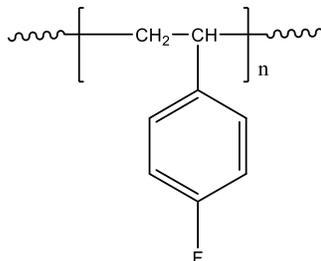


**Sample Name: Poly(4-fluorostyrene)**

### **SEC elugram of the Sample:**

**Sample #: P43492B-4FS**

#### **Structure:**

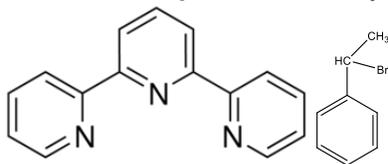


#### **Composition:**

$M_n \times 10^3$	PDI
32.0	2.6

#### **Synthesis Procedure:**

Poly 4-fluorostyrene is obtained by ATRP polymerization process using terpyridine as an adduct and (1-bromoethyl)benzene catalyst.



#### **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.

Thermal analysis was performed on TA Instruments Q100 differential scanning calorimeter (DSC) under a nitrogen atmosphere. The glass transition temperature ( $T_g$ ) of the product was measured at a scan rate of  $10^\circ\text{C}/\text{min}$  shortly after creating thermal history of the sample.

#### **Solubility:**

Polymer is soluble in DMF, THF, toluene and  $\text{CHCl}_3$ . It precipitates from methanol, ethanol, water, and hexanes.

