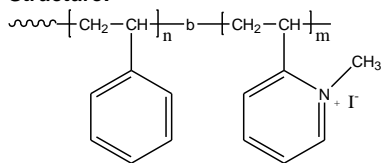


Sample Name: **Poly(styrene-b-N-methyl 2-vinyl pyridinium iodide)**

Sample #: **P5736C-S2VPQ**

Structure:

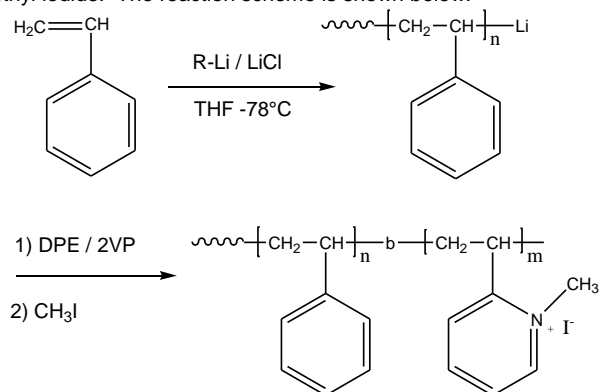


Composition:

Mn x 10 ³ PS-b-P2VPQ	PDI
213.0-b-293.0	1.3

Synthesis Procedure:

Poly(styrene -b- 2-vinyl pyridinium iodide) is prepared by living anionic polymerization with sequence addition of styrene followed by 2-vinyl pyridine and quaternization by the polymer using methyl iodide. The reaction scheme is shown below:



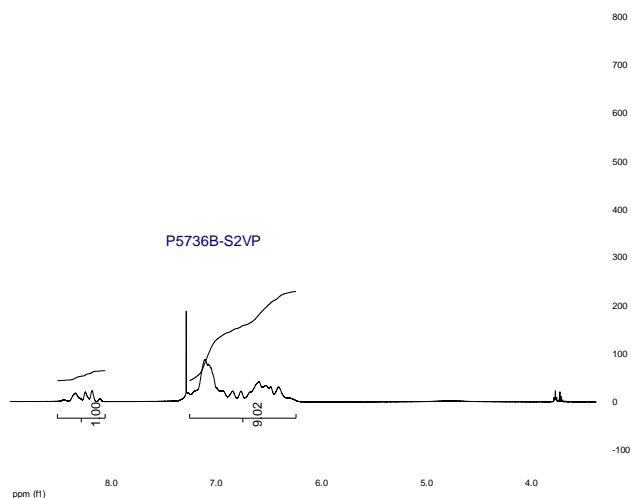
Characterization:

An aliquot of the polystyrene block was terminated before addition of 2-vinyl pyridine and 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 spectroscopy by comparing the peak area of the styrene protons at 6.3-7.2 ppm with the peak area of the 2-vinyl pyridine proton at 8.2 ppm. Block copolymer PDI is determined by SEC.

Solubility:

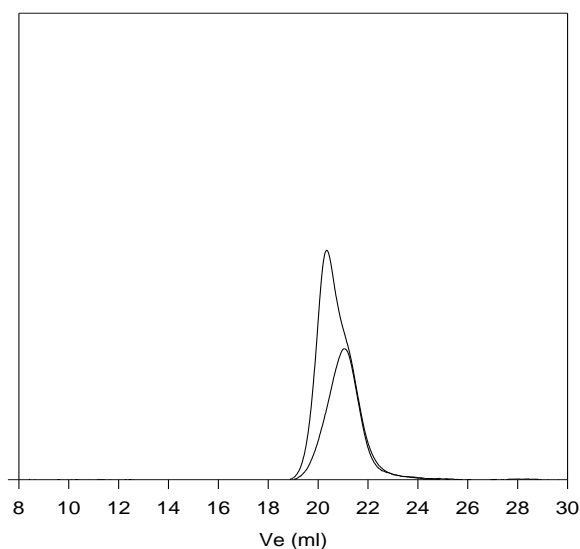
Poly(styrene -b- 2-vinyl pyridinium iodide) is soluble in DMF

¹H-NMR Spectrum of the block copolymer unquaternized



SEC of the block copolymer:

P5736C-S2VP



Size exclusion chromatography of poly(styrene-b-2-vinyl pyridine)

— Polystyrene, M_n=213,000 Mw: 245,000 PI=1.15

— Polystyrene(213,000)-b-Poly(125,000), PI=1.3

After Quaternization : Mn 213000-b-293,00 Mw/Mn :
1.3