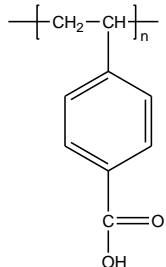


**Sample Name:** Poly (4-vinyl benzoic acid)

**Sample #:** P16224-VBA

**Structure:**

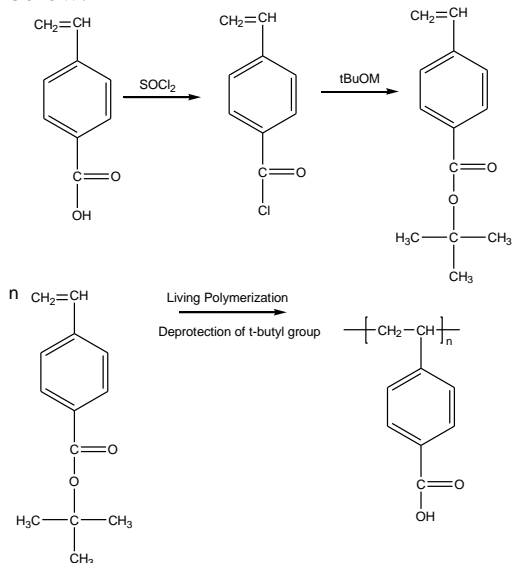


**Composition:**

Mn x 10 <sup>3</sup>	PDI
33.0	1.13

**Synthesis Procedure:**

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



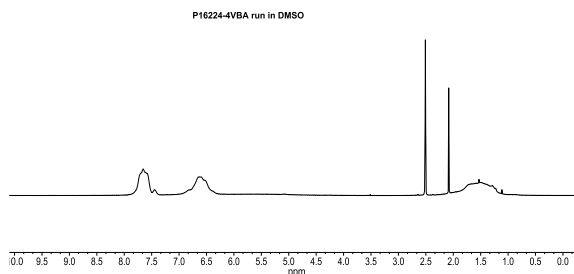
**Characterization:**

The molecular weight and polydispersity index (PDI) of poly(t-butyl vinylbenzoate) are obtained by size exclusion chromatography. The molecular weight of Poly(4-vinyl benzoic acid) is calculated from poly(t-butyl vinylbenzoate).

**Solubility:**

Polymer is soluble in DMF, MeOH, EtOH. It precipitates from water and hexanes.

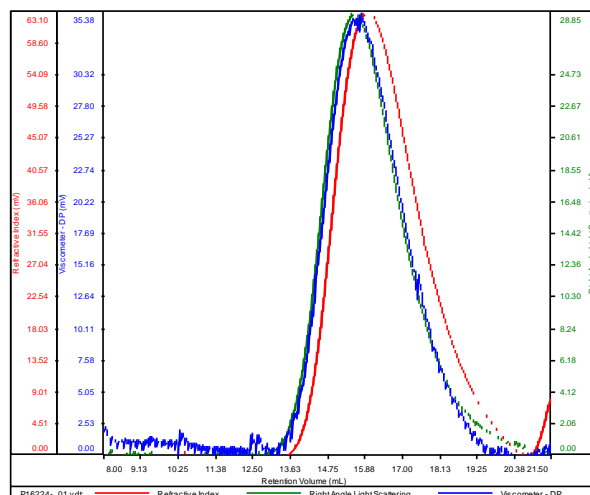
**HNMR spectrum of the Polymer:**



**SEC elugram of Homopolymer poly(t-butyl vinylbenzoate):**

P16224-tBuVBA

Conc	8.3596
dn/dc	0.1650
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k-May2017-0000.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P16224_01.vdt	46,087	52,145	52,841	1.131	1.0000

**FTIR of the product:**

