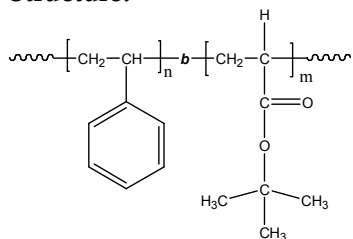


**Sample Name:** Poly (styrene-b- tert.butyl acrylate)

**Sample #:** P19320A-StBuA

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup> S-b-tBuA	PDI
52.0-b-9.5	1.08

**Synthesis Procedure:**

Poly (styrene-b-tert.butyl acrylate) is prepared by living anionic polymerization in THF at -78 °C using sec.BuLi initiator adduct with  $\alpha$ -methyl styrene in the presence of LiCl. tert.butyl acrylate (tBuA) monomer was added after dilution in THF. For further details please see our published articles.<sup>1-4</sup>

**Characterization:**

Polymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The final block copolymer composition was calculated from <sup>1</sup>H-NMR Copolymer Mw/Mn is determined by SEC.

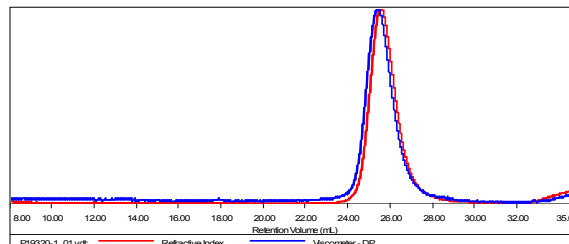
**Solubility:**

Poly (styrene-b-tert.butylacrylate) is soluble in THF, toluene, dioxane and CHCl<sub>3</sub>.

**SEC for the sample:**

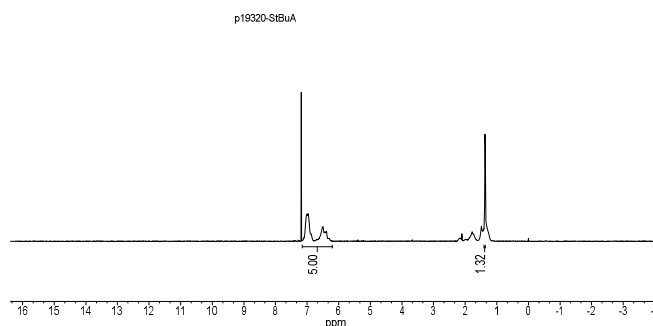
**Sample ID:**P19320-S

Concentration (mg/mL)	2.5795
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-May20-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19320-1_01.vdt	52,124	55,437	52,436	1.083	0.5268

**<sup>1</sup>H NMR for the polymer:**



**References for further information:**

1. S. K. Varshney, R. Fayt, Ph. Teyssie, and J.P. Hautekeer US Patent 5,264,527 (1993)
2. Ph. Teyssie, R. Fayt, **S. K. Varshney**, and C. Jacobs Eur. Pat. Appl., Jan 16, 1991 *Eur.Pat.408420* *Patent Assignees- Atochem S.A France. C.A. Vol 114, 26, 247998.* "Star Block Copolymers based on Acrylates and Methacrylates and their Manufacture process".
3. Ph.Teyssie, R. Fayt, and **S. K. Varshney**, *Eur. Pat. Appl. Dec. 12, 1990. Eur. Pat.402204* *Patent Assignees-Norsolor S.A. France. CA Vol 114, 20, 186314.*"Catalyst for the the Anionic Living Polymerization (Meth)acrylates".