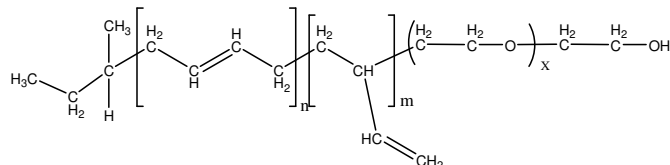


Sample Name: Poly(butadiene-b-ethylene oxide)
Polybutadiene rich in 1,4 microstructure

Sample #: P19920-BdEO
(polybutadiene block rich in 1,4 microstructure)



Composition:

Mn x 10 ³ Bd-b-EO	Mw/Mn (PDI)
32.0-b-98.0	1.12

PBd microstructure	1,4 addition >87%
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Synthesis Procedure:

The polymer was synthesized by anionic process

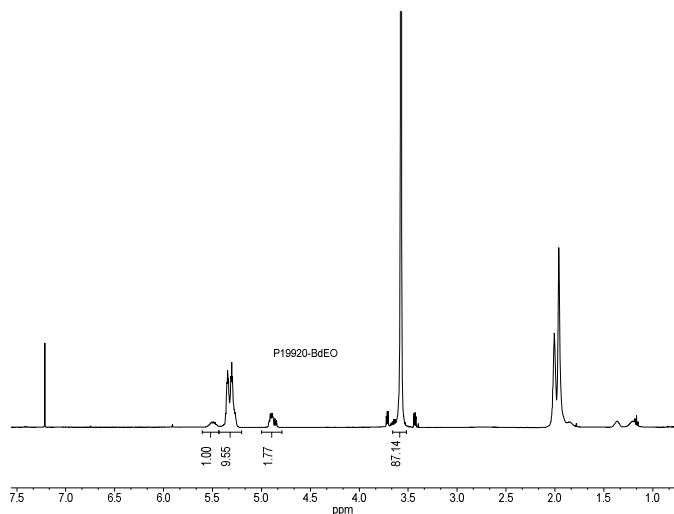
Characterization:

The polymer was characterized by ¹H NMR and SEC

Solubility:

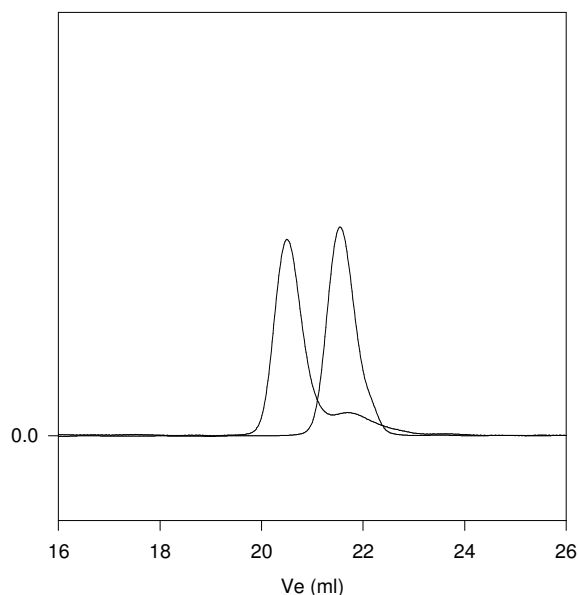
Poly(butadiene-b-ethylene oxide) is soluble in THF, CHCl₃, and toluene. The polymer has variable solubility in hexane, methanol, ethanol and water depending on its composition.

¹H NMR spectrum of the polymer:



SEC elugram of the block copolymer:

P19920-BdEO



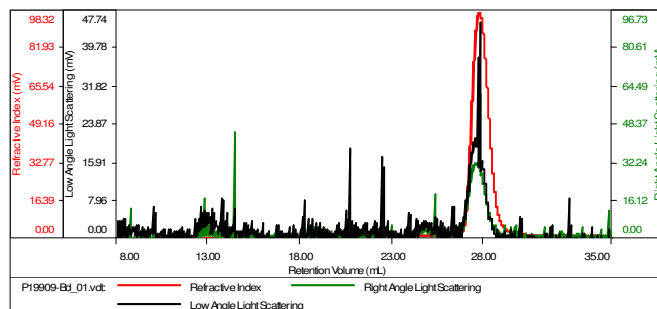
Size exclusion chromatography of poly(butadiene-b-ethylene oxide):

- OH terminated 1,4 polybutadiene M_n=32000, M_w=33600 PI=1.05
- Block Copolymer PBd(32000)-b-PEO(98,000), Mw/Mn 1.12 (Composition from ¹H NMR)

SEC elugram of BdOH terminated used in this synthesis:

Sample ID: P19909-BdOH

Concentration (mg/mL)	13.3402
Sample ch/dc (mL/g)	0.1250
Method File	PS80K-May242016-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Mp (Da)
P19909-Bd_01.vdt	32,154	35,024	1.089	0.1805	32,754