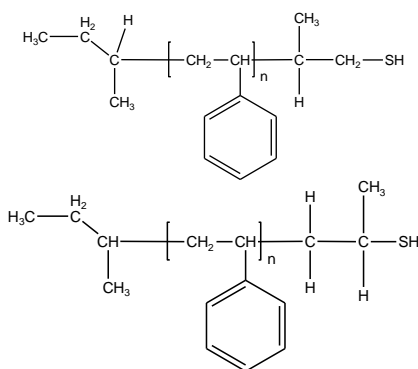


**Sample Name:** Poly(styrene),  $\omega$ -thiol-terminated

**Sample #** P43338-SSH

**Structure:**

**Route 2:** (possible architectures)



**Composition:**

$\text{Mn} \times 10^3 \text{ (g/mol)}$	$\text{Mw/Mn}$
17.0	1.01

-SH functionality	>95%
$T_g$	92 °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  $-78^\circ\text{C}$  and termination by purified ethylene sulfide or propylene sulfide.

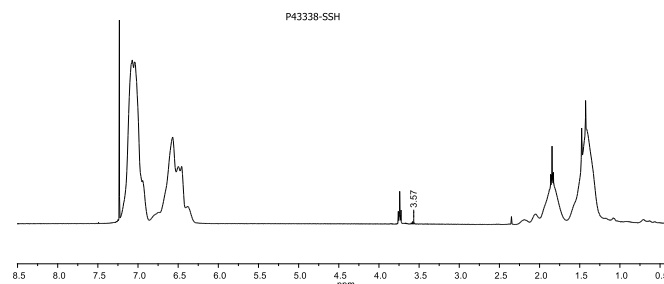
**Characterization:**

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:**

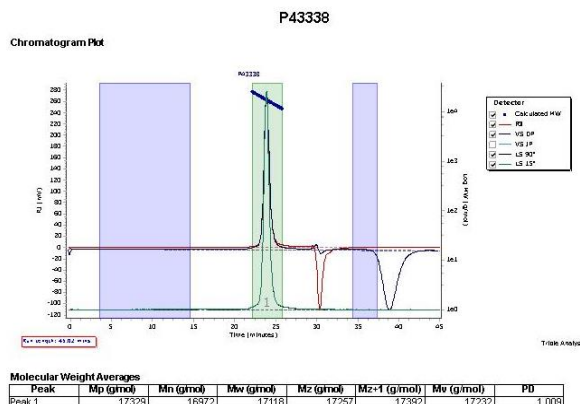
It was determined by oxidation reaction with iodine.

**HNMR spectrum of the polymer:**



**SEC elugram of the Sample:**

Agilent GPC/SEC Software



**DSC thermogram of the Polymer:**

