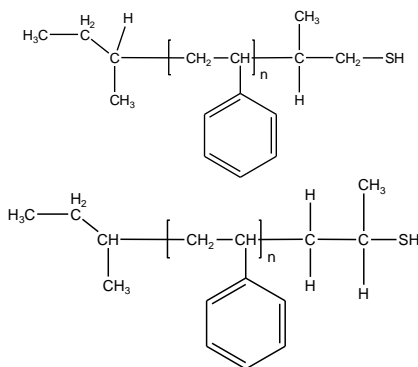


Sample Name: Thiol Terminated Polystyrene

Sample # P40722-SSH

Structure:

Route 2: (possible architectures)



Composition:

Mn x 10 ³ (g/mol)	Mw/Mn	-SH functionality
420.0	1.3	>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.

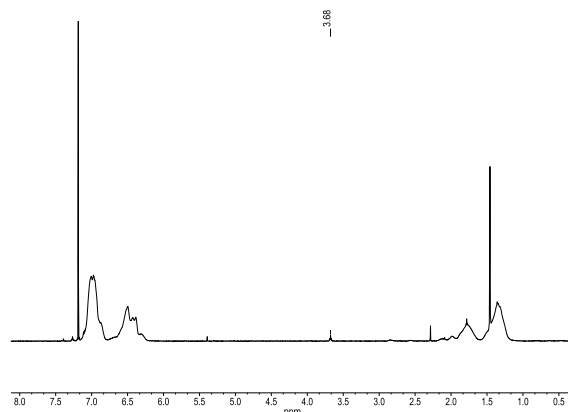
Characterization:

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.

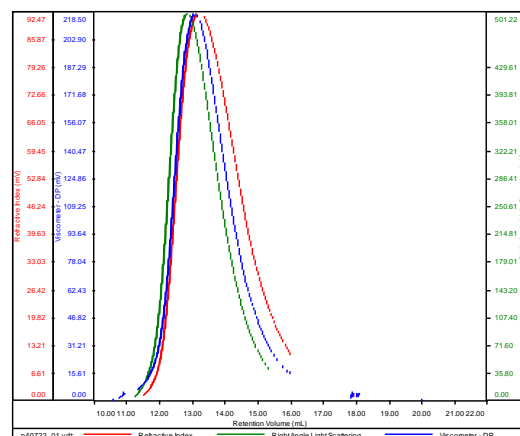
¹H NMR spectrum (500 MHz, CDCl₃) of the Sample:



SEC elugram of the Sample:

P40722-SSH

Conc	5.4082
dn/dc	0.1650
Solvent	DMF-w 0.023M LiBr
Flow Rate	0.7000
Method	PS80K_2017-July-05-0000.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
p40722_01.vdt	419,495	552,793	614,675	1.318	0.9674

DSC of the Polymer:

