronic Supplementary Material (ESI) for Polymer Chemistry.

Supporting Information

Novel semi-aromatic polyesters based on the biobased diol 2,2'-((3S,3aR,6S,6aR)-hexahydrofuro[3,2-b]furan-3,6-diyl)bis(ethan-1-ol): Synthesis, Characterization and Properties

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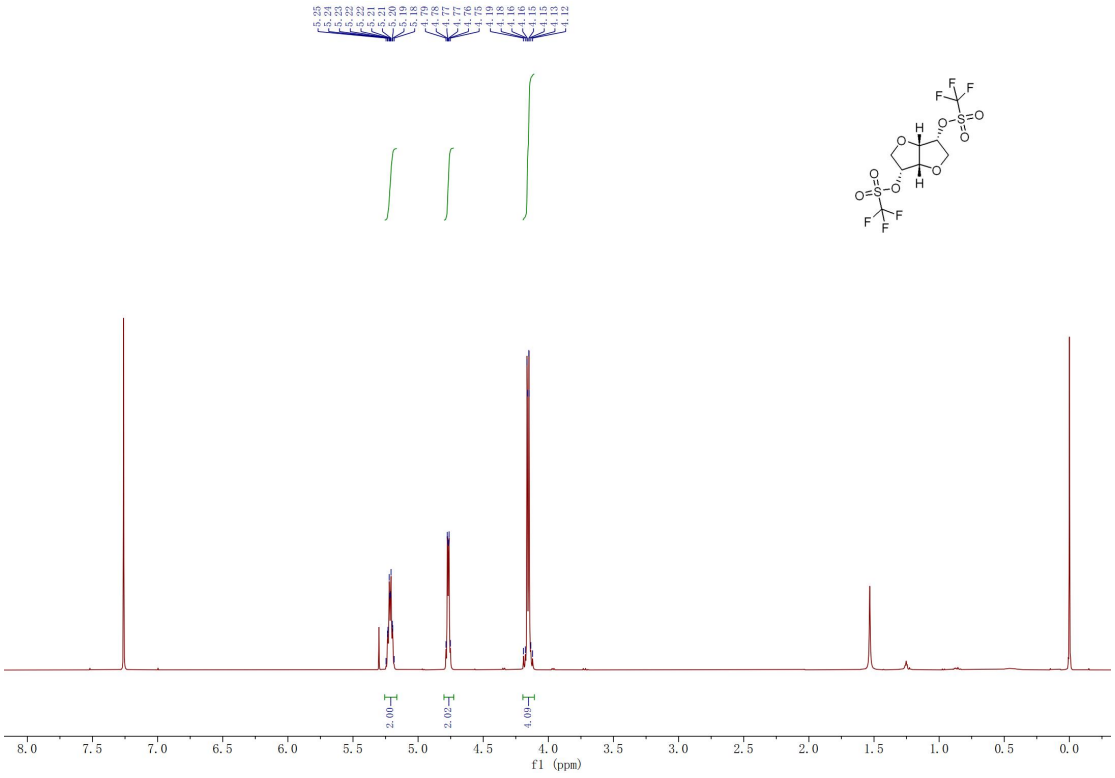
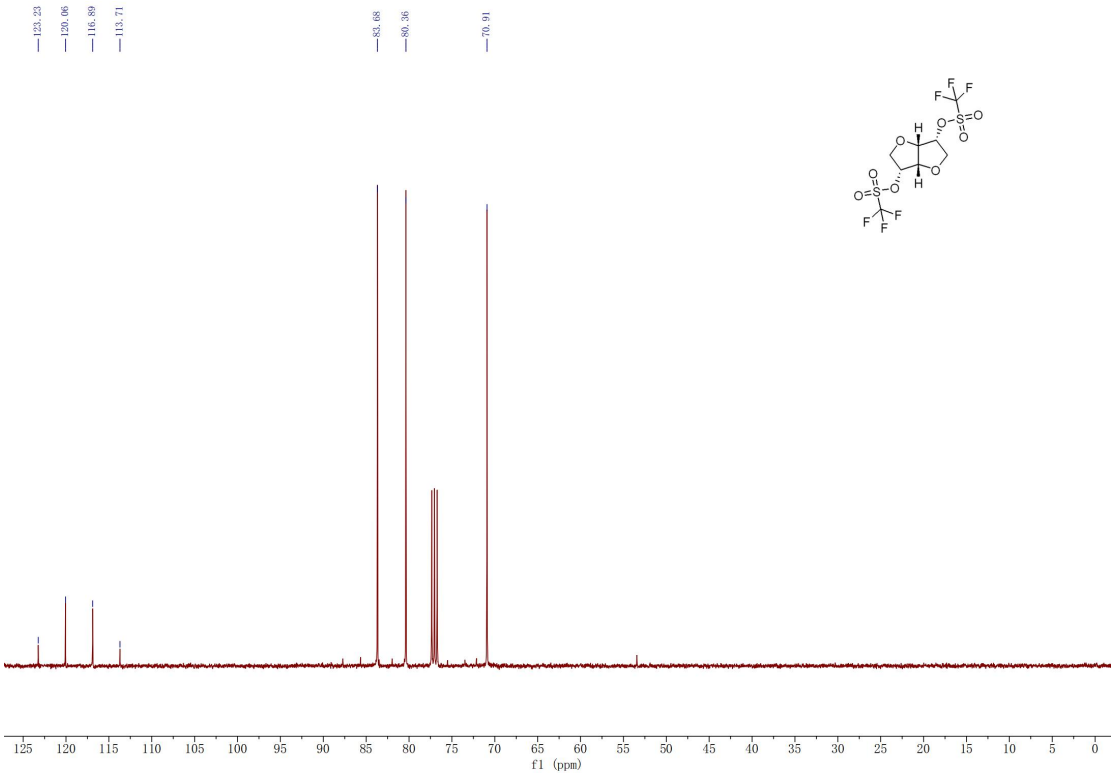
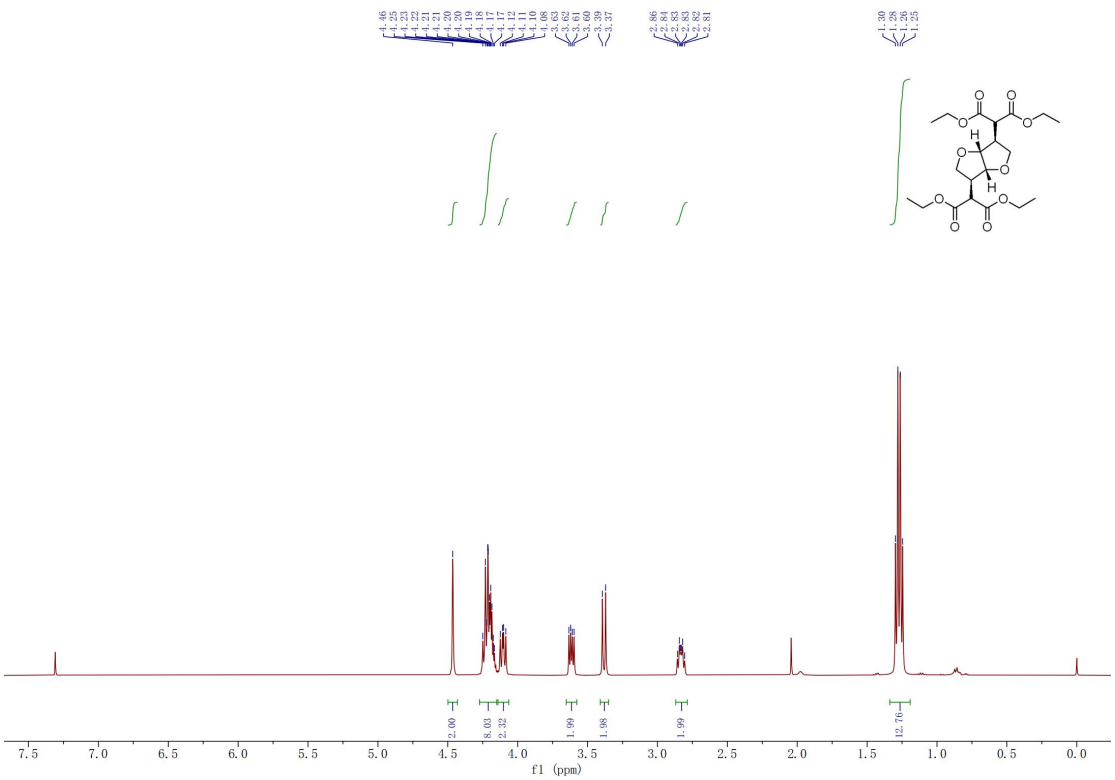
^{1}H and ^{13}C spectra of the synthesized compounds



