

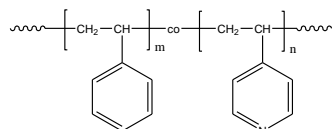
Sample Name: Poly(styrene-co-4-vinylpyridine), random

Sample #: P44108-S4VPran

Synonym(s):

4-Vinylpyridine-styrene copolymer, Poly(4-vinylpyridine)-polystyrene copolymer, Styrene-4-vinylpyridine copolymer

Structure:



Composition:

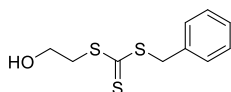
Mn x 10 ³ PS-co-P4VP	PDI
10.0	1.17
P4VP (mol%) : 30	
CAS Number: 26222-40-2	

Synthesis Procedure:

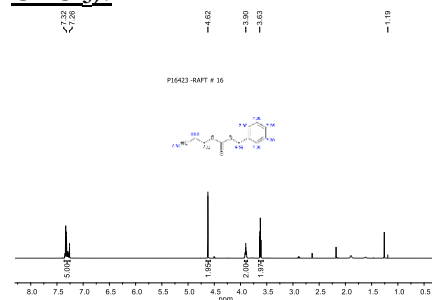
The polymer is prepared by RAFT polymerization of styrene and 4-vinylpyridine. Following RAFT reagent was used.

Benzyl-2-hydroxyethyltrithiocarbonat

Structure:



¹H-NMR spectrum of RAFT (400 MHz, CDCl₃):



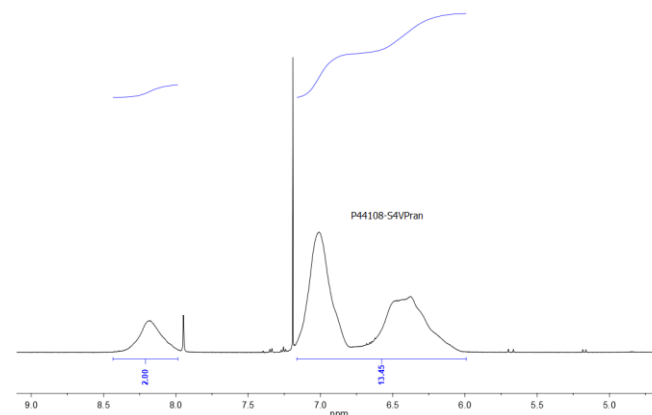
Characterization:

The polymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The copolymer composition was calculated from ¹H-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 CHCl₃, THF, DMF, and toluene. it precipitates out from hexane.

¹H-NMR Spectrum of the random copolymer:



SEC of the random copolymer:

