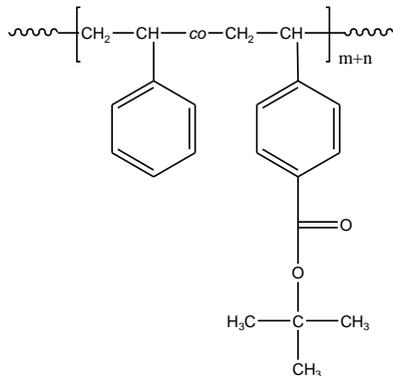


Sample Name: Random Copolymer Poly (styrene-co-4-tert.butyl vinyl benzoate)

Sample #: P16225E-StBuVBA

Structure:



Composition:

PS (mol%) : 60

| | |
|---------------------------------------|------|
| Mn x 10 ³ PS-co-PtBuVBA | PDI |
| 25.0 | 1.11 |

Synthesis Procedure:

The polymer was synthesized by controlled radical polymerization process.

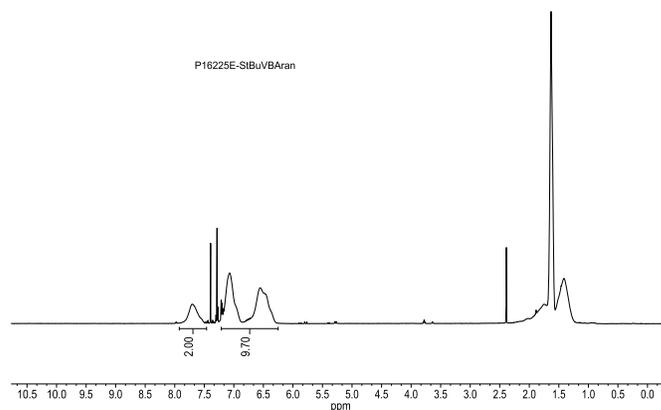
Characterization:

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 ¹H-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, CHCl₃ and precipitated out from hexane and water.

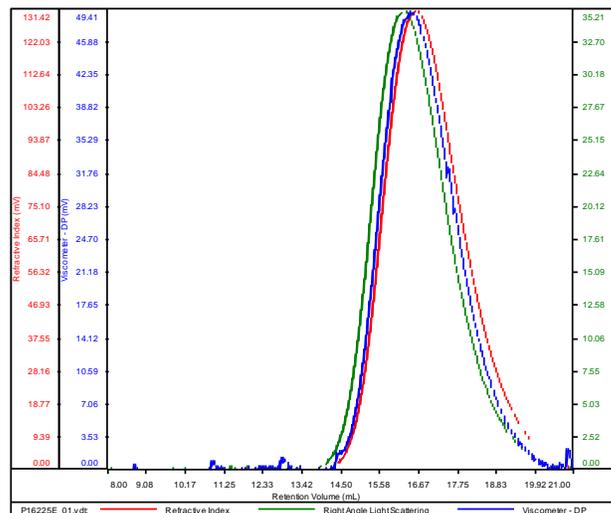
¹H-NMR of the copolymer Poly(S-co-tBuVB):



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

P16225E-StBuVBAran

| | |
|-----------|-----------------------------|
| Conc | 8.4575 |
| 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 |
|----------------|--------|--------|--------|-------|--------|
| P16225E_01.vdt | 24,800 | 27,652 | 26,752 | 1.115 | 1.0000 |