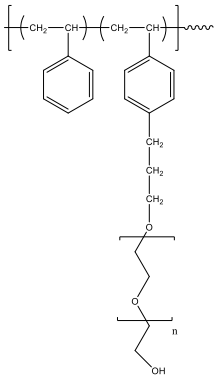
Sample Name: **Poly(styrene)-graft-poly (ethylene oxide), PEO is hydroxy-terminated**

Sample #: **P41760-SEOcomb**

Structure:

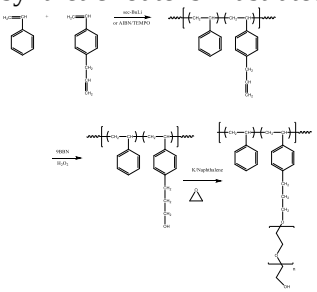


Composition:

Mn x 10^3 (Main Chain)	Mn x 10^3 (Graft Chain)	Mn x 10^3 (Total Chain)	Mw/Mn (Total)
6.0	20.0	126.0	1.16
PEO = 6 branches			

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.



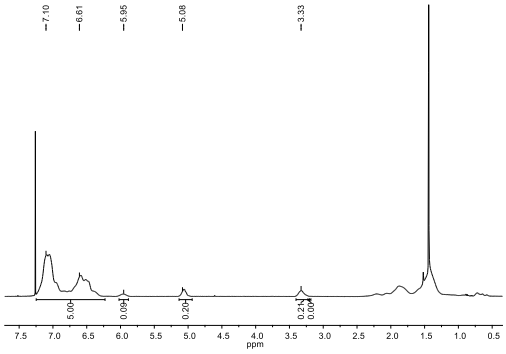
Characterization:

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

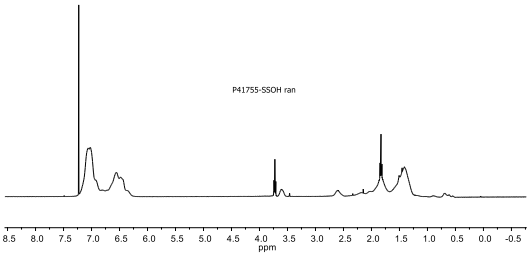
Solubility:

Polystyrene-g-poly(ethylene oxide) is soluble in THF, DMF, chloroform, and Toluene. It precipitates from hexanes and cold ether.

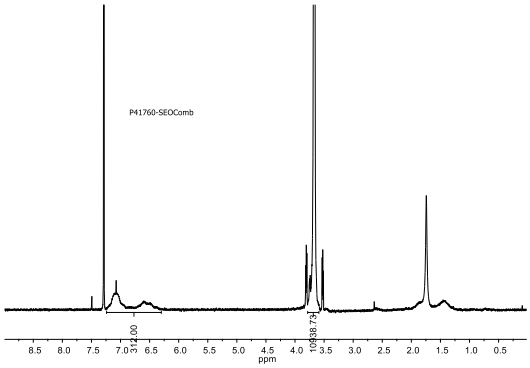
H NMR spectrum of SSallyl random:



H NMR spectrum of SSpropanol:



H NMR spectrum of the Sample:



SEC of Polymer SSalyl ran Lot P41741: