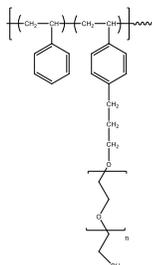


**Sample Name:** Poly(styrene)-graft-poly (ethylene oxide), PEO is hydroxy-terminated

**Sample #:** P43261-SEOcomb

**Structure:**



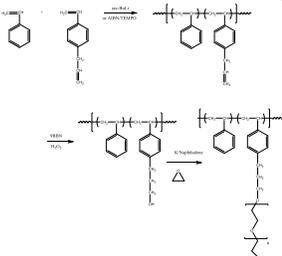
**Composition:**

Mn x 10 <sup>3</sup> (Main Chain)	Mn x 10 <sup>3</sup> (Graft Chain)	Mn x 10 <sup>3</sup> (Total PEO Chain)	Mw/Mn (Total)
7.0	7.5	45.0	1.4

Mn (total): 53,000
Number of branches about: 6

**Synthesis Procedure:**

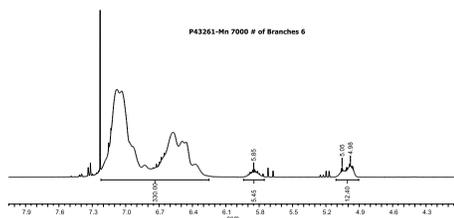
Polystyrene-g-poly(ethylene oxide) is synthesized by polymerization of ethylene oxide on the polystyrene bearing hydroxyl functions. The brief synthetic route is illustrated as following scheme.



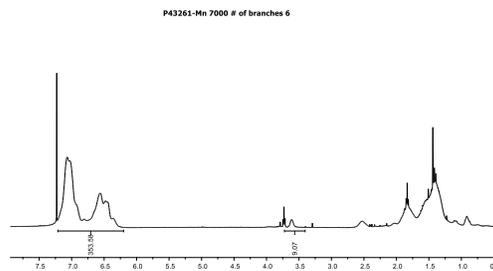
**Characterization:**

The product was characterized by size exclusion chromatography (SEC) and <sup>1</sup>H NMR data analysis.

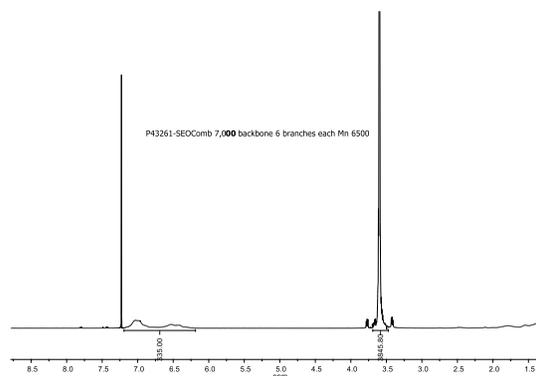
**H NMR spectrum of SSallyl random Polymer:**



**H NMR spectrum of SSpropanol random Polymer:**



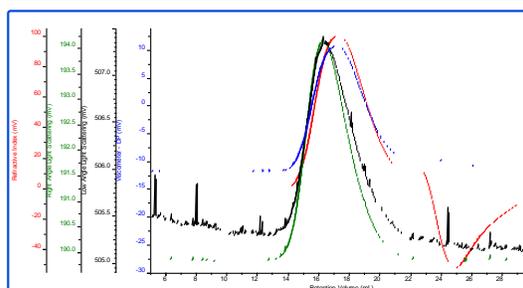
**H NMR spectrum of SEO comb Polymer:**



**SEC elugram of the Polymer:**

P43261-SEO comb

dn/dc	0.0947
Flow Rate	0.7000
Solvent	DMF with LiBr
Method	Calibration_2020-11-25_PMMA-85K-0003.vcm



Sample	Mn	Mw	Mp	Mw/Mn
P43261_1_2021-06-18	53,737	74,416	68,233	1.385