

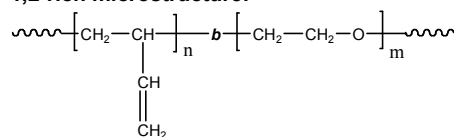
Sample Name: **Poly(butadiene-b-ethylene oxide)**

Polybutadiene rich in 1,2 or 1,4 microstructure

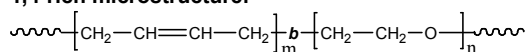
Sample #: **P19494P-BdEO**

(polybutadiene block rich in 1,4 microstructure)

1,2-rich microstructure:



1,4-rich microstructure:



Composition:

Mn x 10 ³ Bd-b-EO	Mw/Mn (PDI)
60.0-b-16.0	1.10
PBd microstructure	1,4 addition 60%

Synthesis Procedure:

Byanionic process

Characterization:

BY SEC and HNMR

Solubility:

Poly(butadiene-b-ethylene oxide) is soluble in THF, CHCl₃, and toluene. The polymer has variable solubility in hexane, methanol, ethanol and water depending on its composition.

Figure: ¹H NMR spectrum of the sample

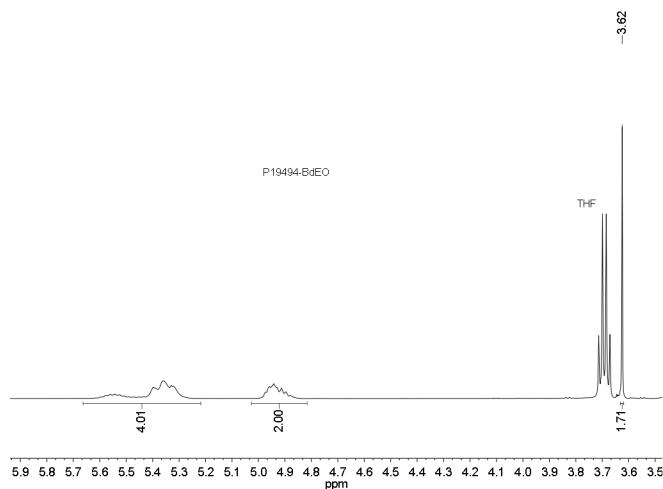
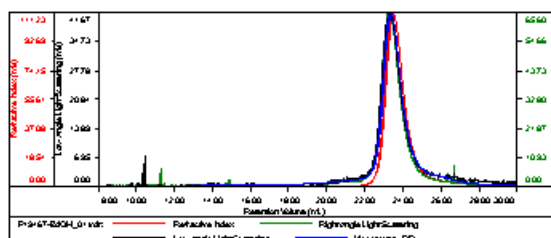


Figure: SEC profile of the block copolymer

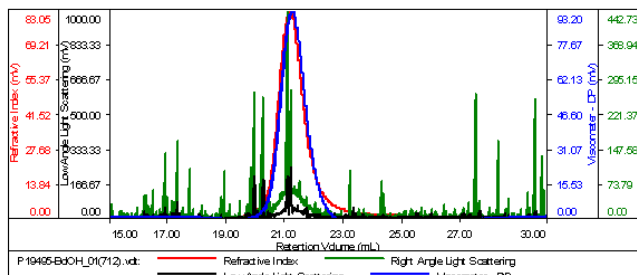
Sample ID:	BdEO
Concentration (mg/mL)	1.0325
Sample chrb (mL/g)	0.1250
Method File	PS80K-June30-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19494-BdEO_01.vdt	60,496	66,084	55,505	1.077	4.7525

Sample ID: P19494-BdEO

Concentration (mg/mL)	0.7352
Sample chrb (mL/g)	0.1150
Method File	PS80K-June30-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19494-BdEO_01(712).vdt	76,484	84,189	75,582	1.101	3.5595