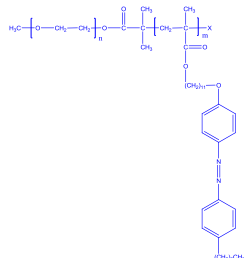


Sample Name: Poly(ethylene oxide-*b*-AZoMA)
(AZoMA=11-[4-(4-butylphenylazo)phenoxy]-undecyl methacrylate)

Sample #: **P16242-EOAzoMA**

Structure:

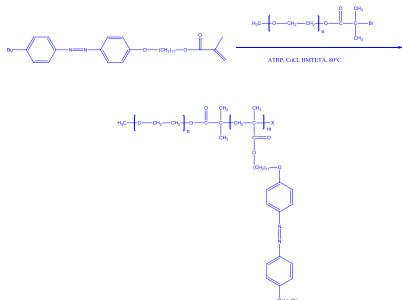


Composition:

Mn x 10 ³ PEO-b-PAzoMA	PDI
12.0-b-13.0	1.6
Melting point, T _{m1} (PEO):	57 °C
Melting point, T _{m2} (PAzoMA):	110 °C

Synthesis Procedure:

Poly(ethylene oxide-*b*-AZoMA) is prepared by ATRP using bromo-terminated poly(ethylene glycol) as the macro-initiator. The scheme of the reaction is illustrated below:



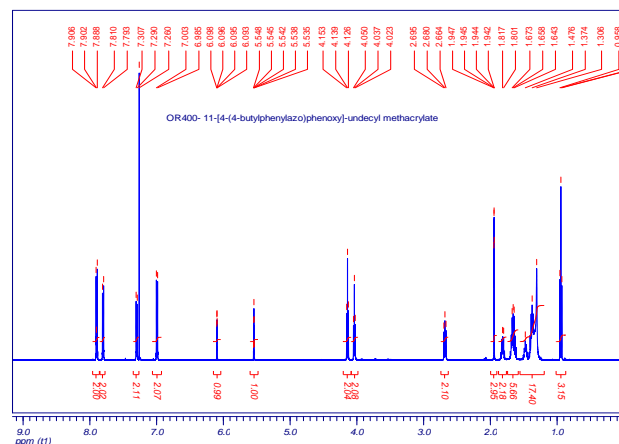
Characterization:

The product was characterized by size exclusion chromatography (SEC) and ^1H NMR. The compositions and molecular weight were determined by HNMR analysis. The SEC was used to determine its distribution and absence of PEG starting polymer.

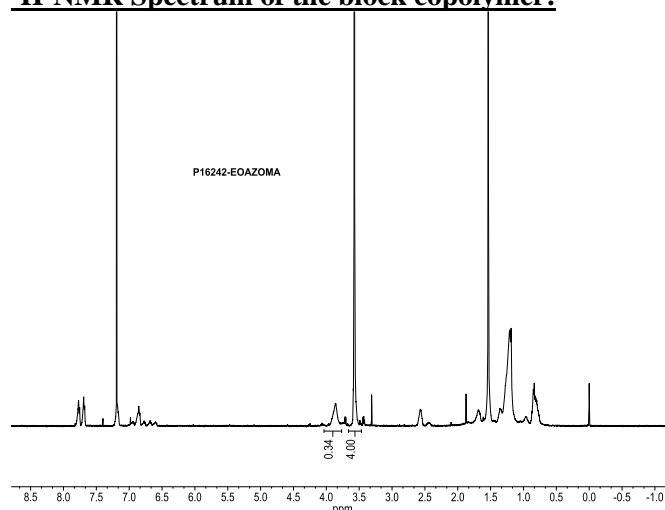
Thermal analysis:

Thermal analysis was performed on TA Instruments Q100 differential scanning calorimeter (DSC) under a nitrogen atmosphere. The glass transition temperature (T_g), melting point (T_m) and crystallization temperature (T_{cr}) of the copolymer were measured at a scan rate of $10^\circ\text{C}/\text{min}$ shortly after creating thermal history of the sample.

¹H-NMR Spectrum of the LC monomer:



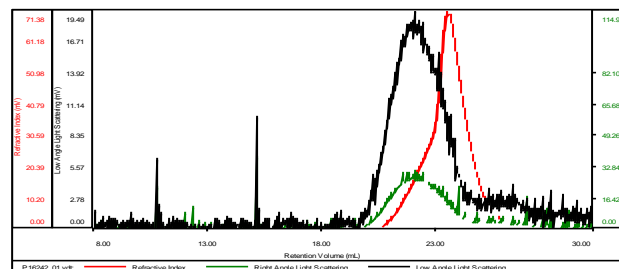
¹H-NMR Spectrum of the block copolymer:



SEC of the block copolymer:

P16242-EOAZOMA

Concentration (mg/mL)	4.5271
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-august2017-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF

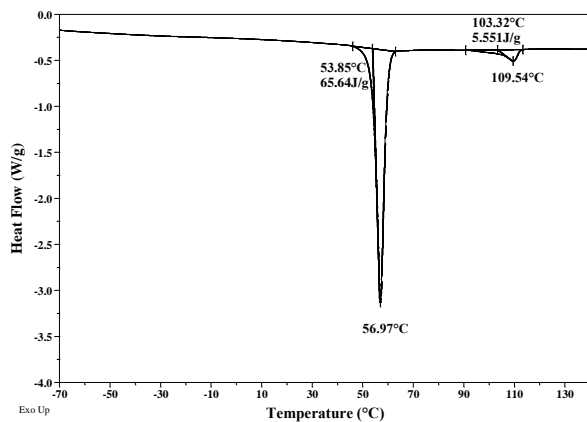


Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Mp (Da)
P16242_01.vdt	16,477	39,562	2.401	0.1701	18,511

DSC thermogram of the polymer (2nd heating scan, 10°C/min):

Sample: P16242_EOAzoMA
Size: 5.5000 mg

File: P16242-EOAzoMA.001



DSC thermogram (cooling and heating scans, 10°C/min):

Sample: P16242_EOAzoMA
Size: 5.5000 mg

File: P16242-EOAzoMA.001

