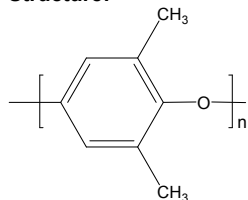


Sample Name: Poly(2,6-dimethyl-p-phenylene oxide)

Sample #: P8183C-DMPO

**Structure:**

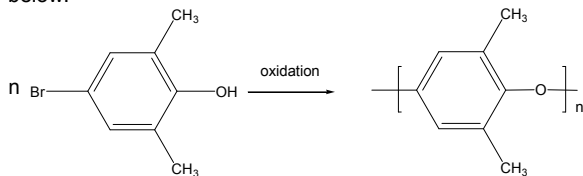


**Composition:**

Mn x 10 <sup>3</sup>	PDI
22.0	1.7

**Synthesis Procedure:**

Poly(2,6-dimethyl-p-phenylene oxide) is obtained by oxidation polymerization and the reaction scheme is shown below.



**Characterization:**

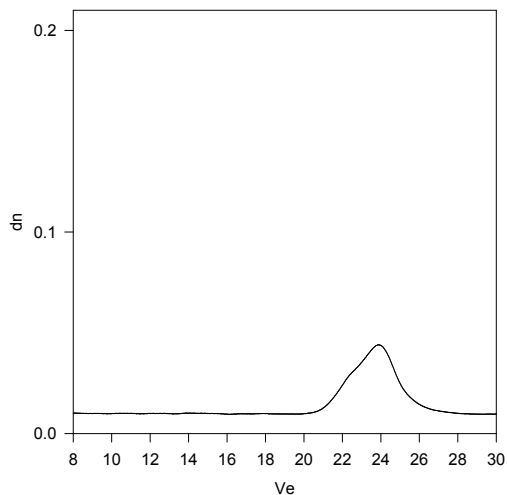
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple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

**Solubility:**

Polymer is soluble in DMF, THF (warm) and CHCl<sub>3</sub>. It precipitates from methanol, ethanol, water and hexanes.

**SEC of Homopolymer:**

**P8183C- DMPO**



Size Exclusion Chromatography of Poly(2,6-dimethyl-p-phenylene oxide) on line Viscotek triple detectors:

M<sub>n</sub>=22000, M<sub>w</sub>=39000 PI=1.7

Solution Viscosity in THF at 30 °C: 0.580dl/g  
Radius of Gyration: 7.49nm