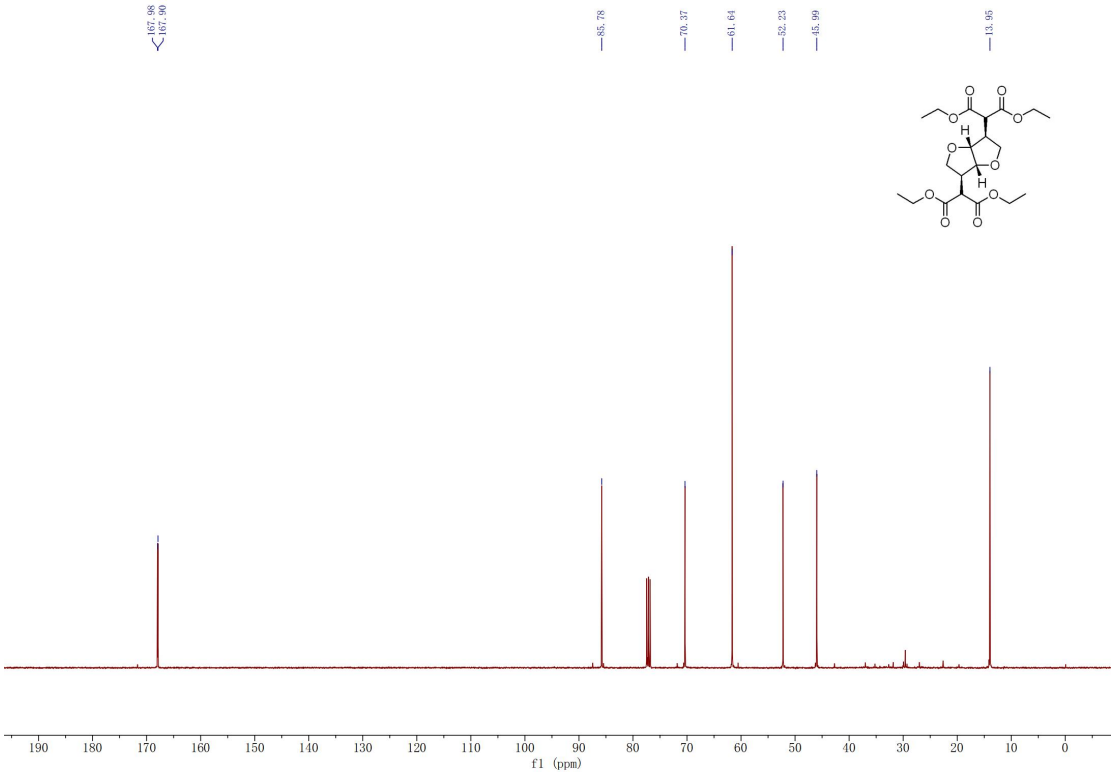
^{1}H NMR spectrum of 2 ($CDCl_3$)



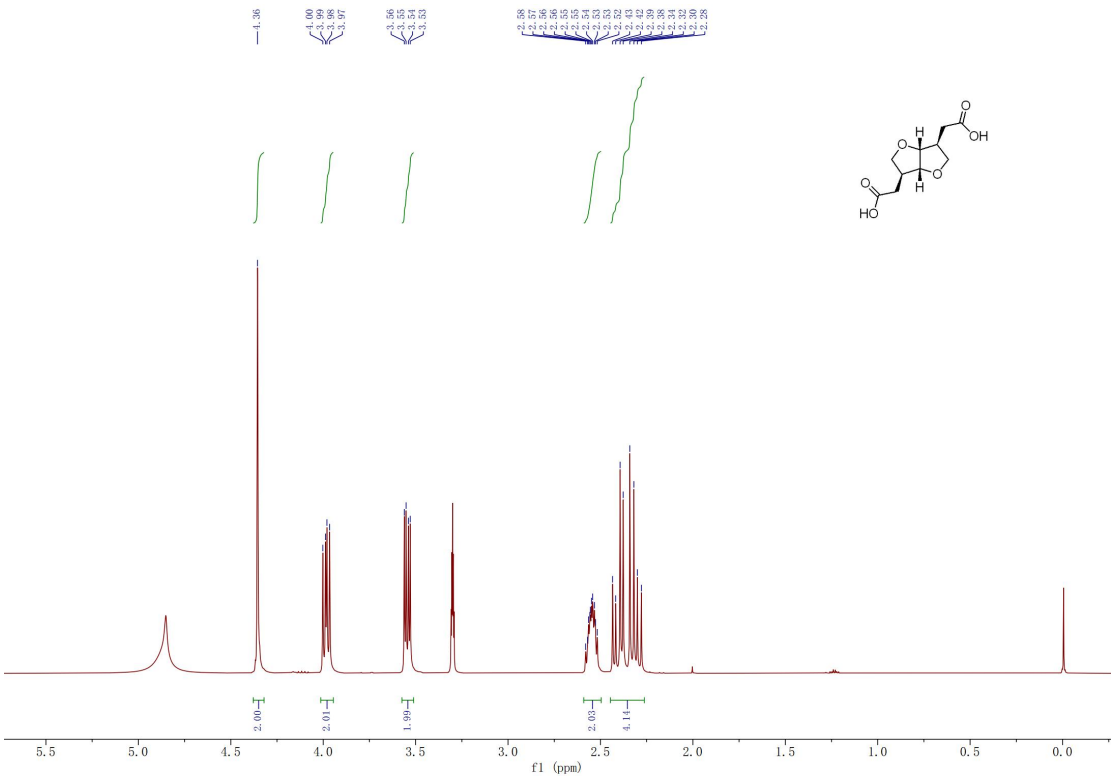
^{13}C NMR spectrum of 2 ($CDCl_3$)



