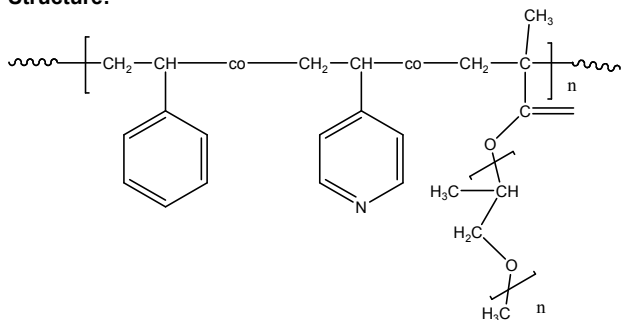


Sample Name:

Random Copolymer Poly(styrene-co-4-vinylpyridine-co-propylene glycol methyl ether methacrylate)

Sample #: **P10394-S4VP-PGMAran**

Structure:



Composition:

S: 4VP :PGMA; 41:45:14

Mn x 10 <sup>3</sup>	PDI
PS-co-P4VP-co-PGMA	
47.0	1.6

Synthesis Procedure:

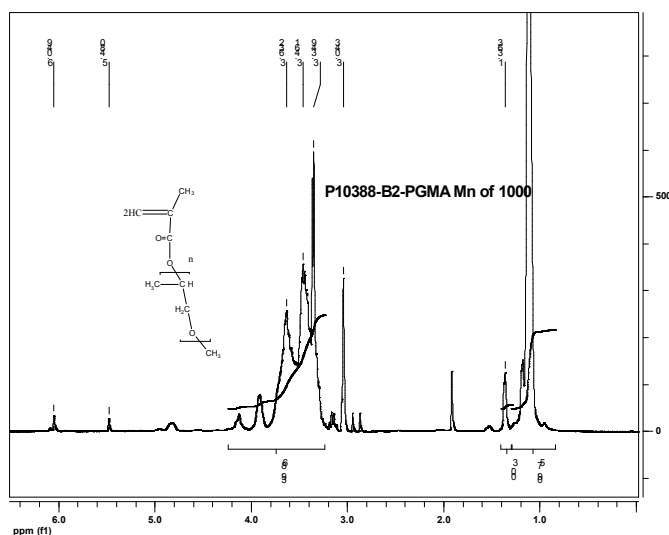
The polymer is prepared by radical polymerization of styrene and 4-vinylpyridine and polypropylene glycol methyl ether methacrylate of Mn 1000 by RAFT process.

Characterization:

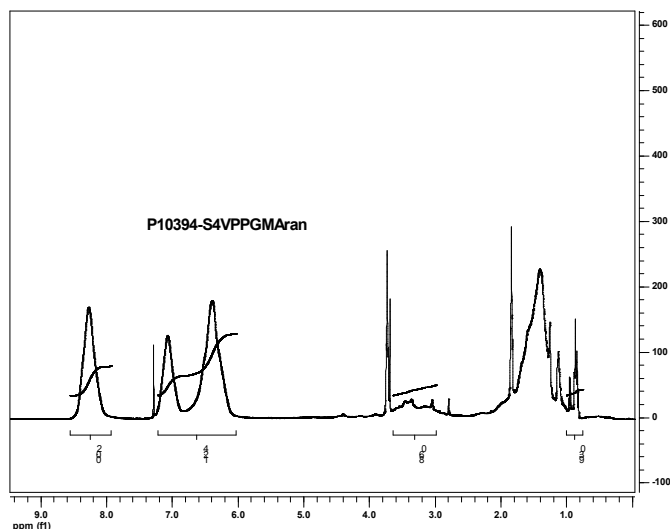
The polymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The copolymer composition was calculated from <sup>1</sup>H-NMR spectroscopy by comparing the peak area of 4VP protons at 8.28 ppm with the styrene protons at about 6.1-7.2 ppm that deducts the contribution of the 4VP protons.

Solubility:

The polymer is soluble in CHCl<sub>3</sub>, THF, DMF, methanol and precipitated out from hexane

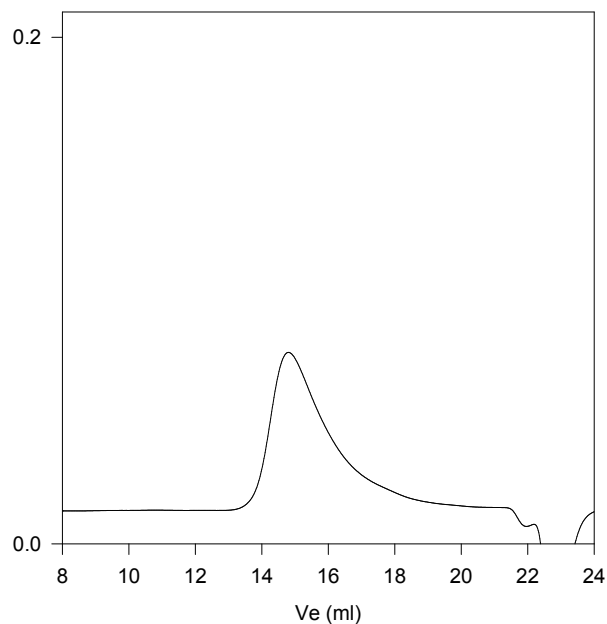


**<sup>1</sup>H-NMR Spectrum of the random copolymer:**



**SEC of the random copolymer:**

**P10394-S4VPGMAPran**



Size exclusion chromatography in DMF at 40 °C:

— M<sub>n</sub>=47,000, M<sub>w</sub>=80,000, PI=1.7 (SEC polystyrene standard)