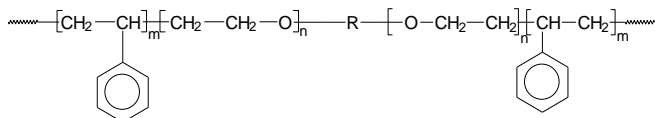


Sample Name:

Poly(styrene-b-ethylene oxide-b-styrene)

Sample#: **P42705-SEOS**

Structure:

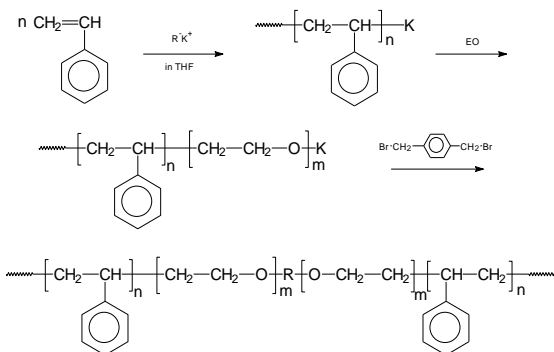


Composition:

Mn x 10 ³ S-b-EO-b-S	PDI
9.0-b-32.0-b-9.0	1.09

Synthetic Procedure:

The detailed synthesis of this polymer has been reported.¹



Characterization:

Polymer was analyzed by size exclusion chromatography (SEC) and by ¹H-NMR analysis.

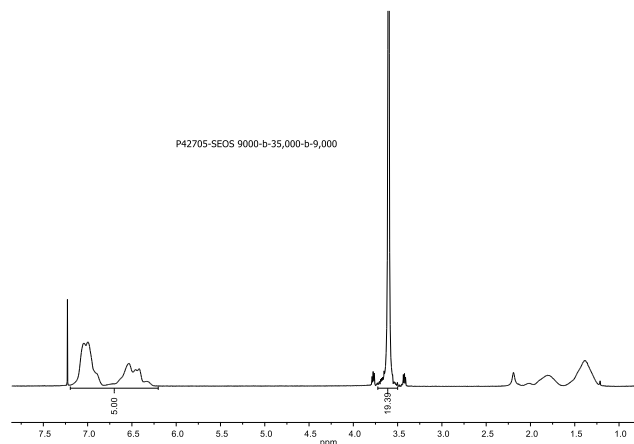
Solubility:

The polymer is soluble in THF, toluene, and CHCl₃.

Purification of the polymer to remove unlinked fraction:

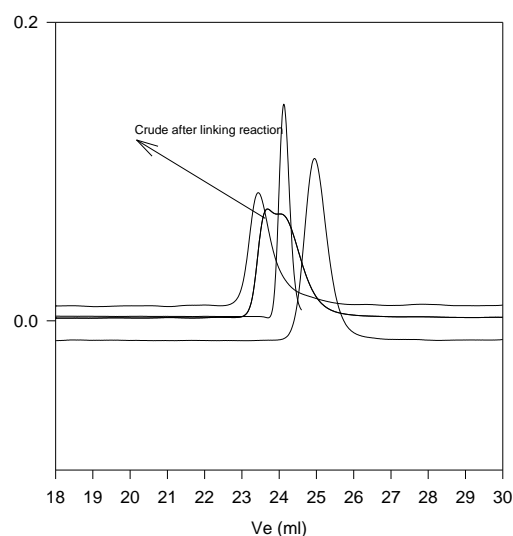
Product was purified to remove the unlinked fraction of the diblock copolymer by passing the polymer solution (by taking different solvent mixture) through Silica column to remove unlinked fraction of Poly(St-b-EO).

¹H-NMR spectrum of the sample(500 MHz, CDCl₃):



SEC chromatograms of SEOS:

P42705-SEOS



Size Exclusion Chromatography:

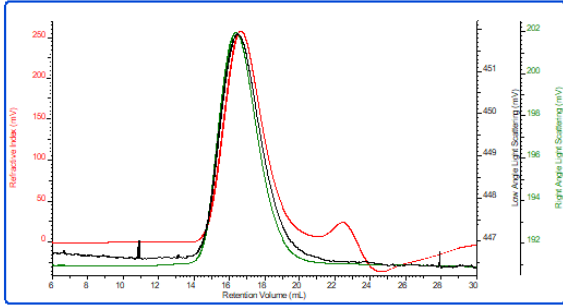
— Polystyrene, M_n=9,000, M_w=10,00, PI=1.05

— After adding ethylene oxide
(diblock PS-b-PEO) M_n PSt(9000)-b-EO(15000) Mw/Mn 1.08

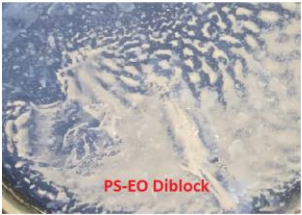
— After linking reaction (purified polymer)
PS(9000)-b-PEO(32000)-b-PS(9000), PI=1.09 Composition from HNMR

P42705-SEOS

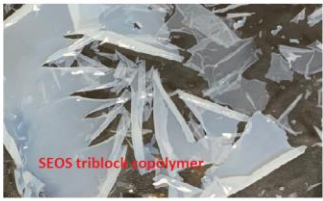
dn/dc	0.0470
Flow Rate	0.7000
Solvent	DMF with LiBr
Method	PSS column-PMMA60K-Jan3-2019-0016.vcm



Sample	Mn	Mw	Mp	Mw/Mn
SEOS	50,030	54,959	52,221	1.099



Soft Gel fracture



SEOS triblock copolymer: Film formation properties