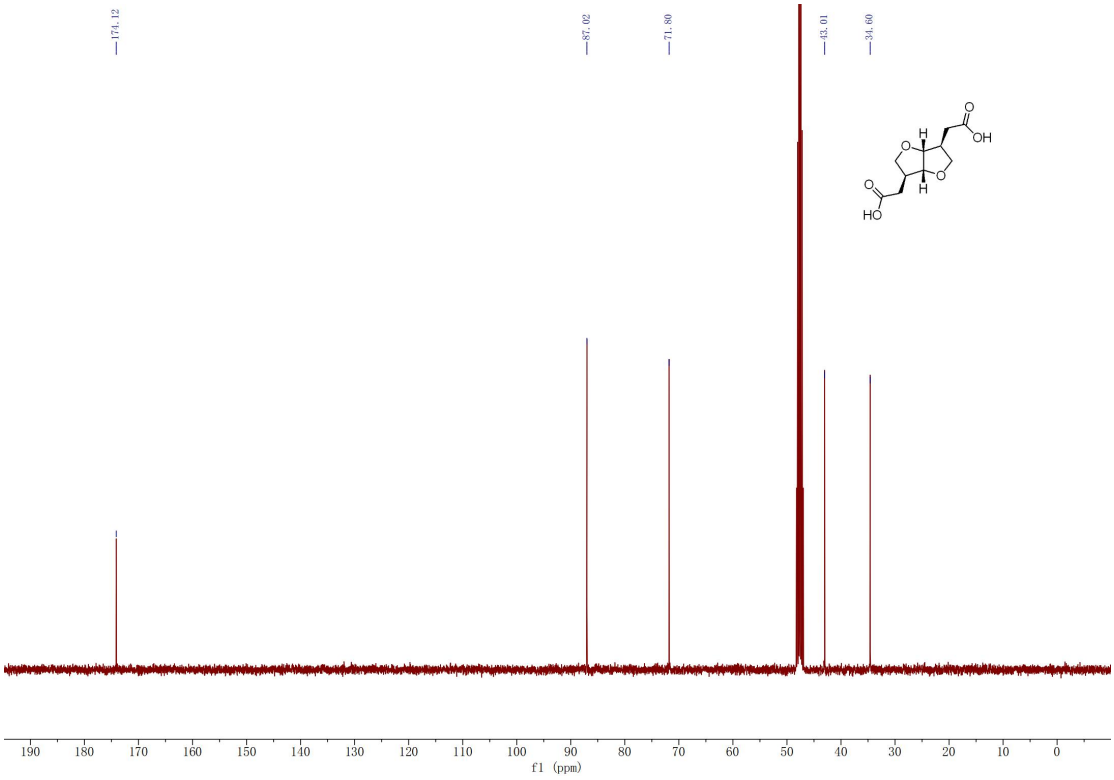
^{1}H NMR spectrum of 3 (CD_3OD)



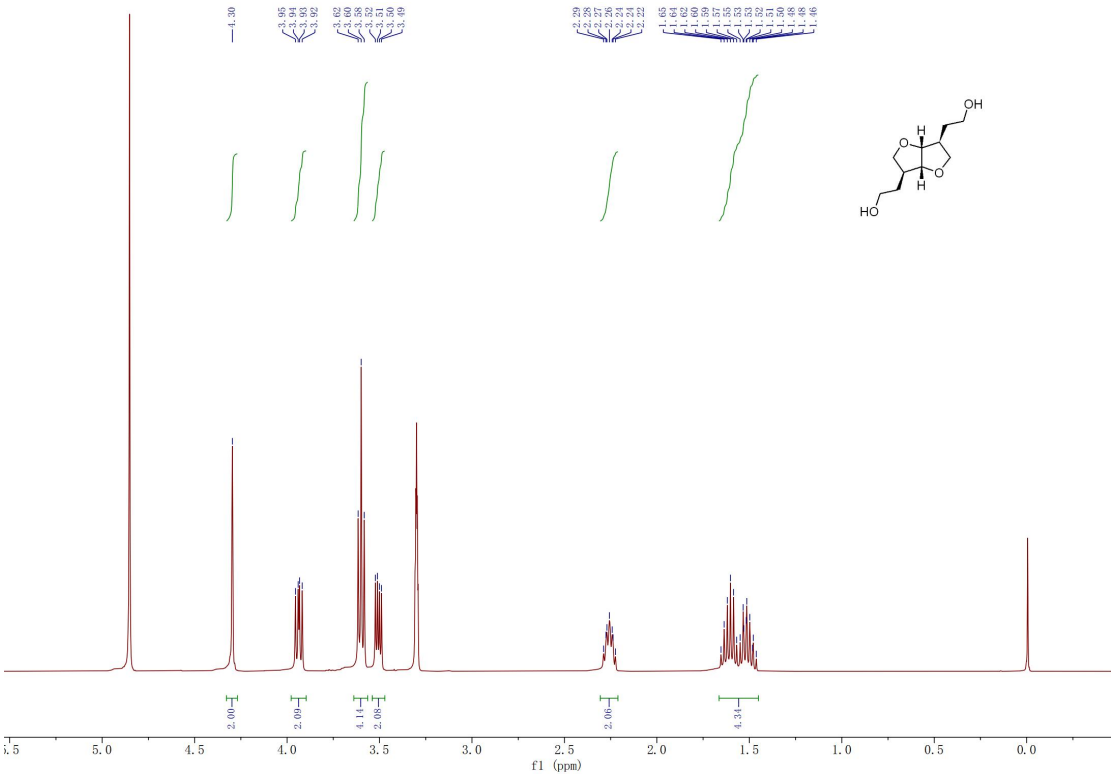
^{13}C NMR spectrum of 3 (CD_3OD)



