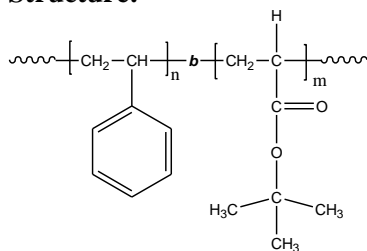


Sample Name: Poly (styrene-b- tert.butylacrylate)

Sample #: P40953-StBuA

Structure:



Composition:

Mn x 10 ³ S-b-tBuA	PDI
34.0-b-83.5	1.05

Synthesis Procedure:

Poly(styrene-b-tert.acrylate) is prepared by living anionic polymerization in THF at -78 °C using sec.BuLi initiator adduct with α -methyl styrene in the presence of LiCl. For further details please see our published articles.¹⁻³

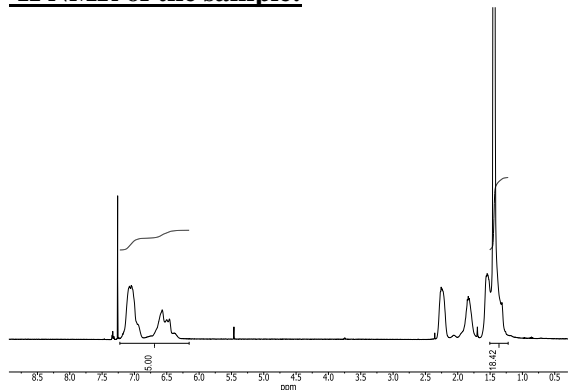
Characterization:

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

Solubility:

Poly(styrene-b-tert.butylacrylate) is soluble in THF, toluene, dioxane and CHCl₃. This polymer readily precipitates from methanol, ethanol, hexanes and water.

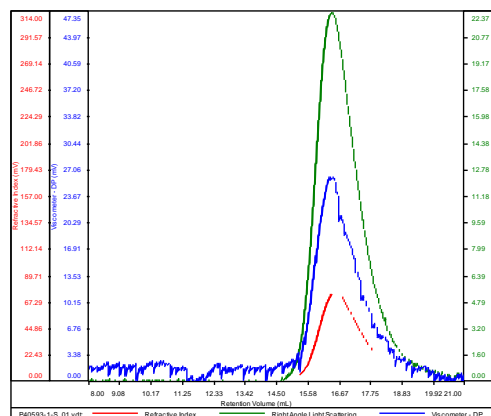
¹H NMR of the sample:



SEC of the first block PS:

P40953-1-S

Conc	3.5022
dn/dc	0.1650
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k_2018-01-24-0000.vcm

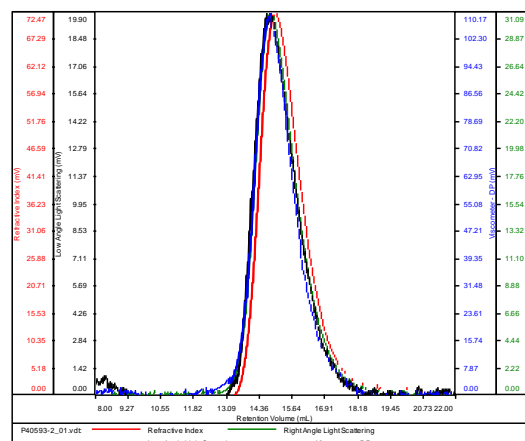


Sample	Mn	Mw	Mp	Mw/Mn	IV
P40953-1-S_01.vdr	34,118	34,773	35,117	1.019	0.1517

SEC for the block copolymer:

p40953-2-StBuA

Conc	8.4528
dn/dc	0.0700
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k_2018-01-24-0000.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P40953-2_01.vdr	117,623	123,186	119,036	1.047	0.2731

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. 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".