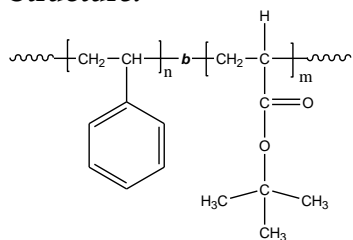


Sample Name: Poly(styrene-b- tert.butyl acrylate)

Sample #: P18752-StBuA

Structure:



Composition:

Mn x 10 ³ S-b-tBuA	PDI
26.0-b-120.0	1.5

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 α -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.¹⁻⁴

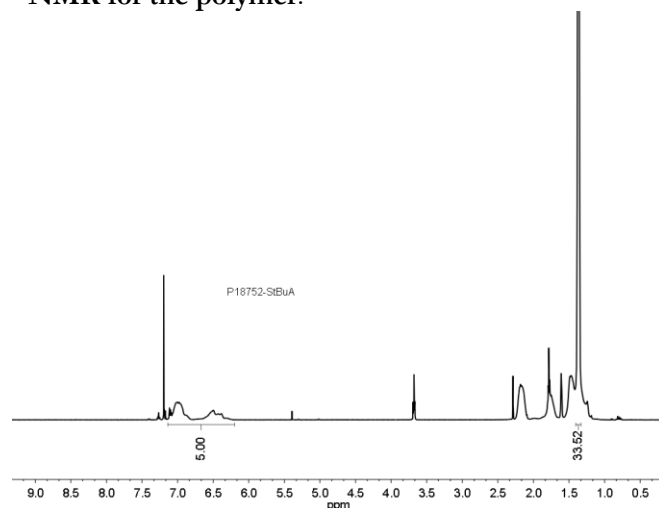
Characterization:

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 ¹H-NMR. Copolymer Mw/Mn is determined by SEC.

Solubility:

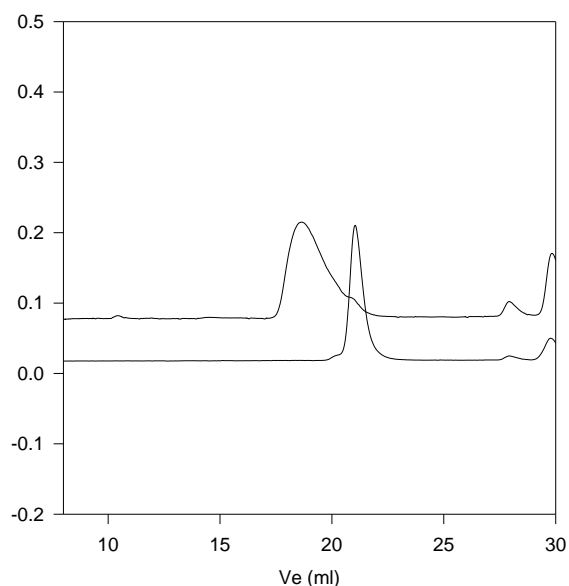
Poly(styrene-b-tert.butylacrylate) is soluble in THF, toluene, dioxane and CHCl₃.

¹H-NMR for the polymer:



SEC for the sample :

P18752-StBuA



Size exclusion chromatography of polystyrene-b-poly(t-butyl acrylate)

— Polystyrene, M_n=26,000, M_w= 27,300 PI=1.04

— Block Copolymer PS(26,000)-b-PtBuA(120,000), PI=1.5

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".