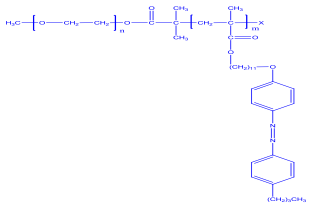
Sample Name: **Poly(ethylene oxide-b-AZoMA)**
(AZoMA=11-[4-(4-butylphenylazo)phenoxy]-undecyl methacrylate)

Sample #: **P16243B-EOAzoMA**

Structure:



Composition:

Mn x 10^3 PEO-b-PAzoMA	PDI
12.0-b- 13.0	1.12

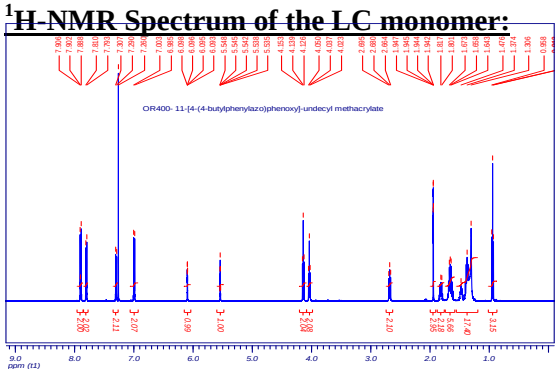
Melting point, T_{m1} (PEO):	54.3
Melting point, T_{m2} (PAzoMA):	113.7

Synthesis Procedure:
Poly(ethylene oxide-b-AZoMA) is prepared by ATRP process.

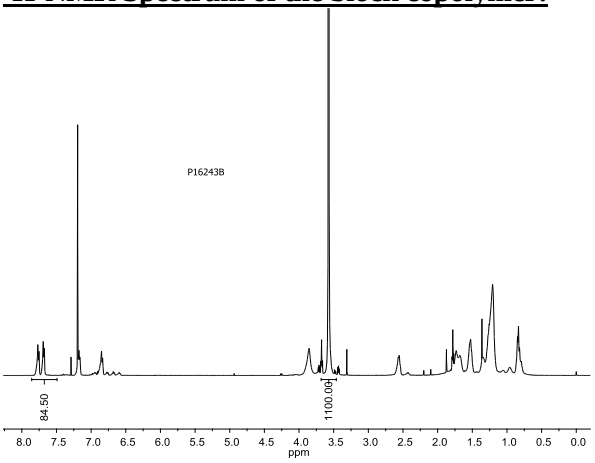
Characterization:
The product was characterized by size exclusion chromatography (SEC) and ^{1}H NMR. The compositions and molecular weight were determined by HNMR analysis. The SEC was used to determine its distribution and absence of PEG starting polymer.

Thermal analysis:
Thermal analysis was performed on TA Instruments Q100 differential scanning calorimeter (DSC) under a nitrogen atmosphere. The glass transition temperature (Tg), melting point (Tm) and crystallization temperature (Tcr) of the copolymer were measured at a scan rate of 10°C/min shortly after creating thermal history of the sample.

^{1}H-NMR Spectrum of the LC monomer:



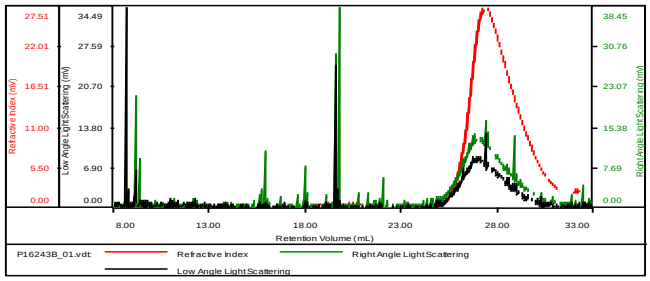
^{1}H-NMR Spectrum of the block copolymer:

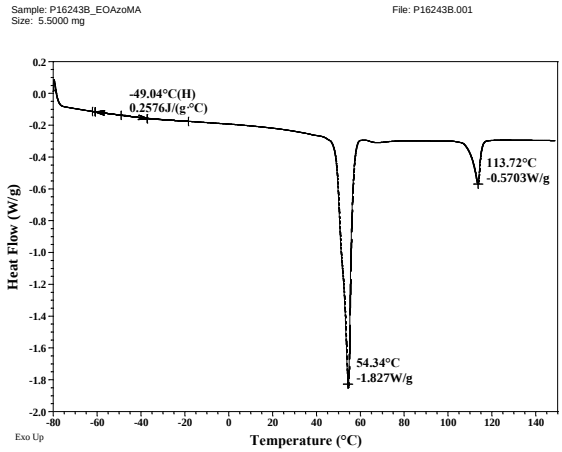


SEC of the block copolymer:

P16243B-EOAZOMA

Concentration (mg/mL)	5.9757
Sample dn/dc (mL/g)	0.0840
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)
P16243B_01.vdt	69,962	78,571	1.123	0.0729	73,036

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