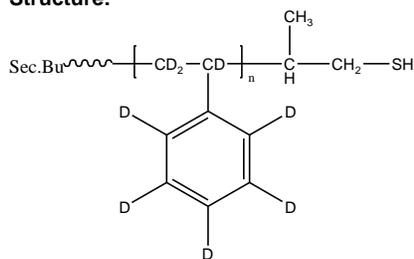


## Sample Name:

$\omega$ - SH-terminated deuterated Polystyrene

Sample #: P8787-dPSSH

### Structure:

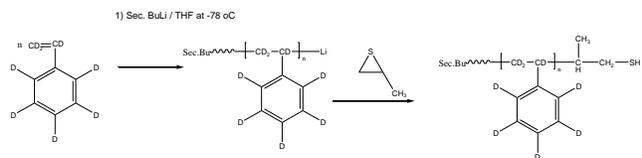


### Composition:

Mn x 10 <sup>3</sup>	PDI	SH end functionality
4.5	1.16	>95%

### Synthesis Procedure:

$\omega$ -SH Terminated deuterated polystyrene was prepared by living anionic polymerization of deuterated styrene using a monofunctional initiator such as Sec. butyl lithium in THF at -78 °C followed by termination with propylene sulfide.



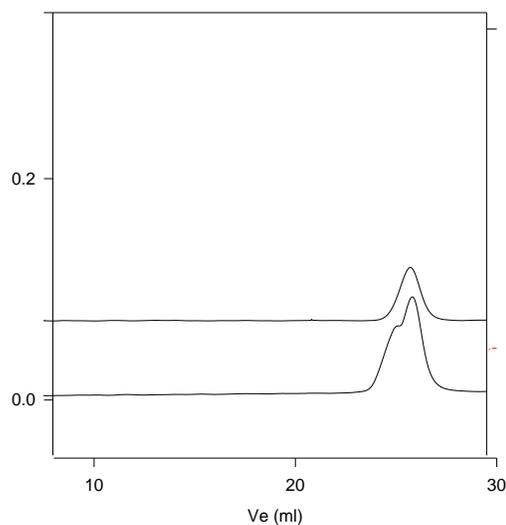
### Characterization:

The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

**Solubility:** Polymer is soluble in toluene, THF, CHCl<sub>3</sub> and can be precipitated in water, cold methanol.

### SEC of Sample:

P8787-dPSSH



Thiol terminated deuterated Polystyrene,  $M_n=4500$   $M_w=5,200$   $PI=1.16$   
After reducing the SEC profile still indicating about 15-20% disulfide linkage  
After oxidation with iodine indicating the disulfide formation:  
SH functionality over 95%