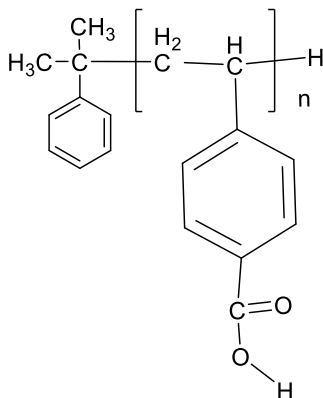


**Sample Name: Poly(4-vinyl benzoic acid)**

**Sample #: P43043-VBA**

**Structure:**



**Composition:**

| Mn x 10 <sup>3</sup>                      | PDI    |
|---|--------|
| 2.8                                       | 1.13   |
| Traces of unreacted monomer               | > 0.1% |
| Presence of unhydrolyzed tert Butyl ester | >1%    |

**Synthesis Procedure:**

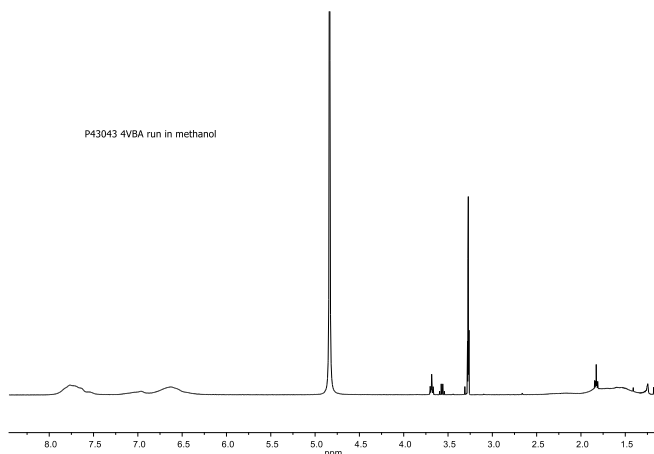
**Using cumyl potassium initiator and polymerization at -95 °C.**

Poly(4-vinyl benzoic acid) is synthesized by making the 4-t-butyl vinyl Benzoate monomer followed by polymerization and hydrolysis of the t- butoxy group.

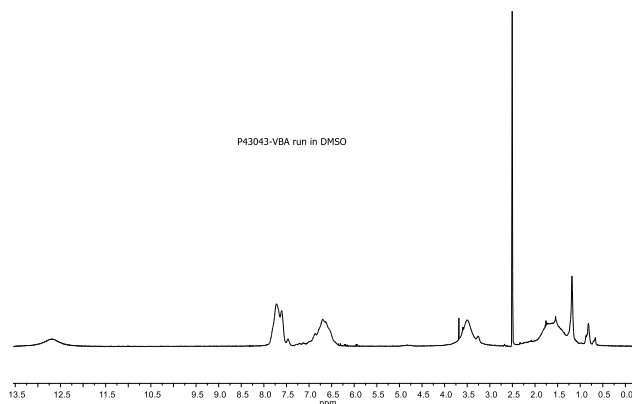
**Characterization:**

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

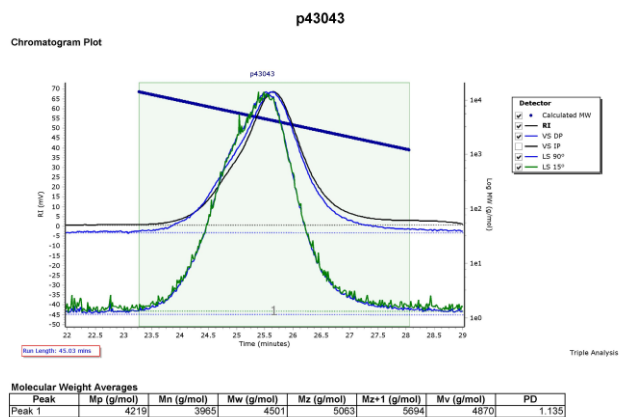
**<sup>1</sup>H-NMR spectrum of Poly 4-VBA run in Methanol**



**<sup>1</sup>H-NMR spectrum of Poly 4-Vinyl Benzoic acid:**



**SEC elugram of Homopolymer:**



After Hydrolysis of ester to COOH Mn:2,800

**FT-IR spectrum:**