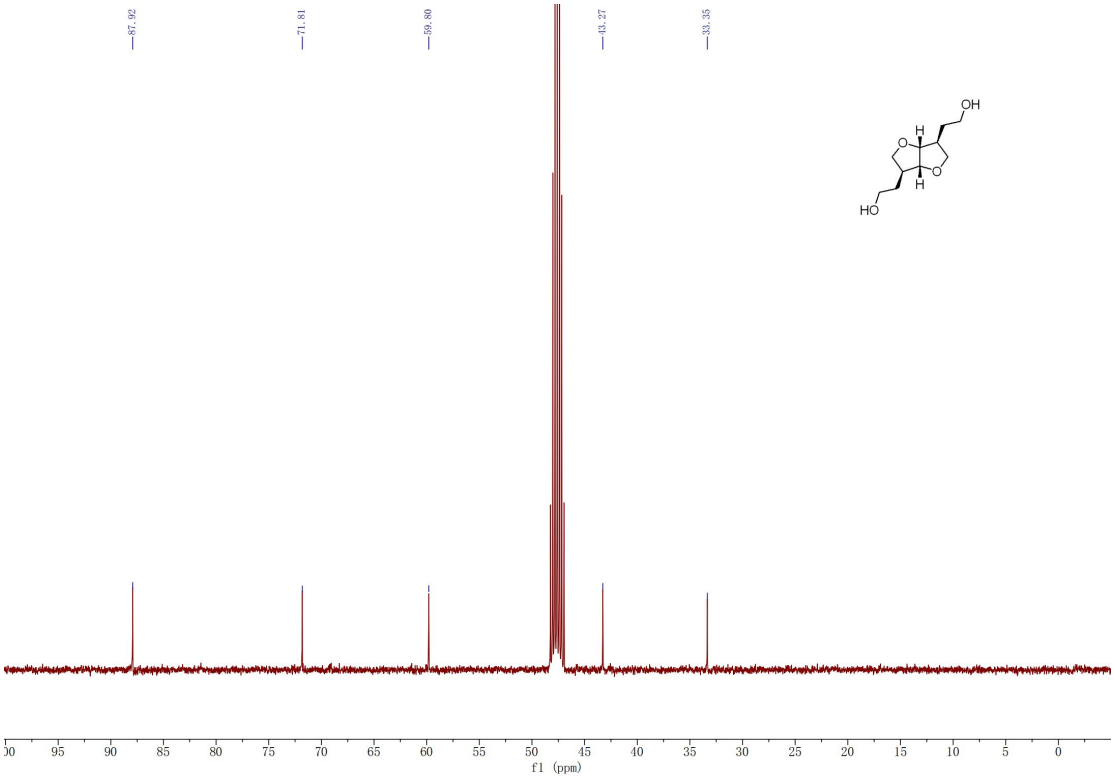
^{1}H NMR spectrum of 4 (CD_3OD)



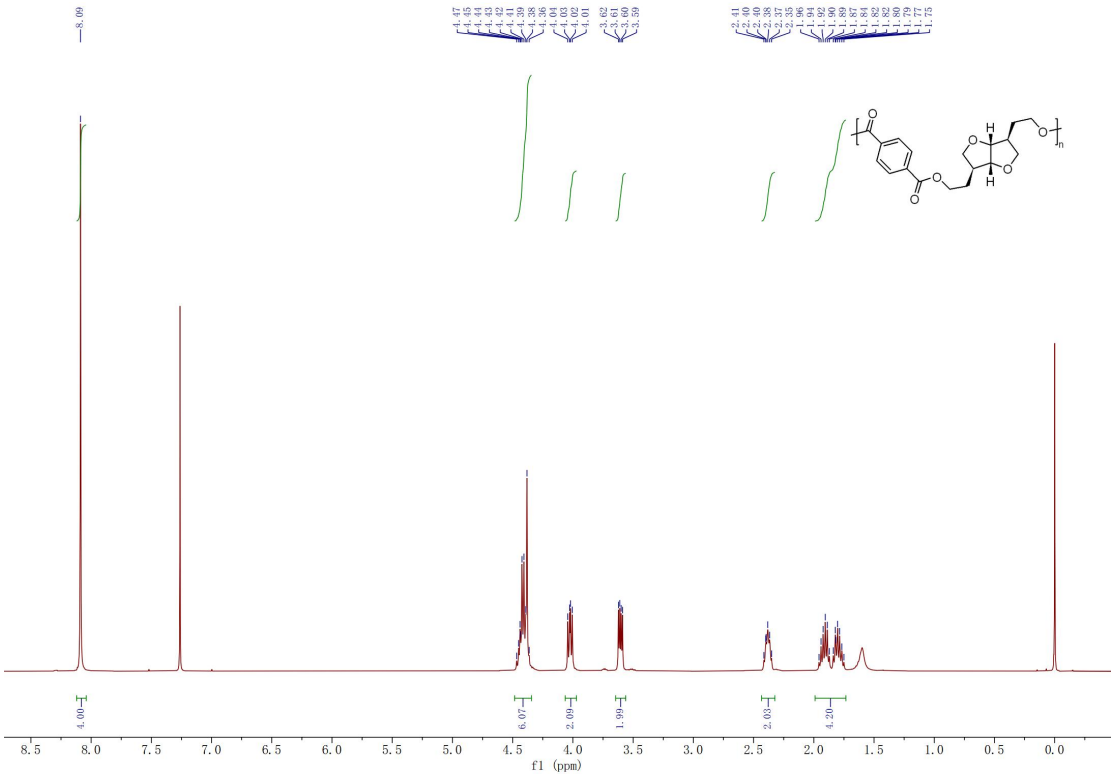
^{13}C NMR spectrum of 4 (CD_3OD)



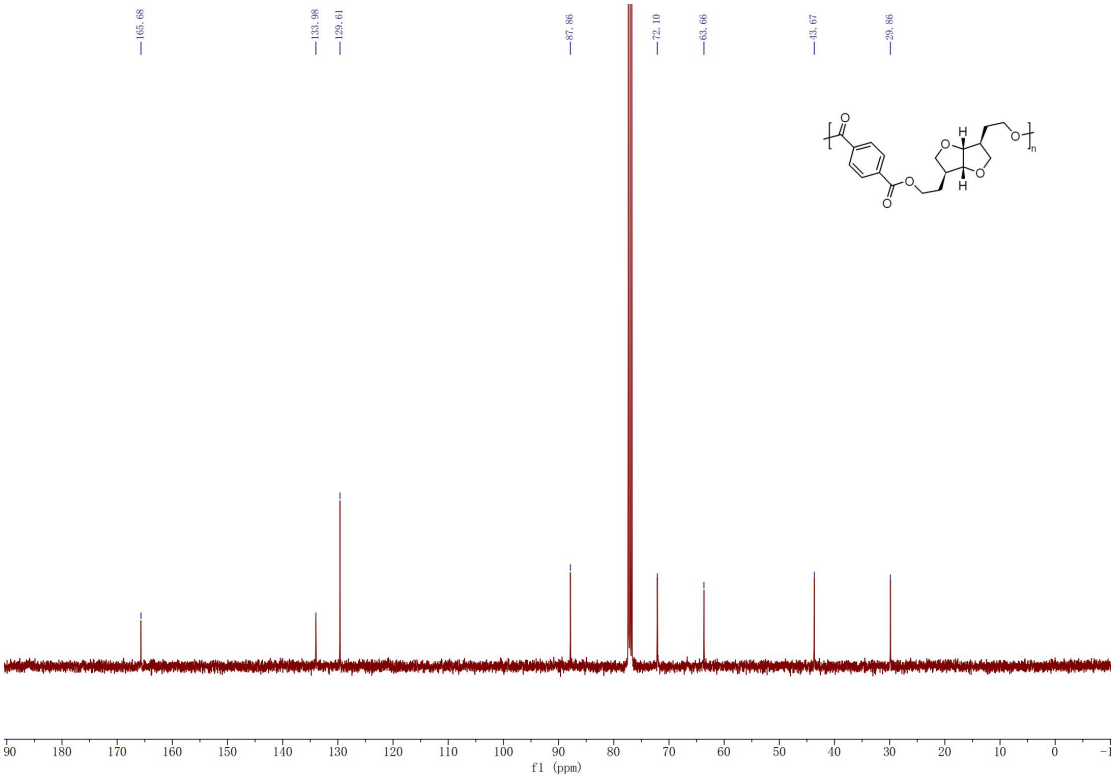
^{1}H NMR spectrum of 5 (CD_3OD)



