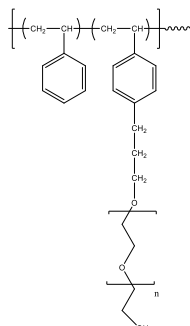


Sample Name: Poly(styrene)-graft-poly (ethylene oxide),
PEO is hydroxy-terminated

Sample #: P43260B-SEOcomb

Structure:



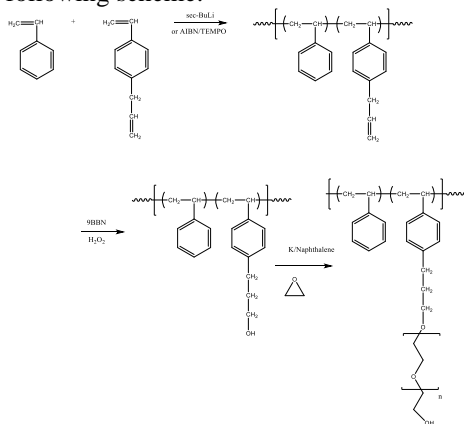
Composition:

Mn x 10 ³ (Main Chain)	Mn x 10 ³ (Graft Chain)	Mn x 10 ³ (Total PEO Chain)	Mw/Mn (Total)
7.0	6.3	38.0	1.6

Mn (total): 45,000
Number of branches about: 6

Synthesis Procedure:

Polystyrene-g-poly(ethylene oxide) is synthesized by polymerization of ethylene oxide on the polystyrene bearing hydroxyl functions. The brief synthetic route is illustrated as following scheme.



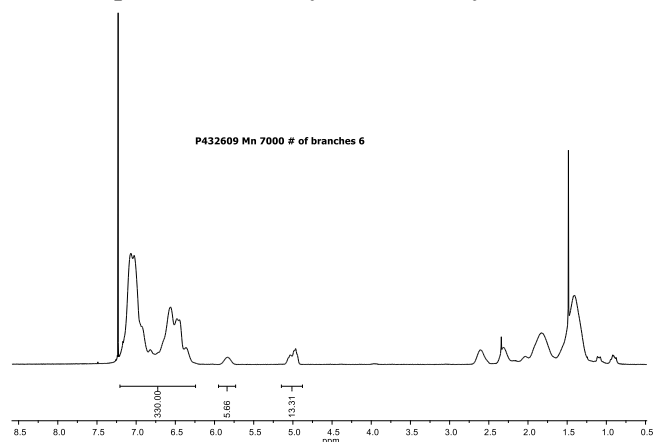
Characterization:

The molecular weight and polydispersity index (PDI) of polymers are obtained by size exclusion chromatography (SEC). The composition of grafting polymer is determined by NMR.

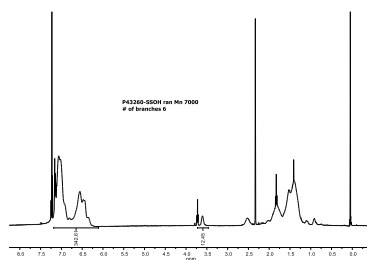
Solubility:

Polystyrene-g-poly(ethylene oxide) is soluble in THF, DMF, and chloroform.

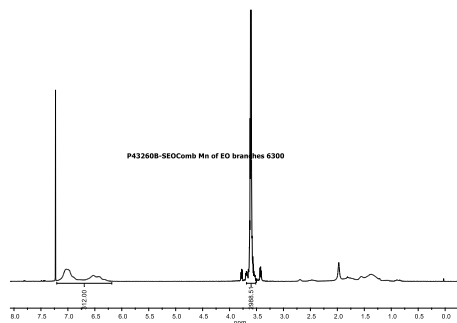
H NMR spectrum of SSAllyl random Polymer:



H NMR spectrum of SSpropanol random Polymer:



H NMR spectrum of SEO comb Polymer:



SEC elugram of the Polymer:

