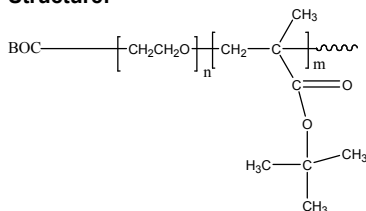


Sample Name:

*N*-(*tert*-Butoxycarbonyl)ethanolamine end functionalized Poly(ethylene oxide -*b*-*tert*.butylmethacrylate)

Sample #: P4858B- BOC-EOtBuMA

Structure:

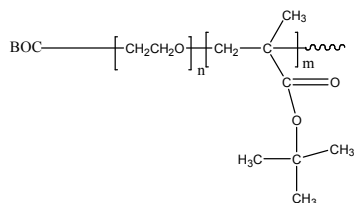
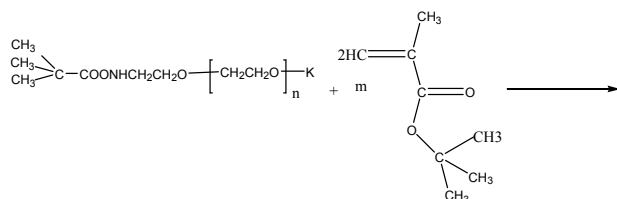
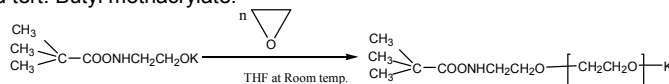


Composition:

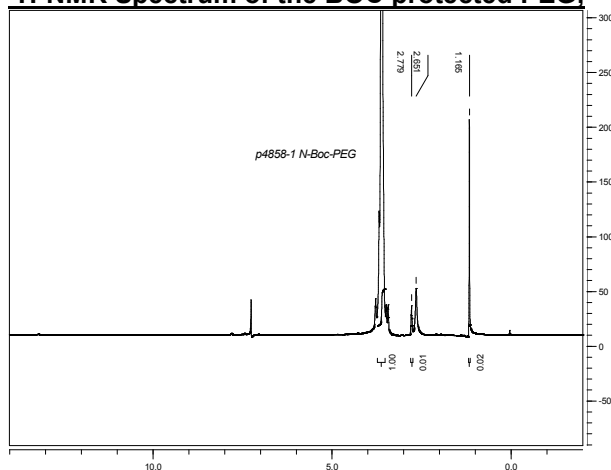
Mn x 10 <sup>3</sup> BOC-EG-b-tBuMA	PDI
5.0-b-5.0	1.15

Synthesis Procedure:

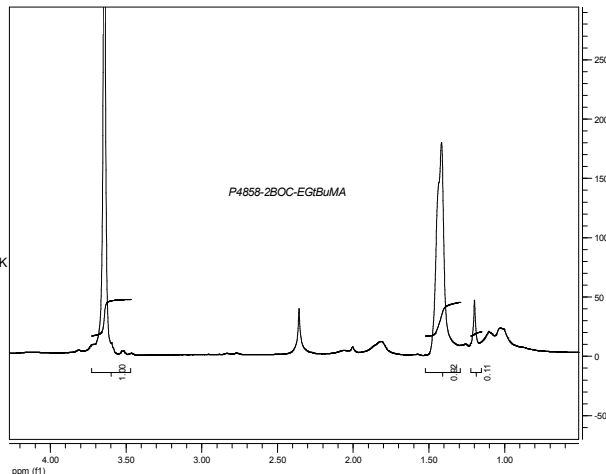
BOC-end functionalized Poly(ethylene oxide -*b*- *tert*.butyl methacrylate) is prepared by living anionic polymerization of ethylene oxide and *tert*. Butyl methacrylate.



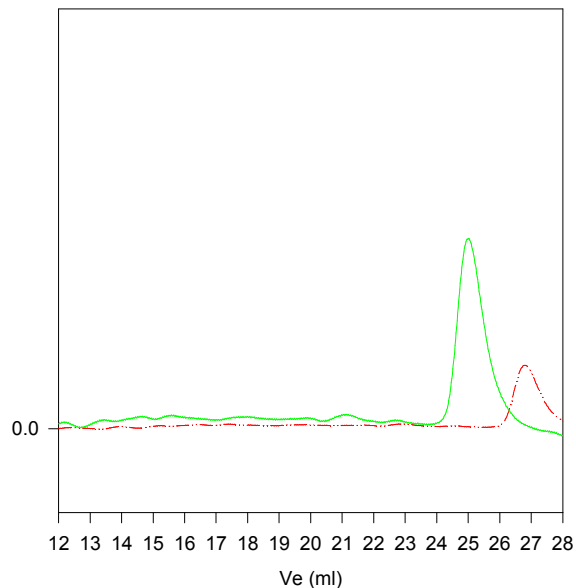
<sup>1</sup>H-NMR Spectrum of the BOC protected PEG:



<sup>1</sup>H NMR of BOC Protected PEG-tBuMA



P4858B-EOtBuMA (EO end protected)



Characterization:

An aliquot of the anionic poly(ethylene oxide) block was terminated before addition of *tert*.butyl methacrylate and analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The polymer obtained at each step and the final block copolymer composition was calculated from <sup>1</sup>H-NMR spectroscopy by comparing the peak area of the ethylene oxide protons at about 3.6 ppm with the one protons at about 1.2 ppm.

Solubility:

BOC-end functionalized Poly(ethylene oxide -*b*-*tert*.butylmethacrylate) is soluble in THF, CHCl<sub>3</sub> and suspension in methanol, ethanol.

Size exclusion chromatography of poly(ethylene oxide-*b*-*tert*.butyl methacrylate)

..... Poly(ethylene oxide), M<sub>n</sub>=5000, M<sub>w</sub>=5500, PI=1.08

