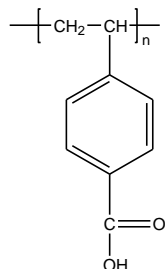


**Sample Name: Poly(4-vinyl benzoic acid)**

**Sample #: P42634A-VBA**

**Structure:**



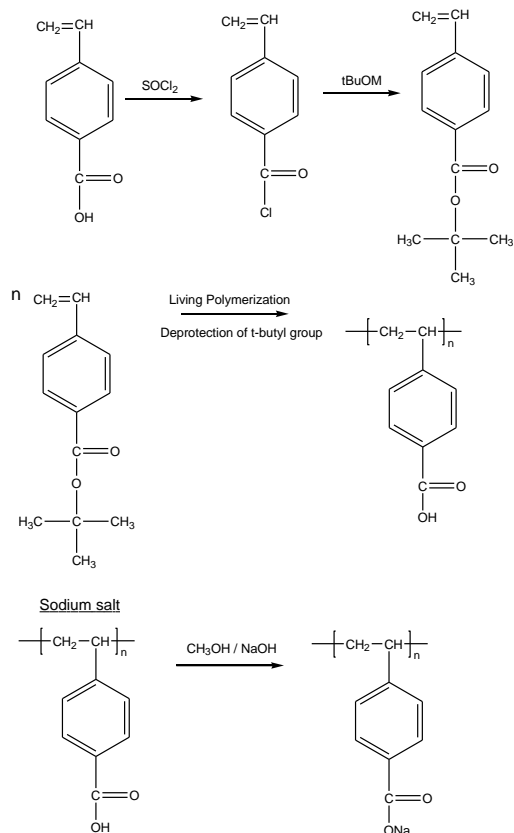
**Composition:**

Mn x 10 <sup>3</sup>	PDI
31.0	1.5

**Synthesis Procedure:**

**Using Sec Butyllithium initiator (yield low)**

Poly(4-vinyl benzoic acid) is synthesized by making the t-butoxy styrene monomer followed by polymerization and hydrolysis of the t-butoxy group. The reaction scheme is shown below.



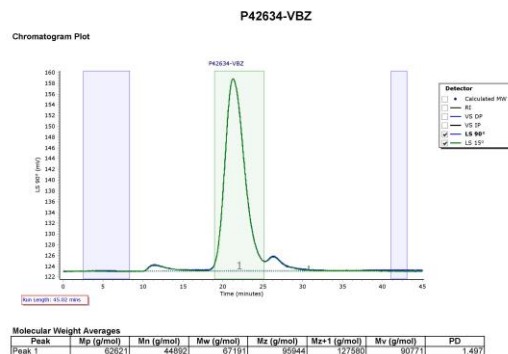
**Characterization:**

The molecular weight and polydispersity index (PDI) of Poly(4-vinyl benzoic acid) are obtained by size exclusion chromatography.

**Solubility:**

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

**SEC of Homopolymer:**



After Hydrolysis of ester to  $\text{COOH}$  Mn 31,000

**FT-IR spectrum of the sample:**