^{13}C NMR spectrum of 5 (CD_3OD)



^{1}H NMR spectrum of PIeT ($CDCl_3$)



^{13}C NMR spectrum of PIeT ($CDCl_3$)

Agilent GPC/SEC Software
Sample GPC Analysis Report

Agilent Technologies

Processing Parameters

Method	Last modified by dell at 13:28:07 on 2024年1月29日
Using Flow Rate Correction	No
Mark-Houwink K ((10e-5) dL/g)	14.100
Mark-Houwink Alpha	0.700
Concentration Detector Used in Analysis	RI
Injection volume (µL)	10.00
Flow rate (mL/min)	1.00

MW Ranges Method

Calculate MW Ranges	No

Percentage Fractions Method

Calculate Percentage Fractions	No

Results

Analysed by	8615 at 9:23:52 on 2024年4月23日
Comments	

Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	28334	15036	33428	56176	84883	30599	2.223

Sample name: PIeT (obtained at 220℃)

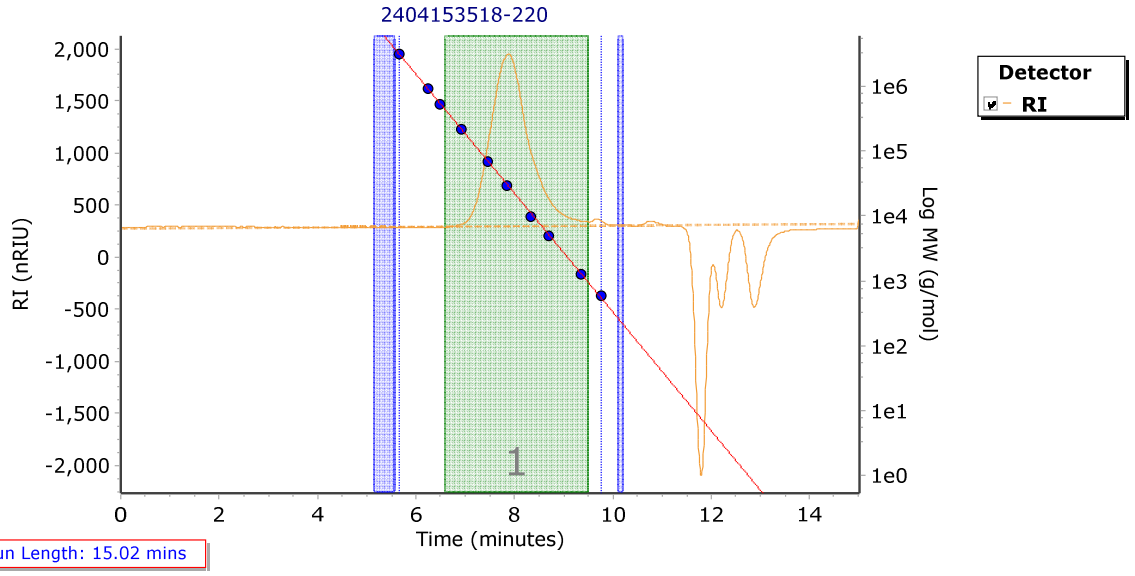
Analyst: ..... **Date:** .....

Checked By: ..... **Date:** .....

Agilent GPC/SEC Software
Sample GPC Analysis Report

Agilent Technologies

Chromatogram Plot



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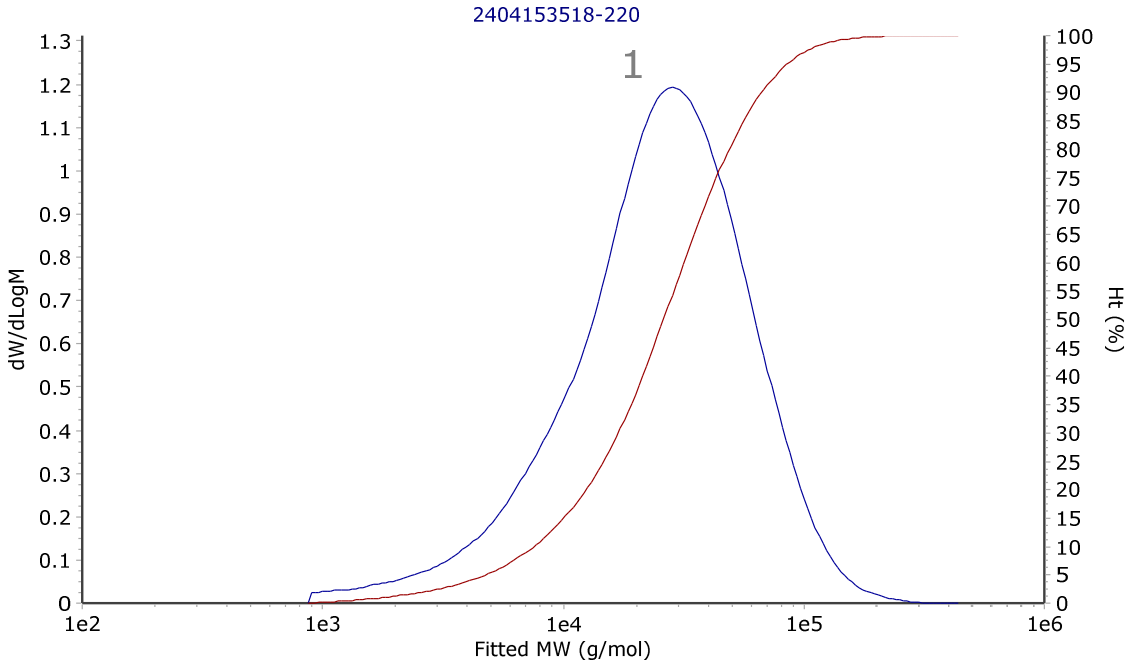
Agilent GPC/SEC Software
Sample GPC Analysis Report

Agilent Technologies

Distribution Plot



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Agilent GPC/SEC Software
Sample GPC Analysis Report

Agilent Technologies

Processing Parameters

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Using Flow Rate Correction	No
Mark-Houwink K ((10e-5) dL/g)	14.100
Mark-Houwink Alpha	0.700
Concentration Detector Used in Analysis	RI
Injection volume (µL)	60.00
Flow rate (mL/min)	1.00

