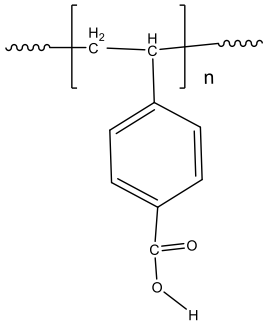
Sample Name: **Poly(4-vinyl benzoic acid)**

Sample #: **P43010-VBA**

Structure:



Composition:

Mn x 10^3	PDI
17.5	1.68
Traces of unreacted monomer	> 1%
Presence of unhydrolyzed tert Butyl ester	>1%

Synthesis Procedure:

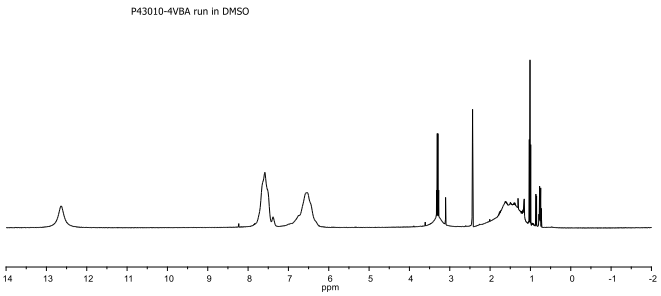
Using potassium naphthalene initiator and polymerization at -95 ºC.

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

Characterization:

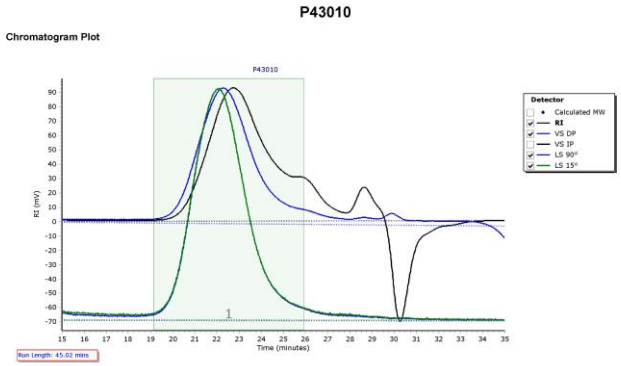
The product was characterized by size exclusion chromatography (SEC) and ^{1}H-NMR data analysis.

^{1}H-NMR spectrum of Poly 4-Vinyl Benzoic acid:



Polymer is soluble in DMSO and its sodium salt in water

SEC elugram of Homopolymer:



Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	40174	25043	42023	64568	91592	60677	1.678

After Hydrolysis of ester to COOH Mn: 17,500

FT-IR spectrum: