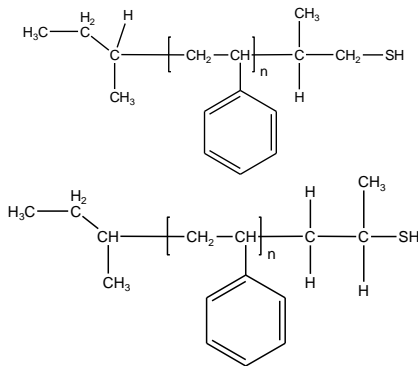


Sample Name: Thiol Terminated Polystyrene

Sample # P40709-SSH

Structure:

Route 2: (possible architectures)



Composition:

Mn x 10 ³ (g/mol)	Mw/Mn	-SH functionality
104.5	1.11	>90%
Tg		105 °C

Synthesis:

The polymer was synthesized by direct termination of anionic living polymerization of styrene by ethylene sulfide or propylene sulfide. Polymerization of styrene by sec-BuLi in THF at -78°C and termination by purified ethylene sulfide or propylene sulfide.

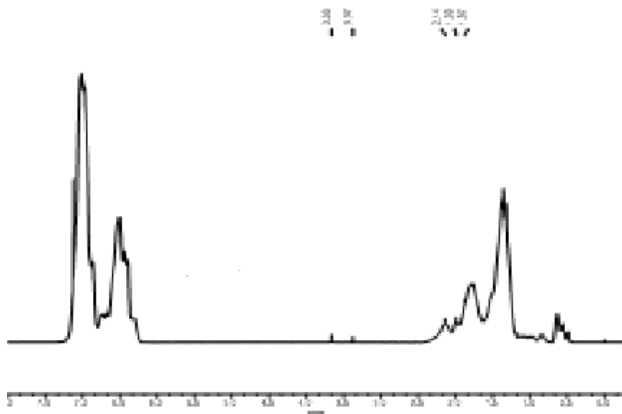
Characterization:

The molecular weight and polydispersity index of the hydroxyl terminated polymer were determined before functionalization with thiol by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with UV-vis and refractive index detectors. Polymer functionality was verified by oxidation of thiol to disulfide.

Functionality:

It was determined by oxidation reaction with iodine.

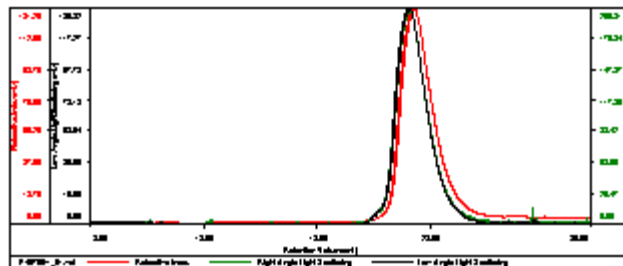
¹H NMR spectrum (500 MHz, CDCl₃) of the Sample:



SEC elugram of the Sample:

P40709-SSH

Concentration (mg/mL)	8.2488
Sample dilute (mL/g)	0.1880
Method File	PeakArea.mcr/00000000
Column Set	3x PL HEC500
Eluent	THF



Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Mp (Da)
P40709-1_01.wat	104,529	116,663	1.116	0.3045	113,509

DSC of the Polymer:

