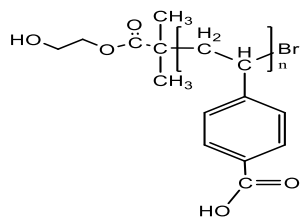


**Sample Name: Poly(4-vinyl benzoic acid)**

**Sample #: P42645A-VBA by ATRP**

**Structure:**

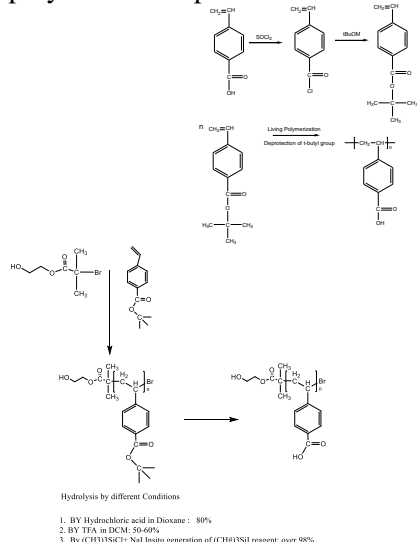


**Composition:**

Mn x 10 <sup>3</sup>	PDI
3.6	1.22
Free VBA monomer	< 3%

**Synthesis Procedure:**

The polymer was synthesized by RAFT polymerization process.



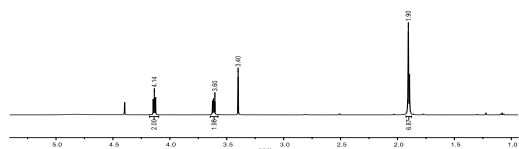
**Characterization:**

The product was characterized by size exclusion chromatography (SEC) and <sup>1</sup>H NMR and FT-IR.

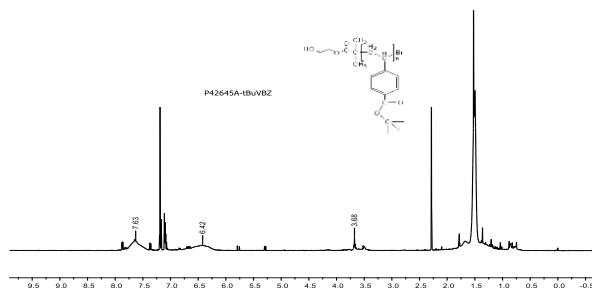
**Solubility:**

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

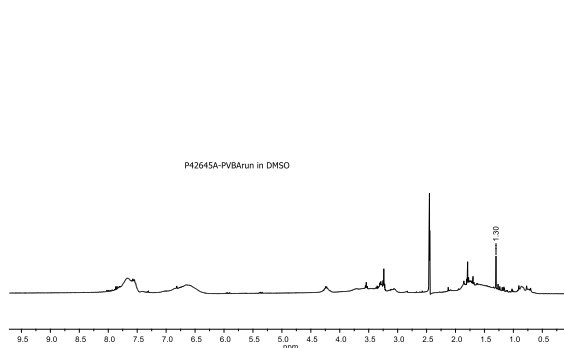
**<sup>1</sup>H-NMR spectrum of ATRP (400 MHz, CDCl<sub>3</sub>):**



**<sup>1</sup>H-NMR spectrum of the polymer (CDCl<sub>3</sub>):**

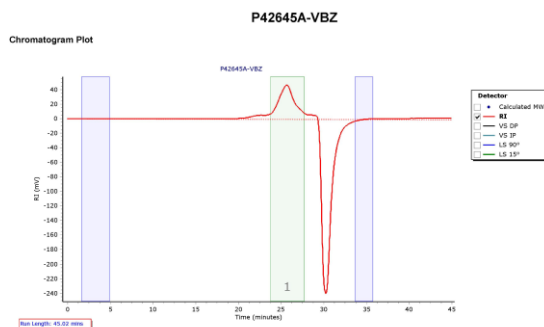


**<sup>1</sup>H-NMR spectrum of the polymer (DMSO):**



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

Agilent GPC/SEC Software



Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	5600	5115	6241	7448	8624	7064	1.22

**After hydrolysis of tert. Butyl ester (Mn 5,000)  
Mn of Poly Vinyl benzoic acid : Mn 3,600**

**FTIR spectrum of the product:**