MW Ranges Method

Calculate MW Ranges	No

Percentage Fractions Method

Calculate Percentage Fractions	No

Results

Analysed by	8615 at 19:32:51 on 2023年11月25日
Comments	

Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	29645	17962	41418	78143	129494	37328	2.306

Sample name: PleT (obtained at 240℃)

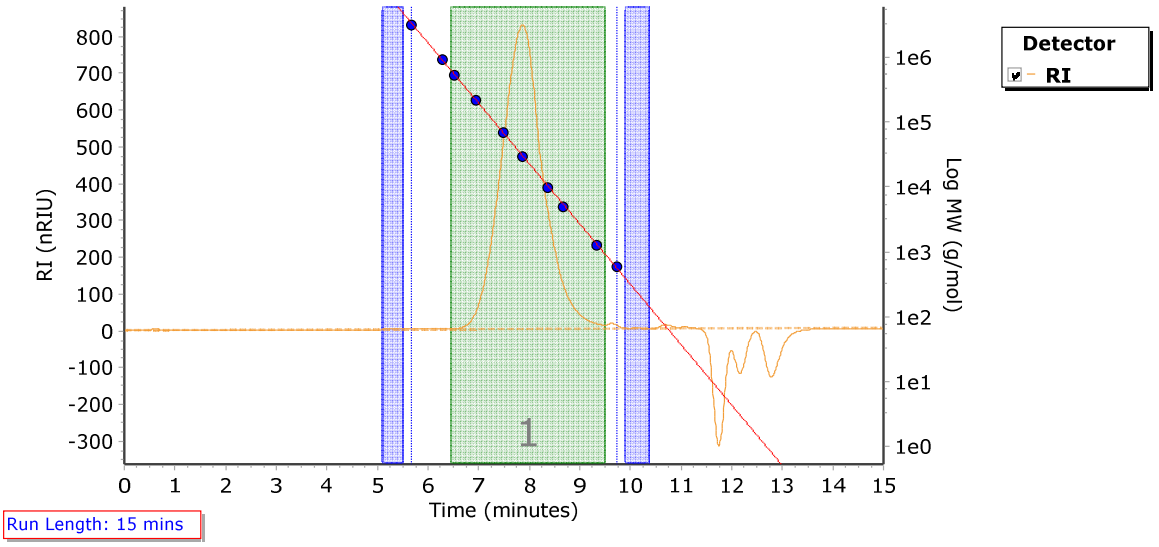
Analyst: ..... **Date:** .....

Checked By: ..... **Date:** .....

Agilent GPC/SEC Software
Sample GPC Analysis Report

Agilent Technologies

Chromatogram Plot



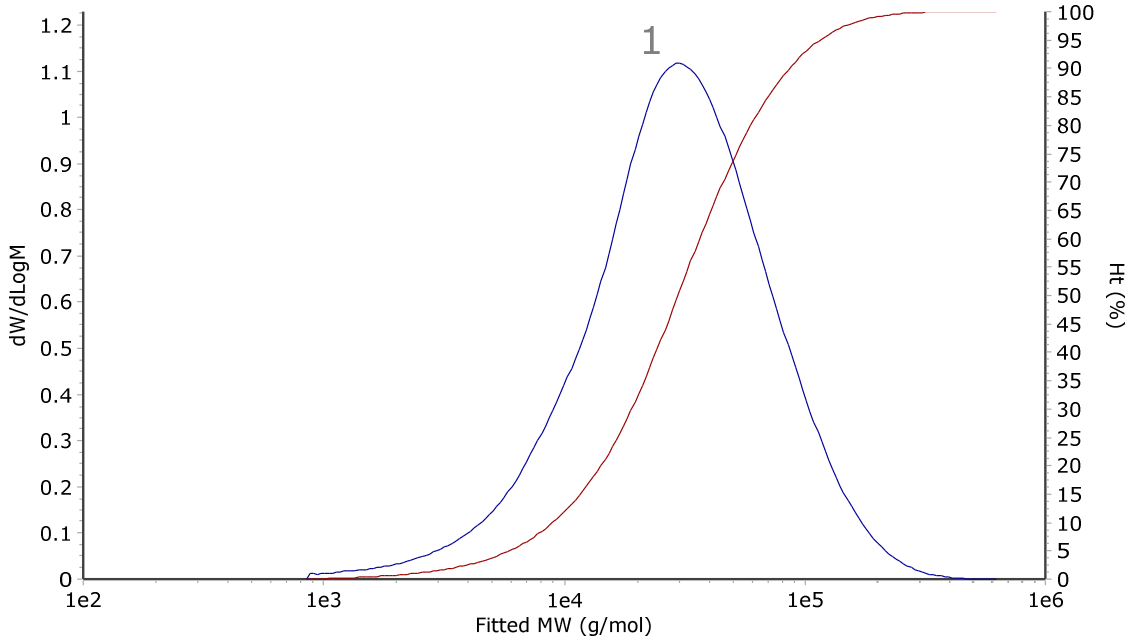
Analyst: ..... **Date:** .....

Checked By: ..... **Date:** .....

Agilent GPC/SEC Software
Sample GPC Analysis Report

Agilent Technologies

Distribution Plot



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Checked By: ..... **Date:** .....

Agilent GPC/SEC Software
Sample GPC Analysis Report

Agilent Technologies

Processing Parameters

Method	Last modified by dell at 13:28:07 on 2024年1月29日
Using Flow Rate Correction	No
Mark-Houwink K ((10e-5) dL/g)	14.100
Mark-Houwink Alpha	0.700
Concentration Detector Used in Analysis	RI
Injection volume (µL)	10.00
Flow rate (mL/min)	1.00

MW Ranges Method

Calculate MW Ranges	No

Percentage Fractions Method

Calculate Percentage Fractions	No

Results

Analysed by	8615 at 9:25:21 on 2024年4月23日
Comments	

Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	19583	8236	19428	33368	47055	17587	2.359

Sample name: PIeT (obtained at 260℃)

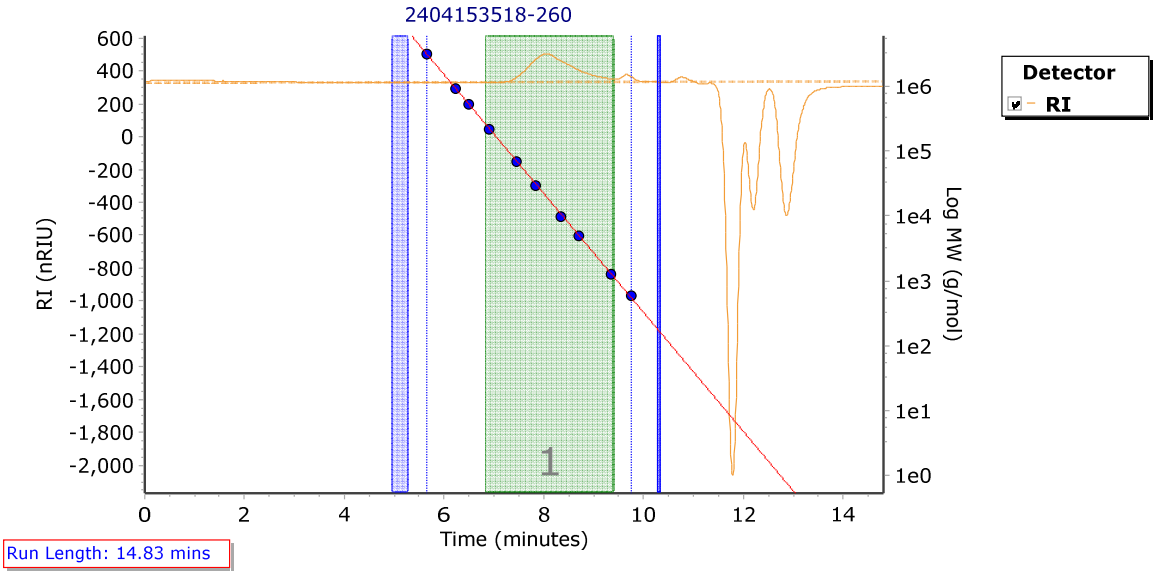
Analyst: ..... **Date:** .....

Checked By: ..... **Date:** .....

Agilent GPC/SEC Software
Sample GPC Analysis Report

Agilent Technologies

Chromatogram Plot



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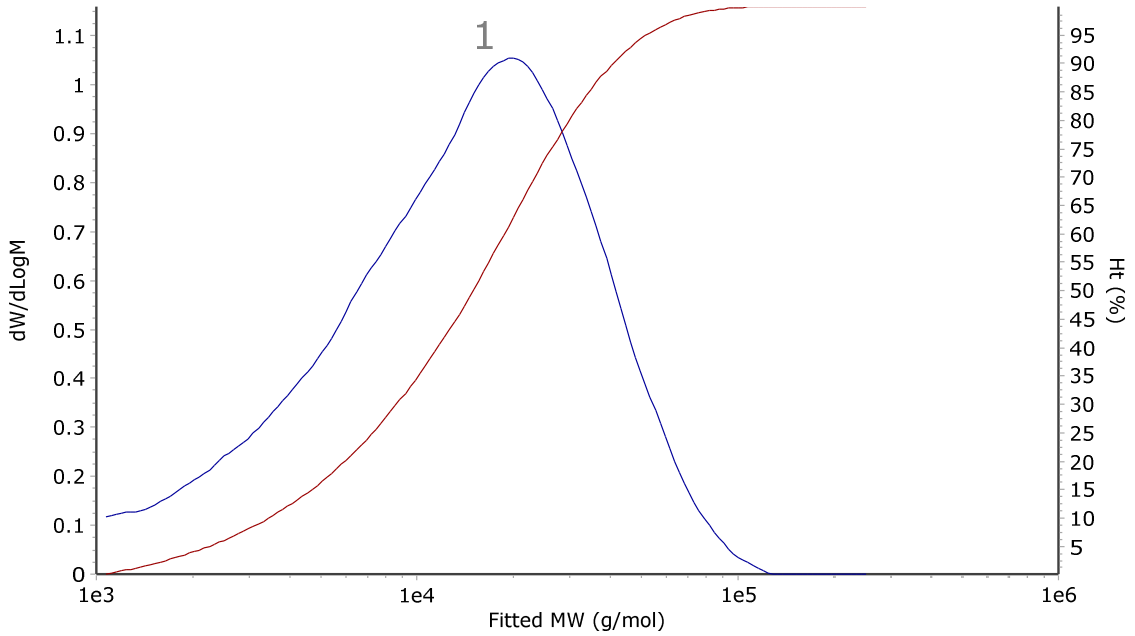
Agilent GPC/SEC Software
Sample GPC Analysis Report

Agilent Technologies

Distribution Plot



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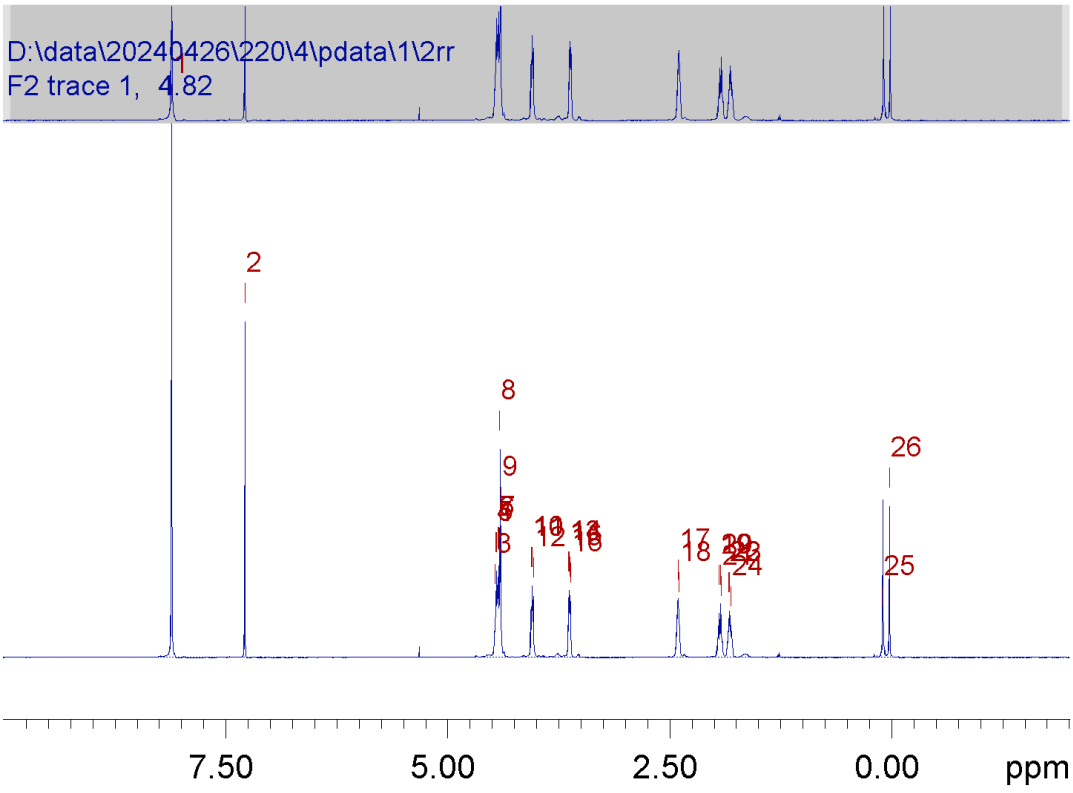

