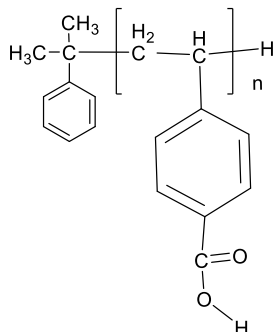


Sample Name: Poly(4-vinyl benzoic acid)

Sample #: P43014A3-VBA

Structure:



Composition:

Mn x 10 ³	PDI
3.2	1.13
Traces of unreacted monomer	> 0.1%
Presence of unhydrolyzed tert Butyl ester	>1%

Synthesis Procedure:

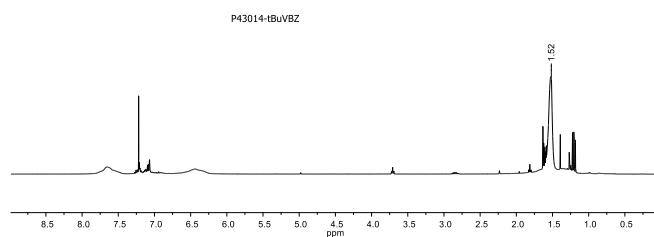
Using cumyl potassium initiator and polymerization at -95 °C.

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

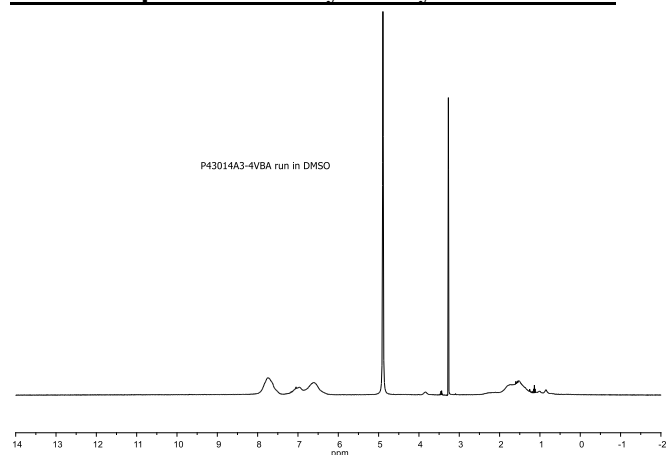
Characterization:

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

¹H-NMR spectrum of Poly 4-Tert.butyl Vinylbenzoate:

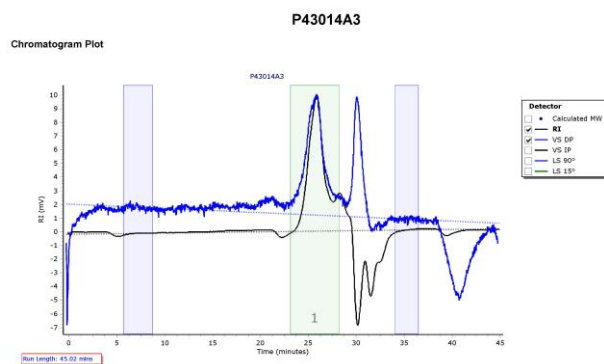


¹H-NMR spectrum of Poly 4-Vinyl Benzoic acid:



Polymer is soluble in DMSO and its sodium salt in water.

SEC elugram of Homopolymer:



Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	4932	4454	5058	5643	6205	5508	1.136

After Hydrolysis of ester to COOH Mn: 3200

FT-IR spectrum:

