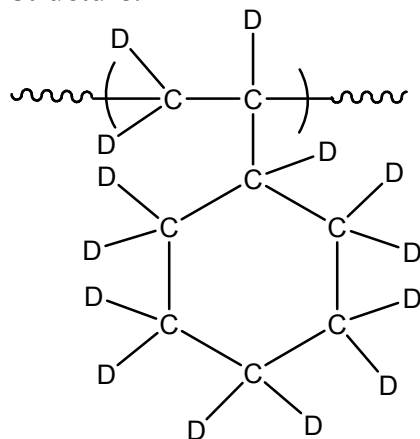


Sample Name: **d14-Deuterated Poly(vinyl cyclohexane)**

Sample #: **P11029-d14VCH**

Structure:



Composition:

Mn x 10 ³	PDI
146.0	1.10

Synthesis Procedure:

Deuterated Polystyrene is obtained by living anionic polymerization. Deuterated polystyrene was deuterated in the presence of Pd based catalyst with deuterium pressure of 1200 psi at 140 oC. The deuteration was carried out for three days. Polymer was recovered after removing catalyst by passing through Silica column and precipitation in ethanol. Polymer was finally dried at 100 oC for 24h under vacuum.

Characterization:

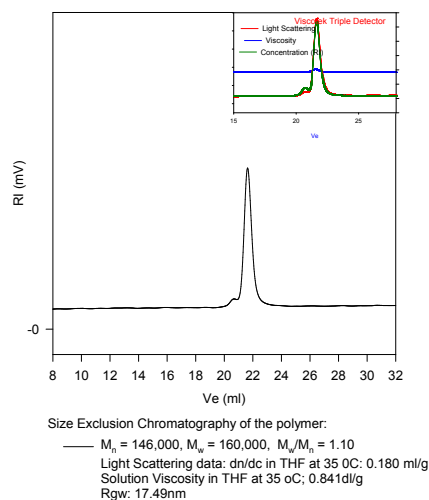
The molecular weight and polydispersity index (PDI) were obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with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

Solubility:

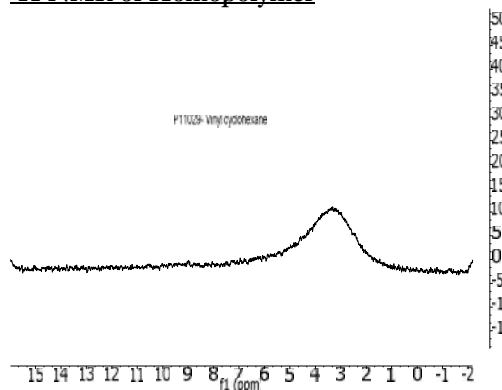
Polymer is soluble in THF, toluene and CHCl₃. It precipitates from methanol, ethanol, water and hexanes.

SEC of Homopolymer:

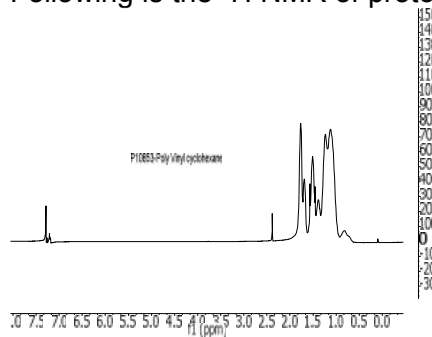
P11029-d14VCH



²H NMR of Homopolymer



Following is the ¹H NMR of protonated analog



DSC of Homopolymer

