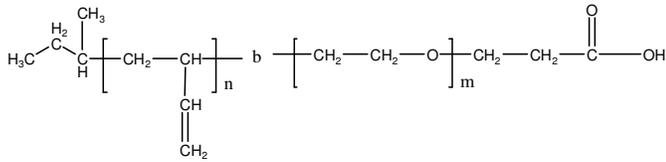


**Sample Name:** -COOH (propionic acid)-terminated Poly(butadiene-*b*-ethylene oxide)  
(polybutadiene block is predominantly 1,2-addition)

**Sample #** P19439A-BdEOCOOH

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup> Bd- <i>b</i> -EO	M <sub>w</sub> /M <sub>n</sub>	Polybutadiene: 1,2 addition
2.5- <i>b</i> -1.5	1.09	95 %
Dp: 46- <i>b</i> -34		

**Synthesis Procedure:**

The polymer was synthesized by anionic process and modification of terminal -OH group to carboxy group.

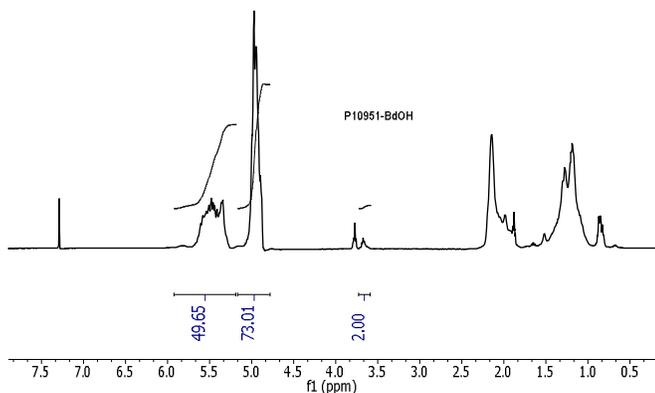
**Characterization:**

The polymer was analyzed by <sup>1</sup>H NMR, SEC, FTIR.

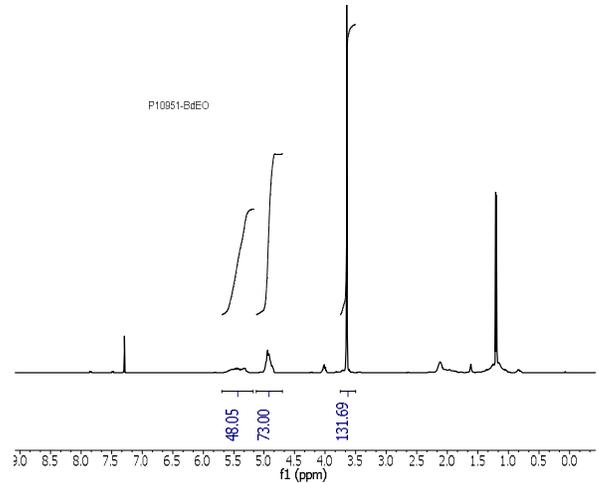
**Solubility:**

Polymer is soluble in THF, chloroform and toluene. Solubility of the polymer in hexanes, methanol, ethanol and water depends on its composition (molecular weight and ratio between blocks).

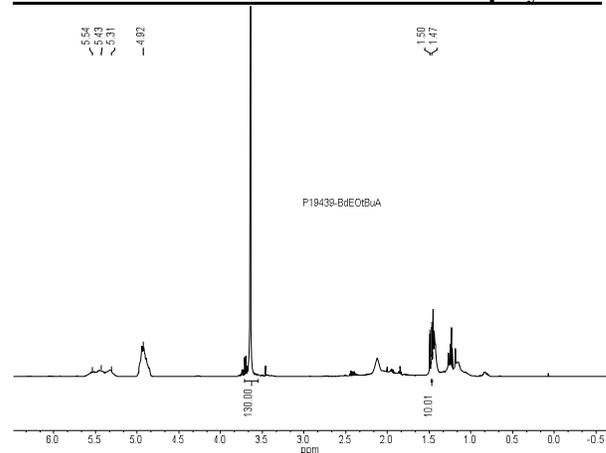
**<sup>1</sup>H NMR of hydroxy-terminated polybutadiene:**



**<sup>1</sup>H NMR of hydroxy-terminated diblock copolymer:**

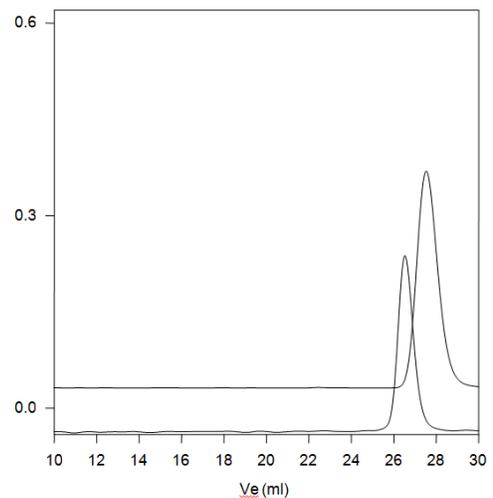


**<sup>1</sup>H NMR of tBu-terminated diblock copolymer:**



**SEC of PBd and PBd-*b*-PEO:**

P19439-BdEO



Size Exclusion Chromatogram of Poly(butadiene-*b*-ethylene oxide)

— Polybutadiene: M<sub>n</sub>=2500, M<sub>w</sub>=2600, M<sub>w</sub>/M<sub>n</sub>=1.07

PBd-*b*-PEO: M<sub>n</sub> PBd(2500)-PEO(1500), M<sub>w</sub>/M<sub>n</sub>=1.06

The M<sub>n</sub> of PEO is calculated from NMR results.