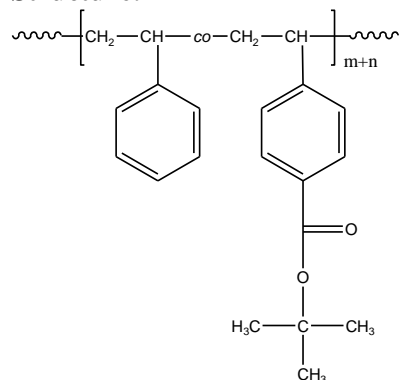


**Sample Name:** Random Copolymer Poly (styrene-co-4-tert.butyl vinyl benzoate)

**Sample #:** P16225B-StBuVBA

### Structure:



### Composition:

PS (mol%) : 88

Mn x 10 <sup>3</sup> PS-co-PtBuVBA	PDI
22.5	1.11

### Synthesis Procedure:

The polymer was synthesized by controlled radical polymerization process.

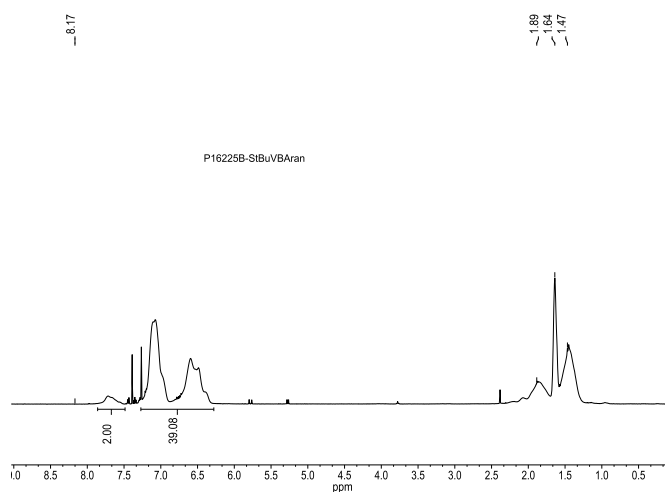
### Characterization:

The polymer Poly(S-co-tBuVB) was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The copolymer composition was calculated from <sup>1</sup>H-NMR spectroscopy by comparing the peak area the aromatic protons of styrene at about 6.66-7.05 ppm with the protons of t-butyl vinylbenzoate at about 6.8-8 ppm that deducts the contribution of the styrene protons.

### Solubility:

The polymer is soluble in THF, DMF, CHCl<sub>3</sub> and precipitated out from hexane and water.

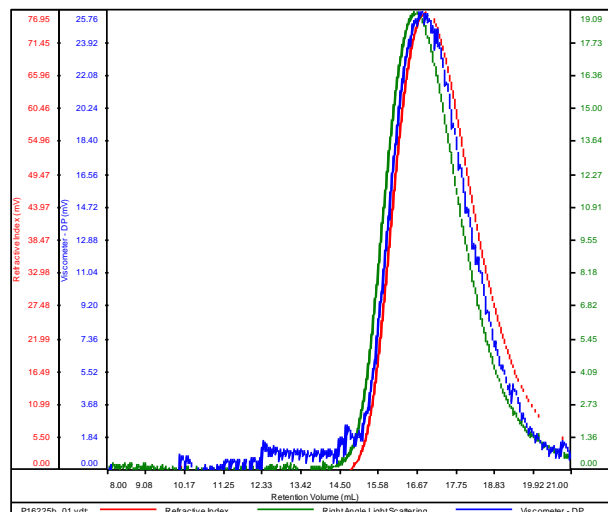
### <sup>1</sup>H-NMR of the copolymer Poly(S-co-tBuVB):



### SEC of the random copolymer Poly(S-co-tBuVBA):

P16225B-StBuVBAran

Conc	5.1899
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
P16225b_01.vdt	22,585	25,160	25,210	1.114	1.0000