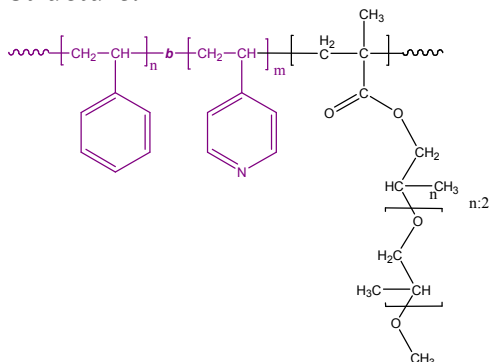


Sample Name:

Poly(styrene-b-4-vinyl pyridine-Propylene glycolmethacrylate)

Sample #: P10241-S4VPPGMA**Structure:****Composition:**

Mn x 10 ³ S-b-4VP-b-PGMA	PDI
20.0-b-31.0-b-0.8	1.18

Synthesis Procedure:

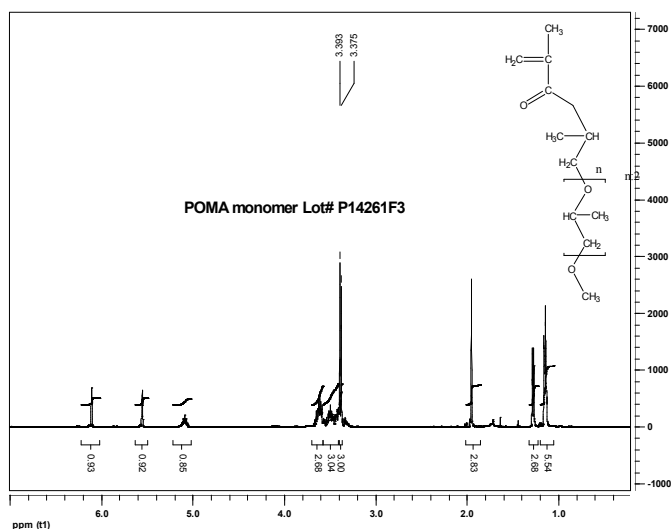
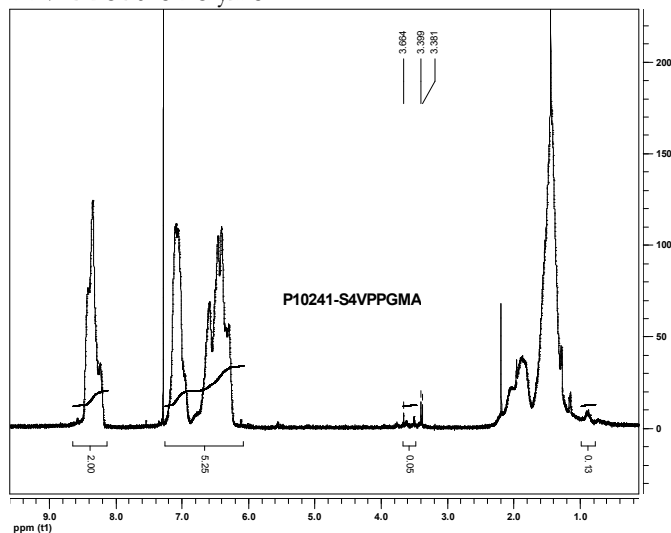
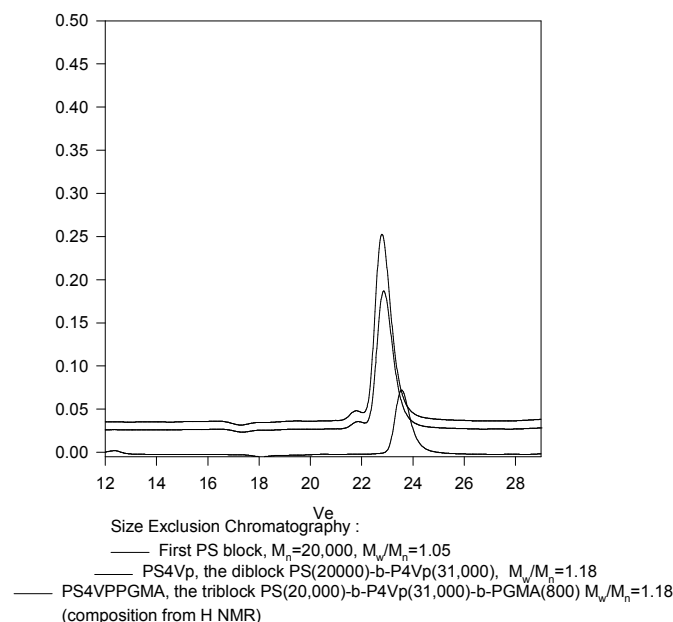
By anionic process

Characterization:

An aliquot of the anionic polystyrene block was terminated before addition of 4VP and analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The block copolymer composition was then calculated from ¹H-NMR spectroscopy by comparing the peak area of the 4VP proton at 8.2 ppm with the peak area of the aromatic protons of polystyrene at 6.3-7.2 ppm and PGMA protons at 3.6 ppm. The composition of the block copolymer can also be determined by titration in acetic acid/HClO₄ using crystal violet indicator. Copolymer PDI is determined by SEC.

Solubility:

Polymer is soluble in THF, DMF, and CHCl₃. The triblock copolymer can also be solubilized in methanol, ethanol depending on its composition. The polymer readily precipitates from hexanes, ether and water.

¹H-NMR Spectrum of the PGMA monomer**¹H-NMR of the Polymer:****SEC of the Polymer:****P10241-S4VPPGMA****References:**

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3. Gohy, J.-F., Mores S., Varshney S. K., Jerome, R., *Self-organization of water-soluble complexes of a poly(2-vinylpyridinium)-block-poly(ethylene oxide) diblock and a fluorinated anionic surfactant*, *Macromolecules* 2003, 36, 2579-2581.
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5. Jean-Francois Gohy, Bas G. G. Lohmeijer, Sunil K. Varshney, and Ulrich S. Schubert, *Covalent vs Metallo-supramolecular Block Copolymer Micelles* *Macromolecules* 2002, 35, 7427-7435.