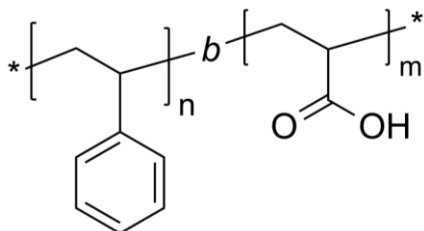


Sample Name: Poly(styrene)-b-poly(acrylic acid)

Sample #: P42635A-SAA

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup> S-b-AA	PDI
65.5-b-13.0	1.01

**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. For further details please see our published articles.<sup>1-3</sup>

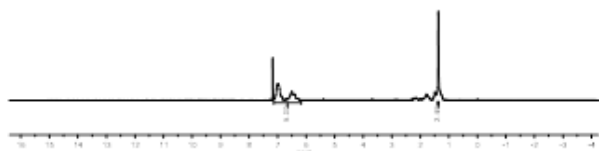
**Characterization:**

The product was characterized by size exclusion chromatography (SEC) and <sup>1</sup>H-NMR analysis.

**Solubility:**

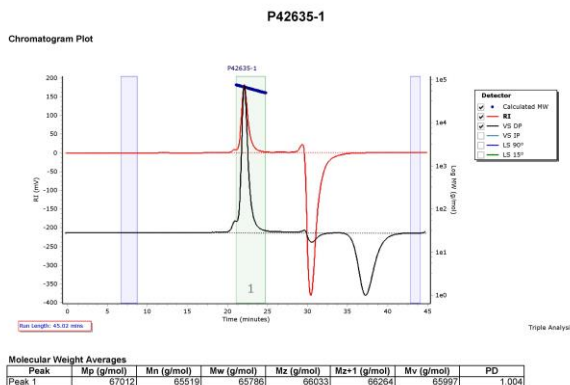
Poly (styrene-b-tert.butylacrylate) is soluble in THF, toluene, dioxane and CHCl<sub>3</sub>.

**<sup>1</sup>H-NMR spectrum of the PS-b-tBuA:**



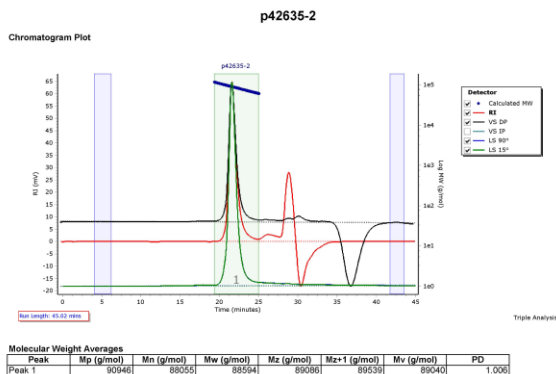
**SEC elugram of the first (PS) block:**

Agilent GPC/SEC Software



**SEC elugram of the product (diblock copolymer):**

Agilent GPC/SEC Software



**After Hydrolysis of tert.butyl ester to :  
S-b-AA ,Mn:65,500-b-13,000**

**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".