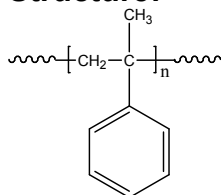


Sample Name: Poly(α -methyl styrene)

Sample #: P9080-MeS

Structure:

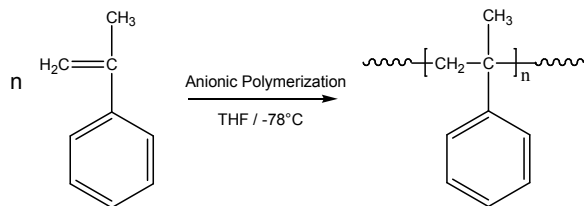


Composition:

Mn x 10 ³	PDI
466	1.25

Synthesis Procedure:

Poly(α -methyl styrene) is synthesized by living anionic polymerization of α -methyl styrene and the reaction scheme is shown below.



Characterization:

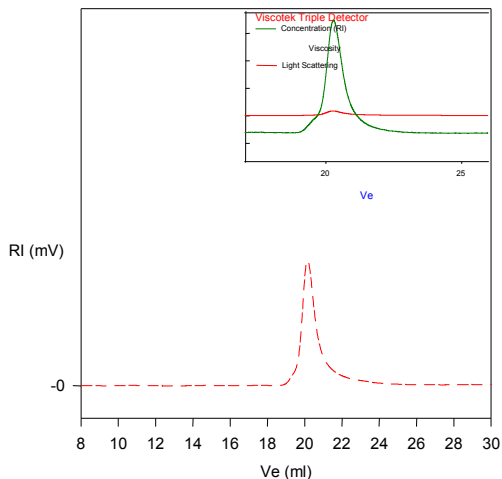
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple detectors from Viscotek Co.

Solubility:

Poly(α -methyl styrene) is soluble in DMF, THF, toluene and CHCl₃. It precipitates from methanol, ethanol, water and hexanes.

SEC of Homopolymer:

P9080- α MeS



Size Exclusion Chromatography of polymer;

--- M_n = 466,000, M_w = 575,000, M_w/M_n = 1.25
In box Light Scattering data from Triple detectors:
dn/dc in THF 0.185ml/g Solution Viscosity in THF at 35 °C: 1.51dl/g
Radius of Gyration: 31.18nm