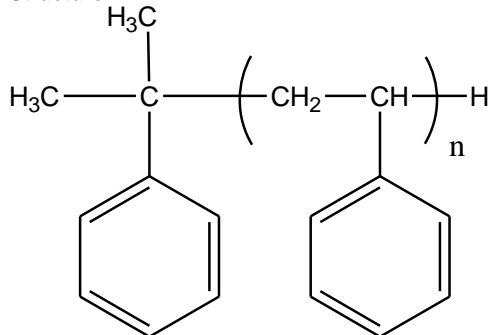


## Sample Name: Polystyrene Oligomer

Sample #: P9378D-S heptamer

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
n= 6 +1 from initiator	1.15

### **Synthesis Procedure:**

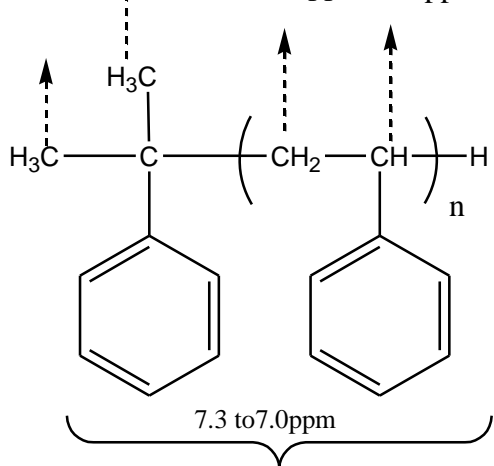
Oligomers of styrene are obtained by living anionic polymerization of styrene followed by separation by column chromatography.

### **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. <sup>1</sup>H-NMR spectroscopy by comparing the peak area of the aromatic and terminal methyl groups coming from cumyl methyl ether potassium salt use as initiator.

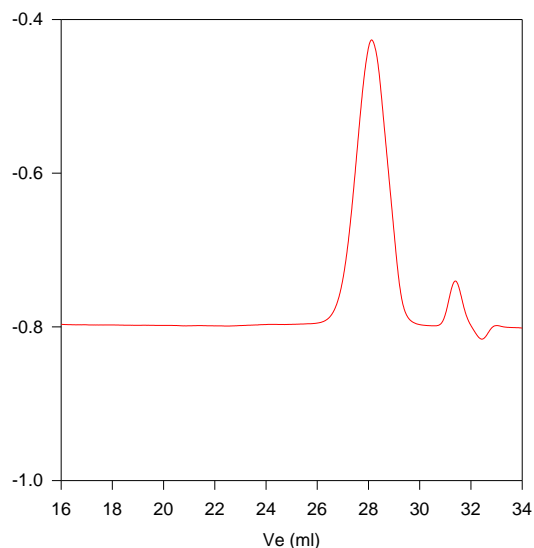
1.1 to 1.3 ppm

1.9ppm 2.4ppm



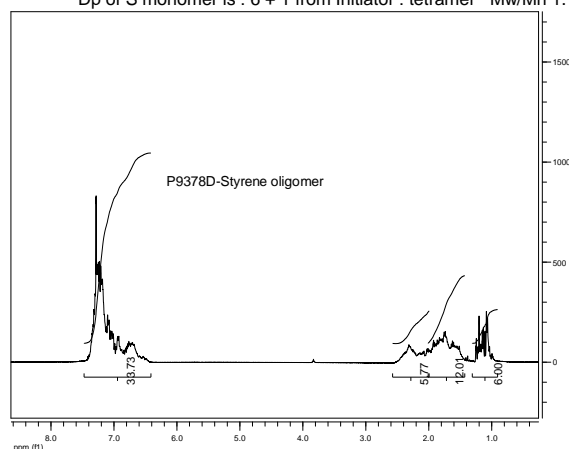
### SEC of Homopolymer:

**P9378D- Styrene Oligomer**

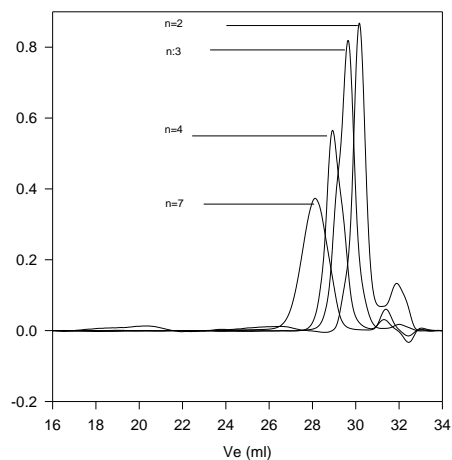


Size Exclusion Chromatography of Poly styrene oligomers

Dp of S monomer is : 6 + 1 from Initiator : tetramer Mw/Mn 1.15



**P9378- Styrene Oligomers**



Size Exclusion Chromatography of Poly styrene oligomers

Dp of S monomer is : Dimer, Trimer, tetramer and Septamers Mw/Mn 1.10