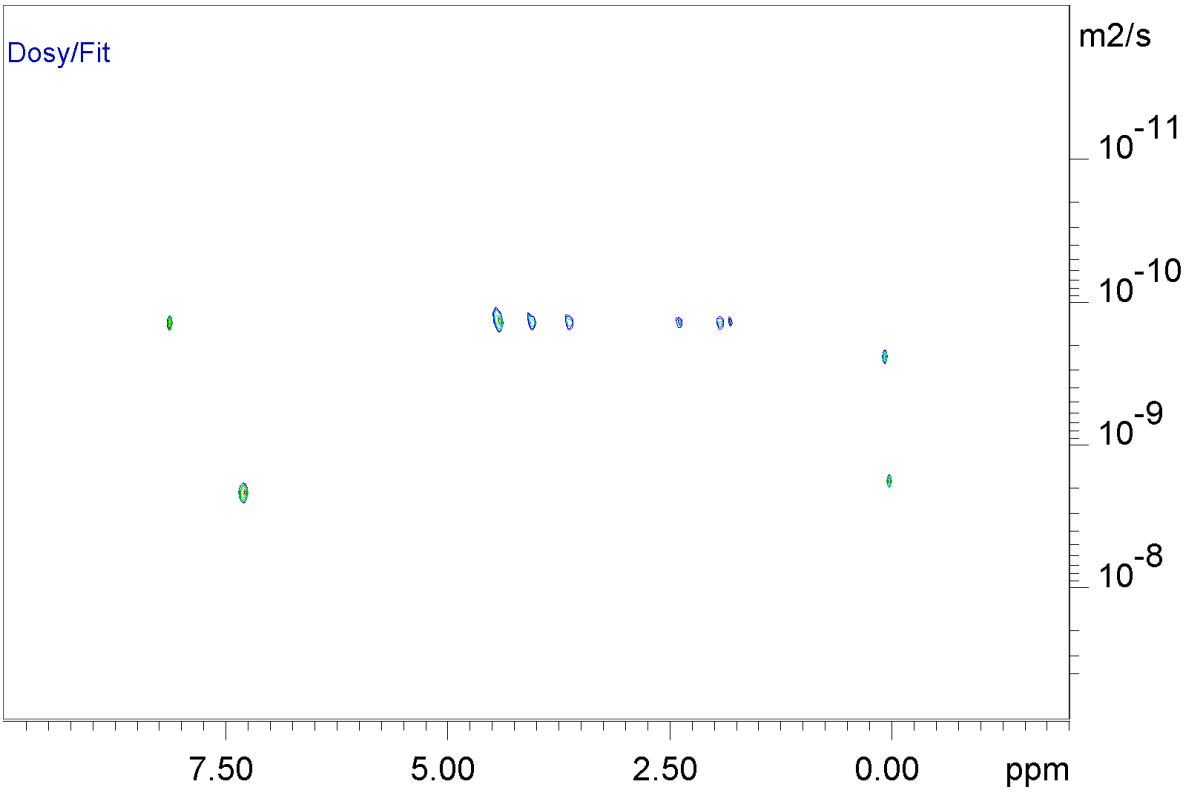

Fig.S1 DOSY spectrum of PIeT (obtained at 220°C)
(H at 25 in the DOSY spectra is silicone grease.)

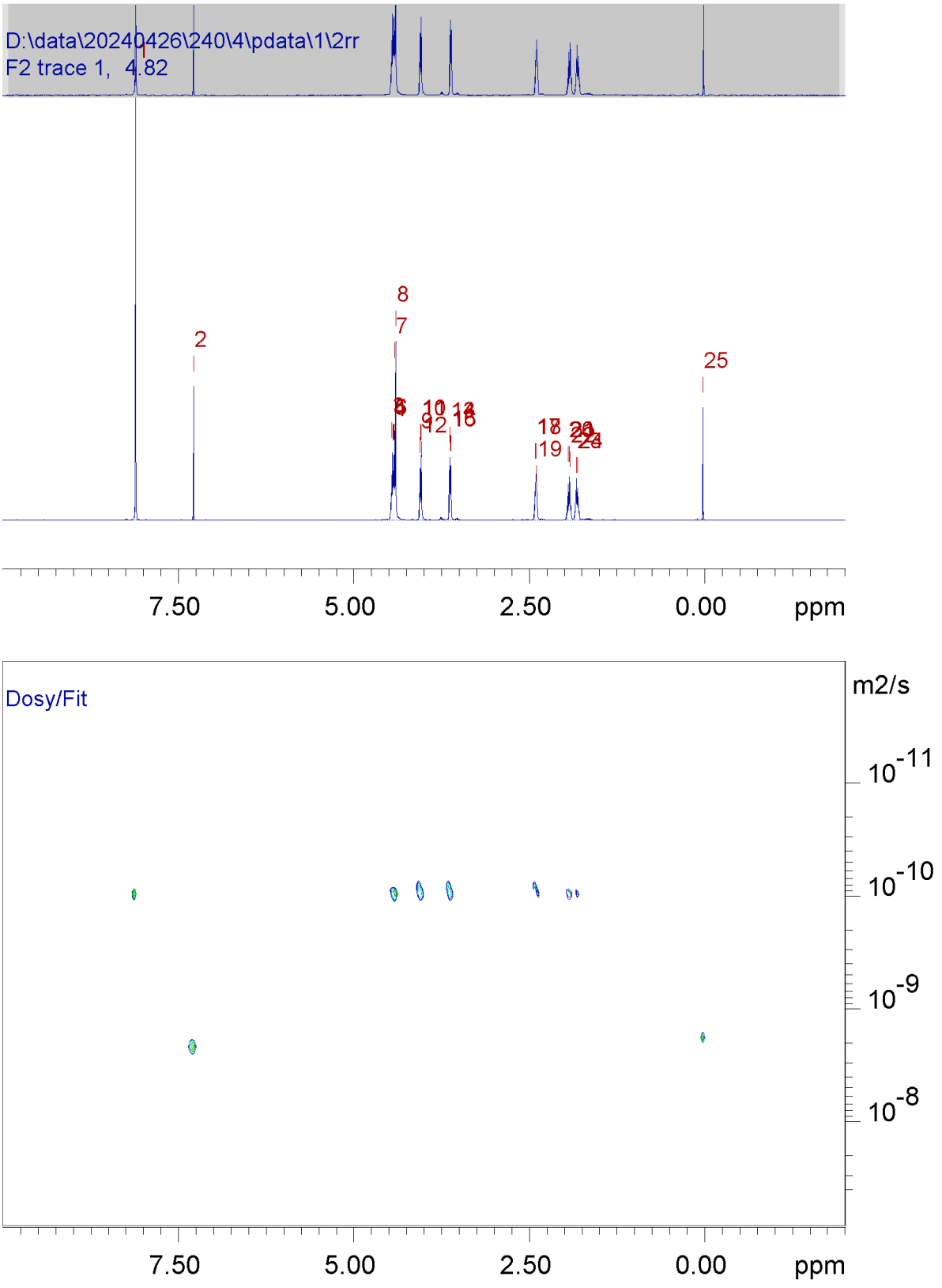

Fig.S2 DOSY spectrum of PIeT (obtained at 240°C)