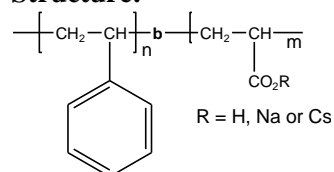


Sample Name: Poly (styrene -b- Sodium acrylate)

Sample #: P914-SANa

Structure:

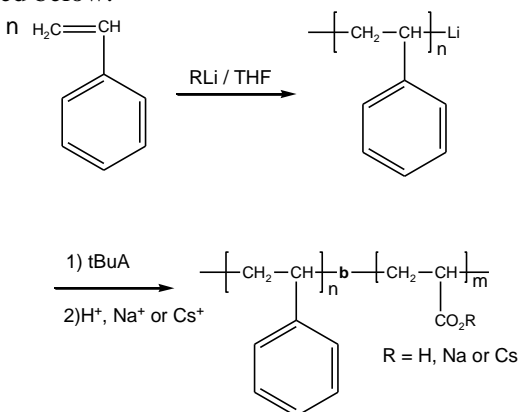


Composition:

Mn x 10 ³ PS-b-PANa	PDI
4.1-b-3.4	1.11

Synthesis Procedure:

Poly(styrene-b-acrylic acid) is prepared by living anionic polymerization with sequence addition of styrene followed by t-butyl acrylate and hydrolysis of the t-butyl group. The scheme of the reaction is illustrated below:



Characterization:

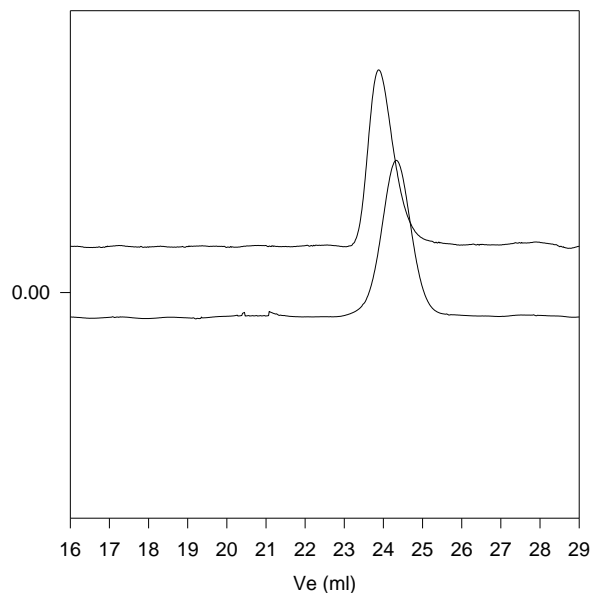
An aliquot of the polystyrene block was terminated before addition of t-butyl acrylate and analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI).

Solubility:

Poly(styrene-b-acrylic acid) is soluble in THF, DMF and its salt can be solubilized in DMSO or DMF depending on the compositions.

SEC of the block copolymer:

P914-StBuA For P914SANa



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

- Polystyrene, $M_n=4100$, $M_w=4600$, $PI=1.12$
- Block Copolymer PS(4100)-b-PtBuA(4600), $PI=1.11$ after Hydrolysis of tBuA ester to ANa: 3,400