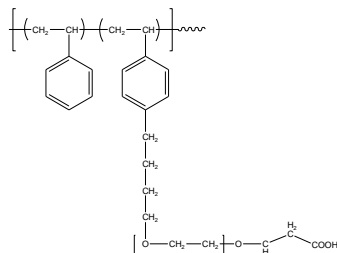


**Sample Name: Polystyrene Graft Ethylene Oxide
Functionalized with carboxy acid groups**

Sample #: P41760A-SEOCOOHcomb

Structure:

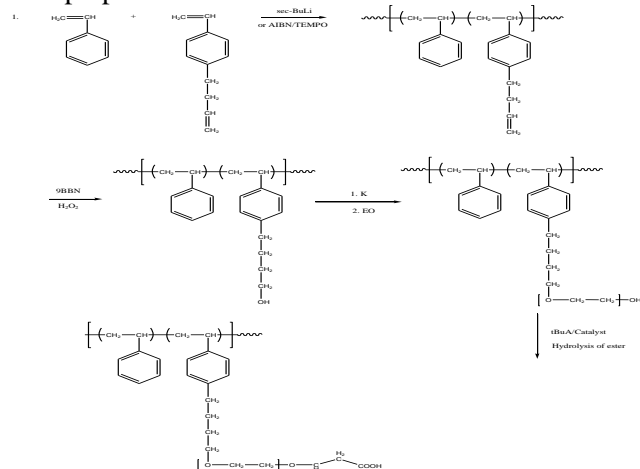


Composition:

Mn x 10 ³ (Main Chain)	Mn x 10 ³ (Graft Chain)	Mn x 10 ³ (Total Chain)	Mw/Mn (Total)
6.0	12.0	126.0	1.10
PEO: 10 branches			

Synthesis Procedure:

Polystyrene-g-poly (ethylene oxide) is synthesized by polymerization of ethylene oxide on the polystyrene bearing hydroxyl functions. The following reaction scheme shows how the product was prepared:



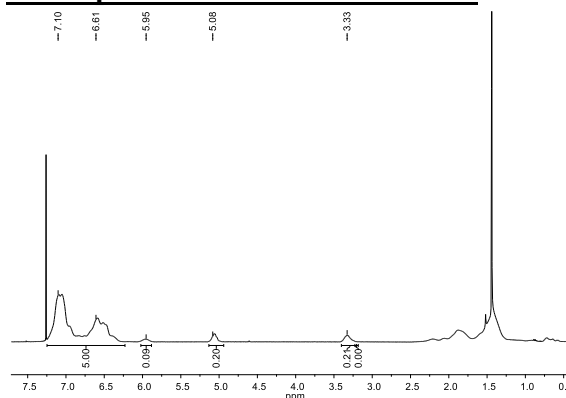
Characterization:

The product was characterized by size exclusion chromatography (SEC) and ¹H NMR.

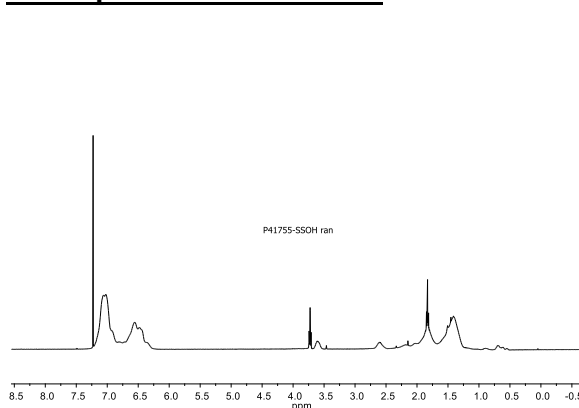
Solubility:

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

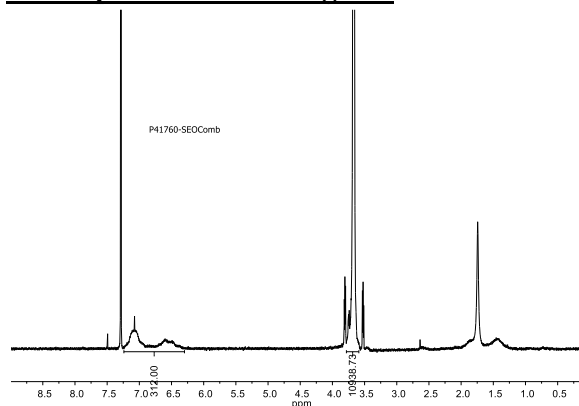
NMR spectrum of SSButene random:



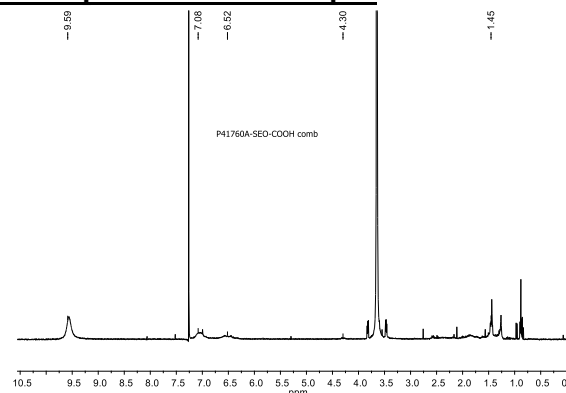
NMR spectrum of SSButanol:



NMR spectrum of SSEO graft:

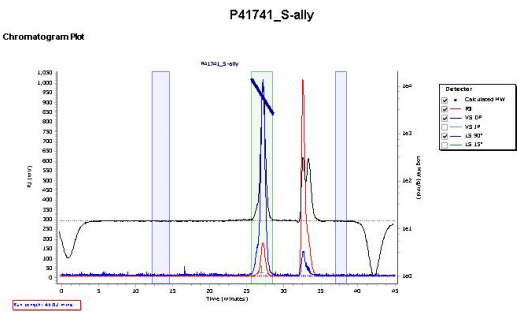


NMR spectrum of the Sample:



SEC elugram of SSallyl ran Lot P41741:

Agilent GPC/SEC Software



Molecular Weight Averages

Peak	MP (g/mol)	Min (g/mol)	Max (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mz (g/mol)	PD
Peak 1	6076	6777	6076	6304	6628	6198	1.043

SEC elugram of the Sample:

Agilent GPC/SEC Software

