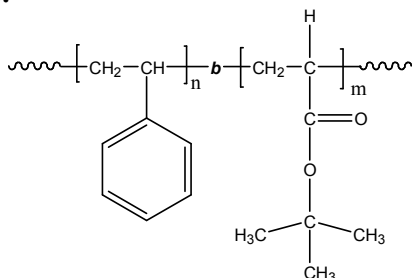


Sample Name: **Poly (styrene-b- tert.butyl acrylate)**

Sample #: **P40246-StBuA**

Structure:



Composition:

| | |
|----------------------------------|------|
| Mn x 10 ³ S-b-tBuA | PDI |
| 95.0-b-18.0 | 1.02 |

Synthesis Procedure:

The polymer was synthesized by anionic process.

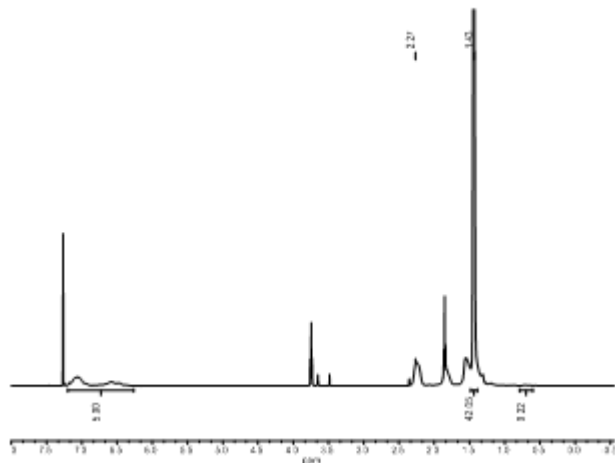
Characterization:

The polymer was characterized by ^1H NMR, SEC, and FTIR.

Solubility:

Poly (styrene-*b*-*tert*.butylacrylate) is soluble in THF, toluene, dioxane and CHCl₃.

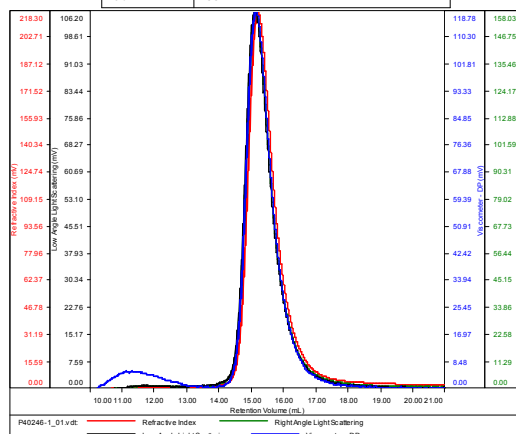
¹H NMR (500 MHz, CDCl₃):



SEC of polystyrene block:

P40246-S

| | |
|--------------|--------------------------|
| Conc (mg/mL) | 8.0745 |
| dn/dc (mL/g) | 0.1650 |
| Method | PS80k-Nov162016-0000.vcm |
| Solvent | DMF w 0.023M LiBr |
| Column | PSS |

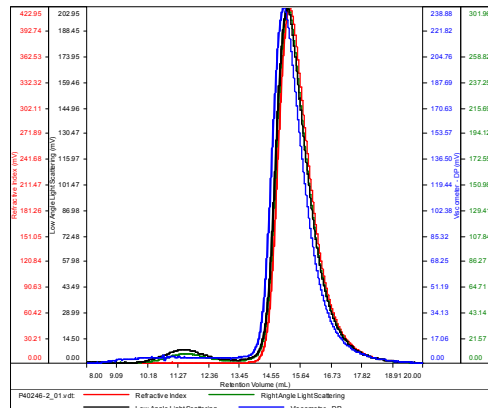


| Sample | Mn | Mw | Mp | Mw/Mn | IV |
|-----------------|--------|--------|--------|-------|--------|
| P40246-1_01.vdt | 94,900 | 97,032 | 96,710 | 1.022 | 0.1615 |

SEC of diblock copolymer:

P40246-StBuA

| | |
|--------------|------------------------------|
| Conc (mg/mL) | 11.4241 |
| dn/dc (mL/g) | 0.1480 |
| Method | PS80k-October192016-0000.vcm |
| Solvent | DMF w 0.023M LiBr |
| Column | PSS |



| Sample | Mn | Mw | Mp | Mw/Mn | IV |
|-----------------|---------|---------|---------|-------|--------|
| P40246-2_01.vdt | 113,189 | 115,633 | 113,259 | 1.022 | 0.3249 |

References:

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. CA. 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"

(v. R-01)