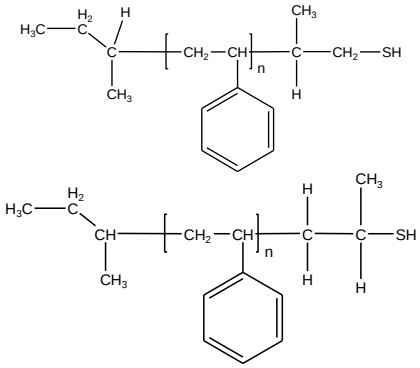
Sample Name: **Thiol Terminated Polystyrene**

Sample # **P44442A-SSH**

Structure:



Composition:

Mn x 10^3 (g/mol)	Mw/Mn	-SH functionality
34.0	1.22	>90%
Tg: 105 ^oC		

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.

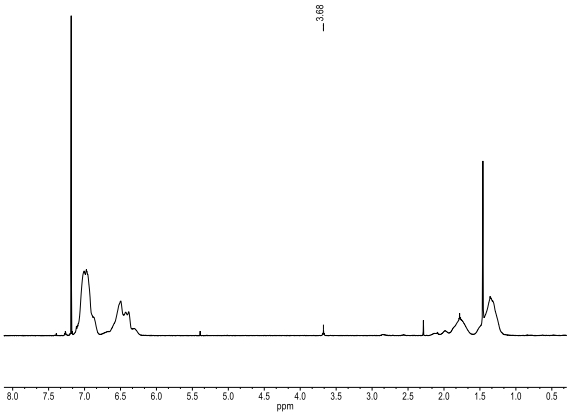
Characterization:

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.

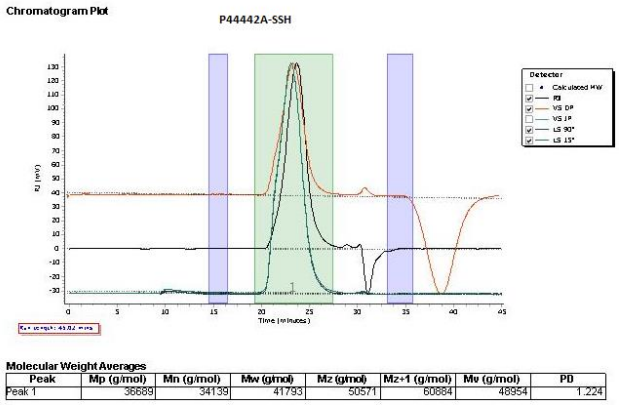
Functionality:

It was determined by oxidation reaction with iodine.

^{1}H NMR spectrum (500 MHz, $CDCl_3$) of the Sample:



SEC elugram of the Sample:



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	36689	34139	41793	50571	60884	48954	1.224

DSC of the Polymer: