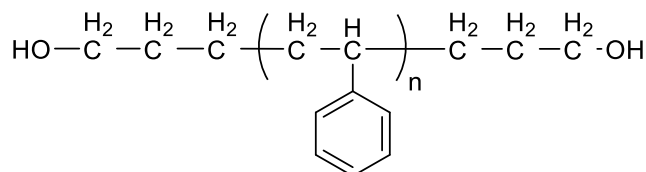


Sample Name:

α,ω -Di(hydroxy)-terminated polystyrene

Sample#: **P42538-S2OH**

Structure:

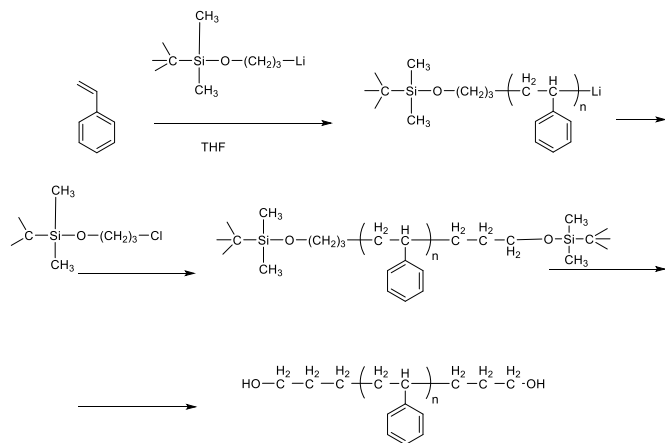


Composition:

| $M_n \times 10^3$ (g/mol) | M_w/M_n |
|---------------------------|-----------|
| 19.0 | 1.22 |

Synthesis procedure:

α,ω -Di(hydroxyl)-terminated polystyrene was prepared by living anionic polymerization of styrene using a hydroxyl-protected initiator, followed by termination with tert-Butyldimethylsiloxy Propyl chloride. The scheme of reaction is presented below:



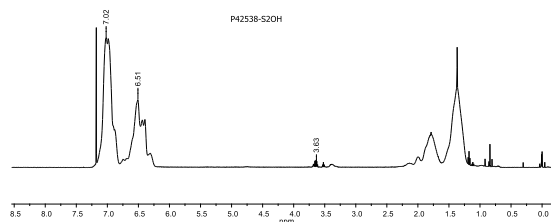
Characterization:

End-group functionality of the polymer was confirmed by ^1H -NMR spectroscopy. The molecular weight and polydispersity index of the polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detectors.

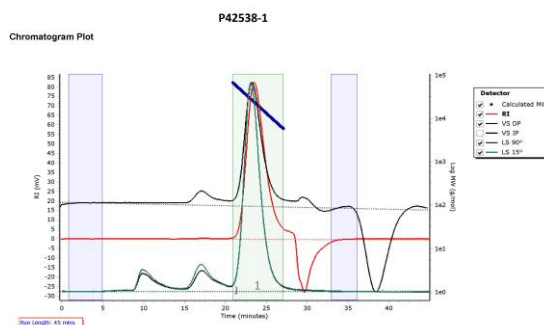
Solubility:

Polystyrene is soluble in toluene, THF and chloroform. It precipitates from cold methanol, water.

^1H -NMR spectrum of the polymer:



SEC elugram of the polymer:



| Peak | Mp (g/mol) | Mn (g/mol) | Mw (g/mol) | Mz (g/mol) | Mz+1 (g/mol) | Mx (g/mol) | PD |
|--------|------------|------------|------------|------------|--------------|------------|-------|
| Peak 1 | 23889 | 18699 | 22654 | 26506 | 30176 | 25643 | 1.211 |