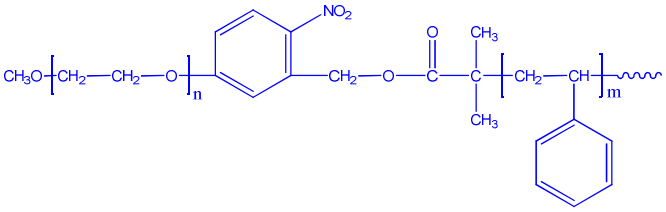
Sample Name: **UV Cleavable (at 350nm) Poly(ethylene oxide-b-styrene)**

Sample #: **P16100D-EOSCleav**

Structure:



Composition:

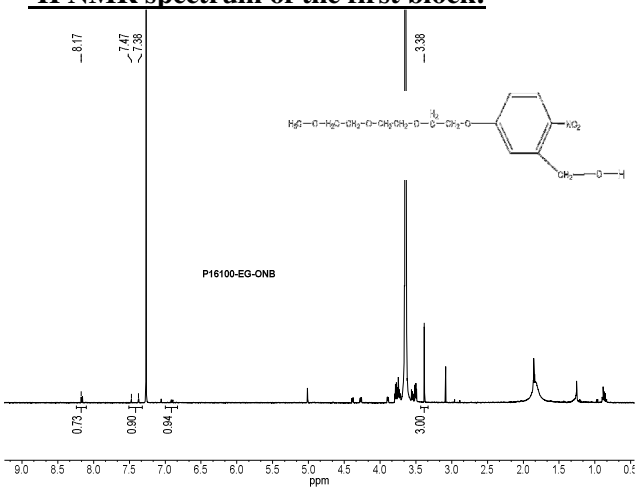
Mn x 10^3 PEO-b-PS	PDI
9.0-b-20.0	1.35

Synthesis Procedure:
The polymer was synthesized by anionic and controlled radical process.

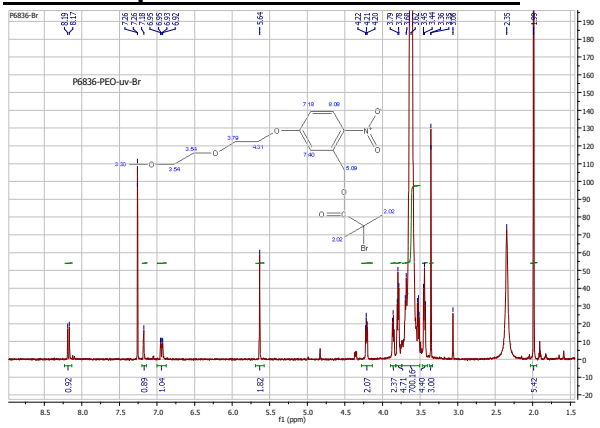
Characterization:
PEG-Br and final block copolymer were analyzed by size exclusion chromatography (SEC) to obtain the molecular weight of PEG and polydispersity index (PDI) for both PEG and block copolymer. The final block copolymer composition was calculated from ^{1}H-NMR spectroscopy by comparing the peak area of the ethylene oxide protons at about about 3.6 ppm with the aromatic protons of styrene at about 7.0 ppm.

Solubility: Poly(ethylene oxide-b-styrene) is soluble in THF, and chloroform and it precipitates out in hexane or methanol.

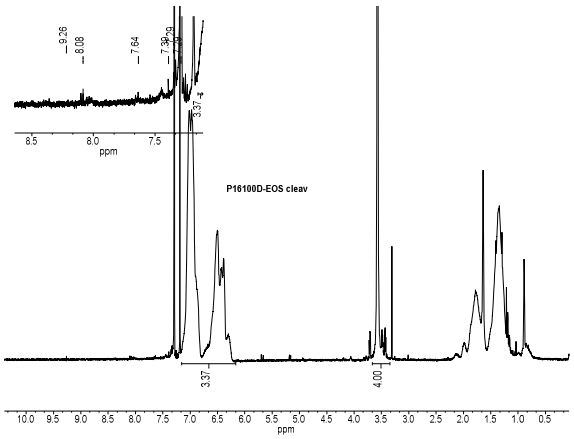
^{1}H NMR spectrum of the first block:



^{1}H NMR Spectrum of the macroinitiator:



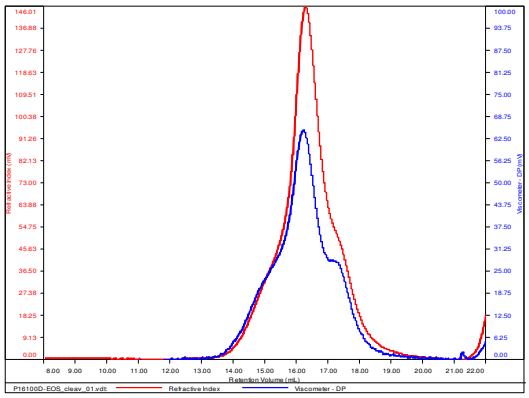
^{1}H NMR Spectrum of the block copolymer:



SEC elugram of the block copolymer:

P16100D-EOS cleav

Conc (mg/mL)	3.6976
dn/dc (mL/g)	0.1650
Method	PS80k-August-08-2016-0000.vcm
Solvent	DMF w 0.023M LiBr
Column	PSS



Sample	Mn	Mw	Mp	Mw/Mn	IV
P16100D-EOS_cleav_01.vdt	29,126	40,753	30,720	1.399	0.7086