

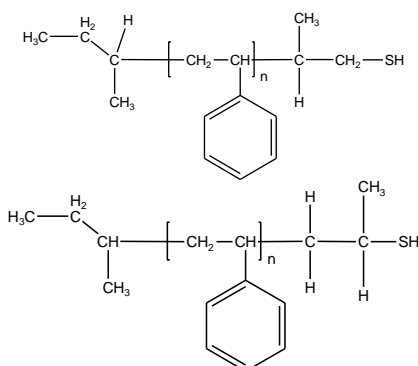
Sample Name: Poly(styrene), ω -thiol-terminated

Sample # P41862-SSH

Structure:

Route 2:

(possible architectures)



Composition:

Mn x 10 ³ (g/mol)	Mw/Mn
47.5	1.03

-SH functionality	>98%
Tg	53 °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:

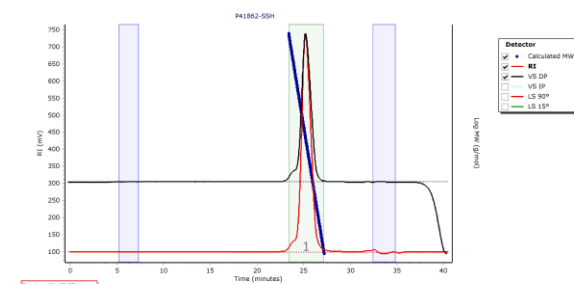
It was determined by oxidation reaction with iodine.

SEC elugram of the Sample:

Agilent GPC/SEC Software

P41862-SSH

Chromatogram Plot



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	49727	47660	48975	50368	51880	50064	1.028

DSC thermogram of the Polymer:

