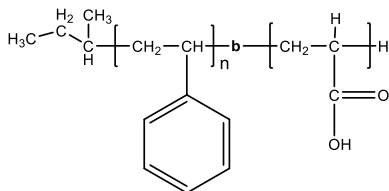


Sample Name: Poly (styrene-b- Acrylic acid)

Sample #: P43543-SAA

Structure:



Composition:

Mn x 10 <sup>3</sup> S-b-AA	PDI
12.7-b-0.4	1.25

Dp (S-b-AA): (122-b-5)
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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>

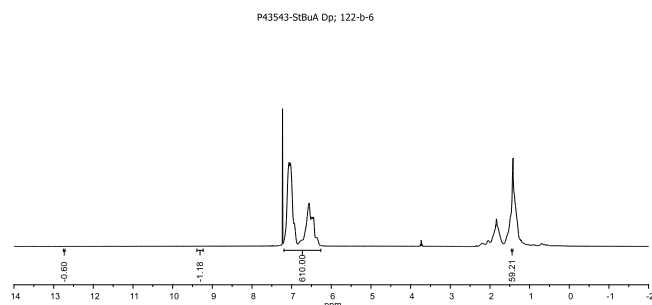
Characterization:

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

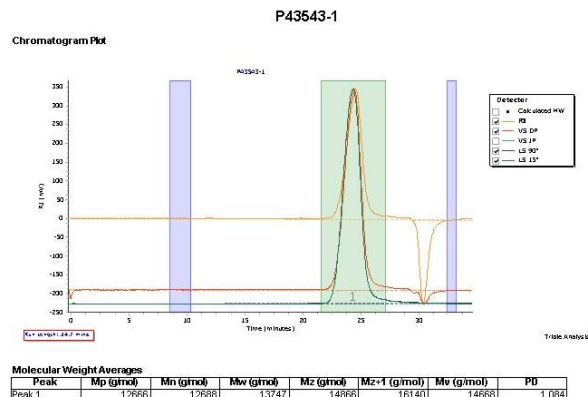
Solubility:

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

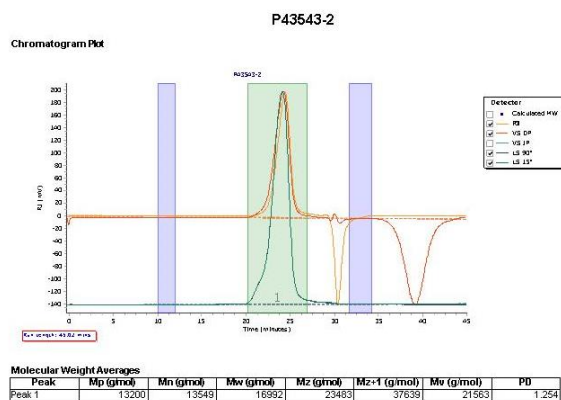
<sup>1</sup>H-NMR spectrum of the PS-b-tBuA:



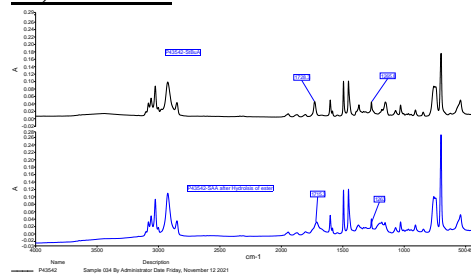
SEC elugram of the first (PS) block:



SEC elugram of the product (diblock copolymer):



After Hydrolysis of tert.butyl ester to: S-b-AA  
12,700-b-400



References for further information:

1. 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".
2. Xing Fu. Zhong, S. K.Varshney, and A. Eisenberg "Critical Micellization Length for Polystyrene-b-Na-Acrylate Block Ionomers" CA Vol 117, 26, 252280 Macromolecules 1992, 25, 7160-7167.