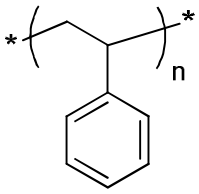
Sample Name: **Polystyrene**

Sample # **P2704-S**

Structure:

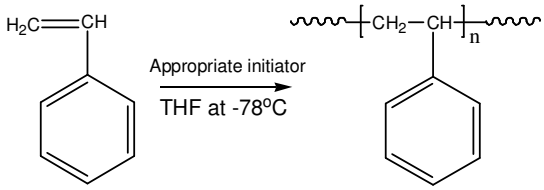


Composition:

Mn x 10^3 (g/mol)	M_w/M_n
9.6	1.27

Synthesis procedure:

Polystyrene was obtained by living anionic polymerization of styrene as presented below:



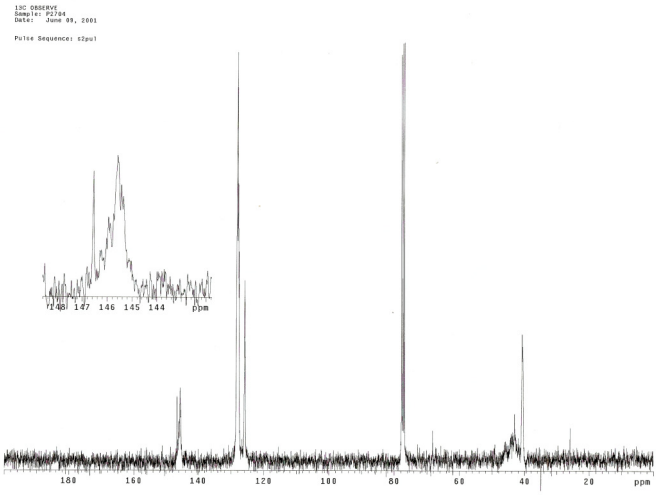
Characterization:

The molecular weight and polydispersity index (M_w/M_n) of the polymer were obtained by size exclusion chromatography (SEC) using THF as an eluent. 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:

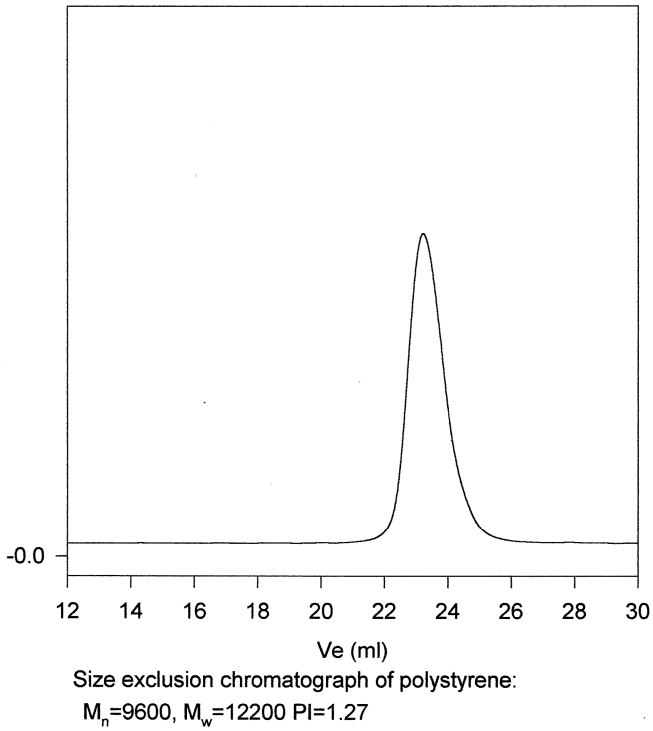
Polystyrene is soluble in DMF, THF, toluene, and chloroform. It precipitates from methanol, ethanol, water, and hexanes.

^{13}C NMR spectrum of the polymer:



SEC of the polymer:

P2704-S



Size exclusion chromatograph of polystyrene:
M_n=9600, M_w=12200 PI=1.27