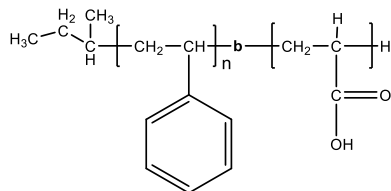


Sample Name: Poly (styrene-b- Acrylic acid)

Sample #: P43542-SAA

Structure:



Composition:

Mn x 10 ³ S-b-AA	PDI
11.3-b-0.3	1.17

Dp (S-b-AA): (107-b-4)

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. For further details please see our published articles.¹⁻³

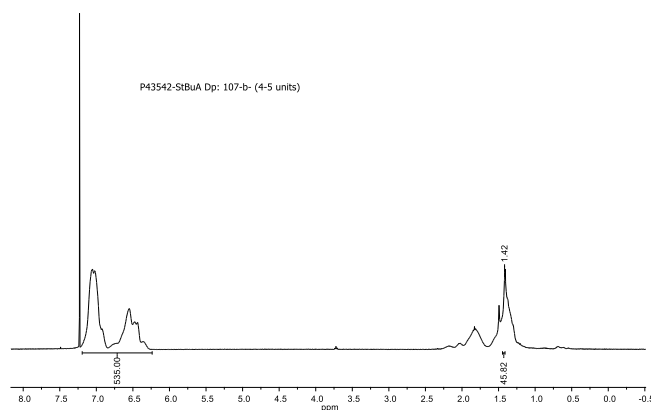
Characterization:

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

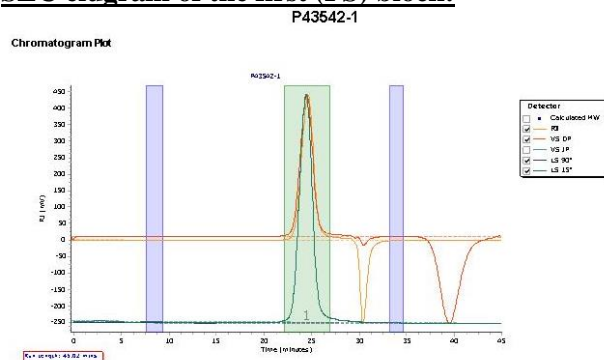
Solubility:

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

¹H-NMR spectrum of the PS-b-tBuA:



SEC elugram of the first (PS) block:

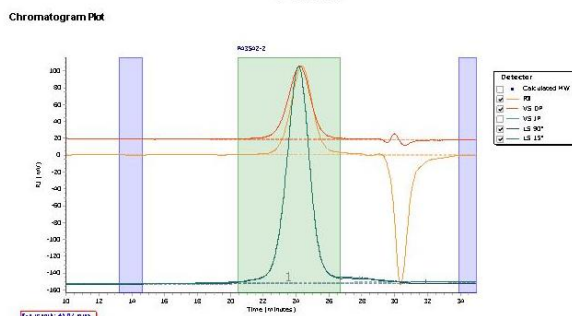


Molecular Weight Averages							
Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	11667	11292	12334	13421	14609	13236	1.092

SEC elugram of the product (diblock copolymer):

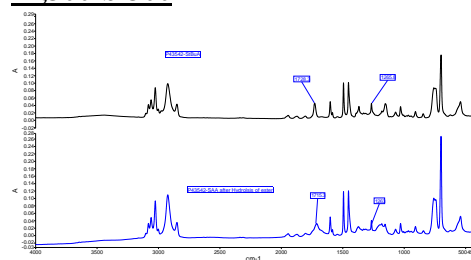
Agilent GPC/SEC Software

P43542-2



Molecular Weight Averages							
Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	12574	11776	13792	16973	23950	16304	1.171

After Hydrolysis of tert.butyl ester to: S-b-AA
11,300-b-300



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.