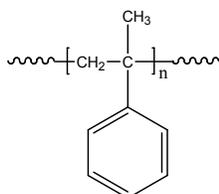


Sample Name: Poly(α -methyl styrene)

Sample #: P4879A-MeS (electronic grade)

Structure:

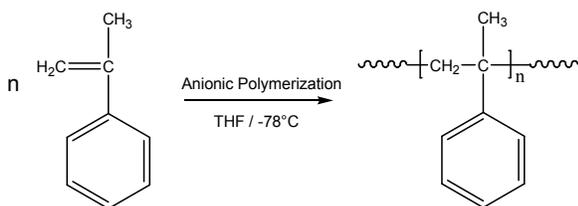


Composition:

| | |
|-------------------|------|
| $M_n \times 10^3$ | PDI |
| 340.0 | 1.10 |

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.

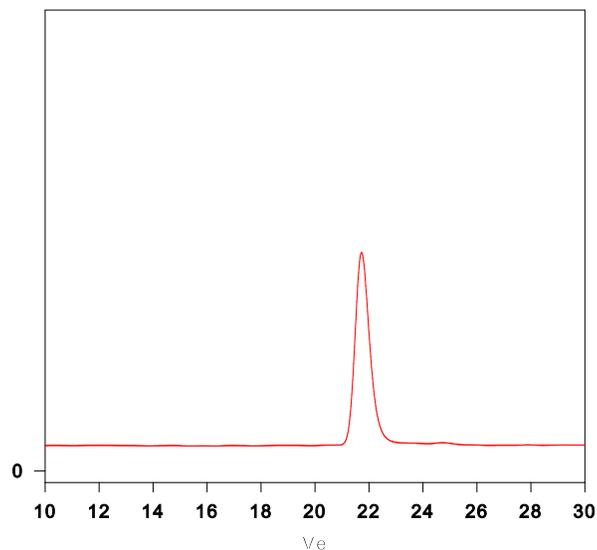
Solubility:

Poly(α -methyl styrene) is soluble in DMF, THF, toluene and $CHCl_3$. It precipitates from methanol, ethanol, water and hexanes.

Purification and Filtration: The obtained polymer was dissolved in benzene and filter through a membrane 0.5 μ nylon filter. The obtained solution was freeze dried under vacuum.

SEC of Homopolymer:

P4879- α MeS



Size exclusion chromatography of Poly(α -methyl styrene) with on-line TriSEC detector:

$M_n=340,000$, $M_w=374,000$, $M_w/M_n=1.10$

Solution viscosity in THF at 35 °C: 1.148dl/g

Radius of Gyration:23.07nm