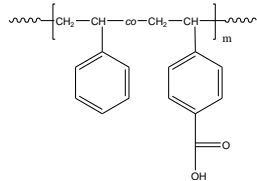


Sample Name: Random Copolymer Poly (styrene-co-vinybenzoic acid)

Sample #: P16226C-SVBArAn

Structure:



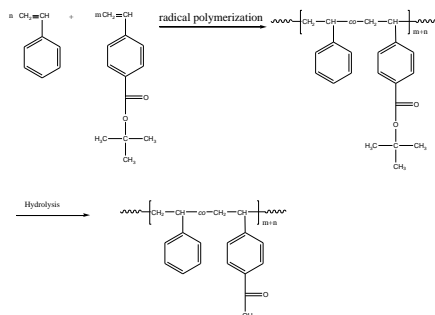
Composition:

PS (mol%) : 80.0

Mn x 10 ³ PS-co-PVBA	PDI
21.5	1.10

Synthesis Procedure:

The copolymer was prepared by TEMPO mediated copolymerization of styrene (St) and t-butyl vinylbenzoate(tBuVB), followed by a hydrolysis of t-butyl ester. The scheme of the reaction is illustrated below:



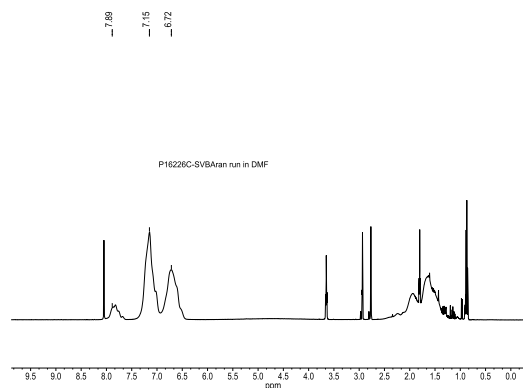
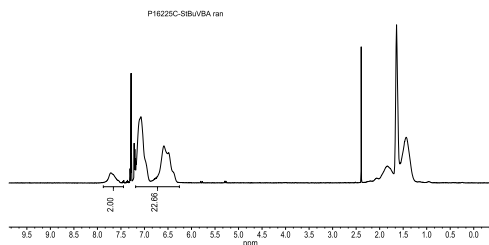
Characterization:

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

Solubility:

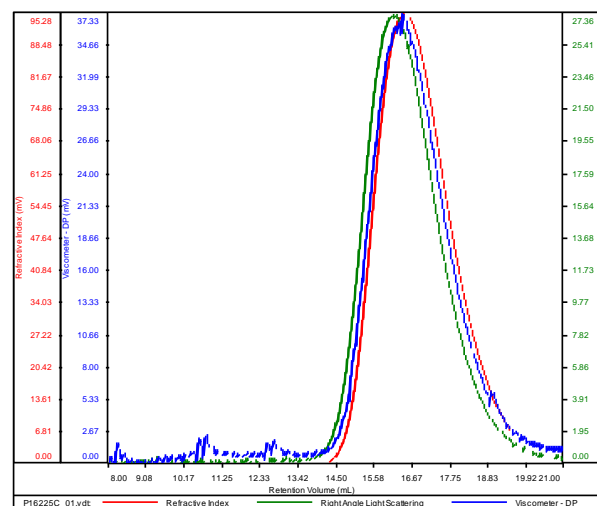
The polymer is soluble in MeOH, EtOH, dioxane, DMF and precipitated out from hexane and water.

¹H-NMR of the copolymer Poly(S-co-tBuVB):



SEC of the random copolymer Poly(S-co-tBuVB): P16225C-StBuVBArAn

Conc	5.9989
dn/dc	0.1650
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k_2017-July-05-0000.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P16225C_01.vdt	27,361	30,140	29,231	1.102	2.6631

FTIR of the polymer before and after hydrolysis:

