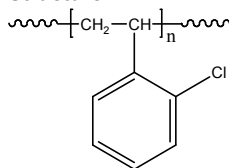


## Sample Name: Poly(2-chloro styrene)

Sample #: P10335-2CIS

### Structure:

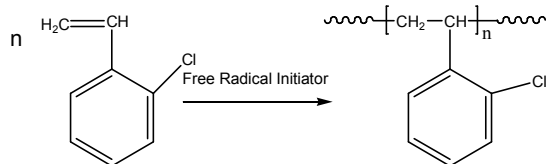


### Composition:

Mn x 10 <sup>3</sup>	PDI
50.0	1.88
Dn/dc in THF at 35 oC	0.1532 ml/g
With respect to Polystyrene	44,000

### Synthesis Procedure:

Poly(2-chloro styrene) is synthesized by controlled radical polymerization of 2-chloro styrene and the reaction scheme is shown below.



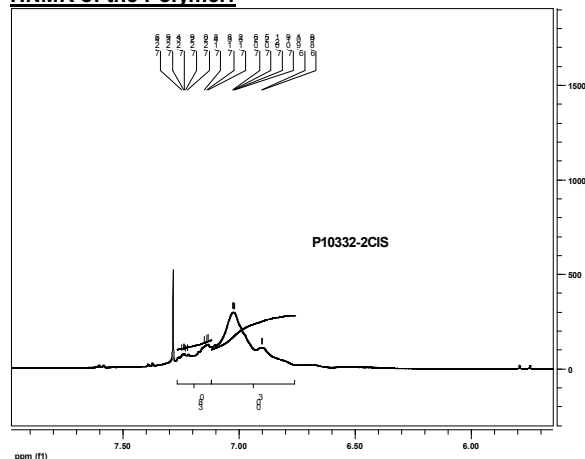
### Characterization:

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(2-chloro styrene) is soluble in DMF, THF, toluene and  $\text{CHCl}_3$ . It precipitates from methanol, ethanol, water and hexanes.

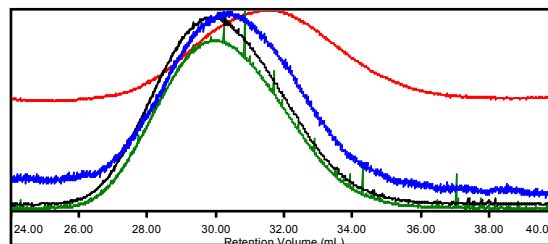
### HNMR of the Polymer:



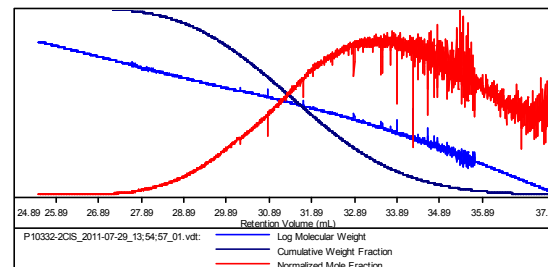
### SEC of Homopolymer:

Sample ID: P10332-2CIS

Concentration (mg/mL)	1.5400
Sample dn/dc (mL/g)	0.1532
Method File	PS80K-July-0000.vcm
Column Set	3x PL 1113-6300
System	System 1

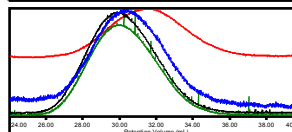


Sample	Mn (Da)	Mw (Da)	Mp (Da)	Mw/Mn	IV (dL/g)
P10332-2CIS_2011-07-29_13:54:57_01	171,273	361,698	306,246	2.112	1.0468



Sample ID: P10332-2CIS

Concentration (mg/mL)	1.2753
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-July-0000.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	Mn (Da)	Mw (Da)	Mp (Da)	Mw/Mn	IV (dL/g)
P10332-2CIS_2011-07-29_13:54:57_01	141,689	298,822	252,940	2.109	1.2641

