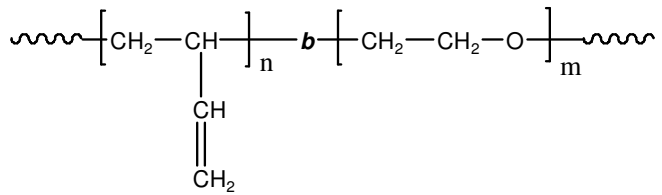


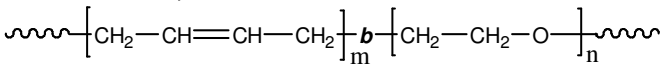
Sample Name: Poly(butadiene-b-ethylene oxide)

Sample #: P19502-BdEO
(poly butadiene block rich in 1,2-addition)

Structure of 1,2-rich microstructure:



Structure of 1,4-rich microstructure:



Composition:

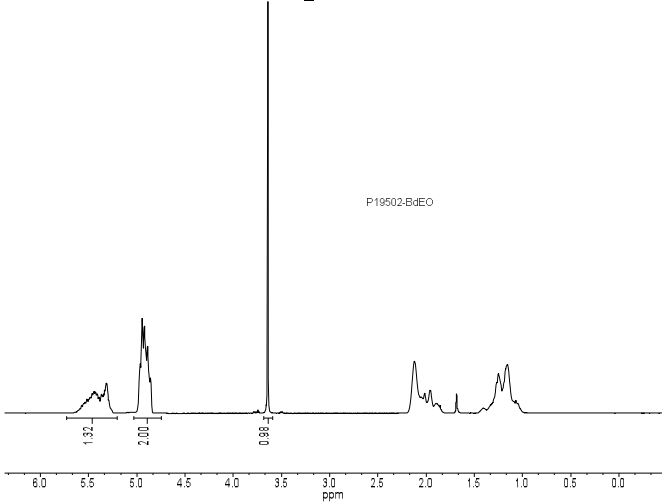
Mn x 10 ³ Bd-b-EO	Mw/Mn (PDI)	% 1,2 addition butadiene
145.5-b-43.5	1.04	92

Synthesis Procedure: by anionic polymerization

Characterization:

By SEC and ¹H-NMR.

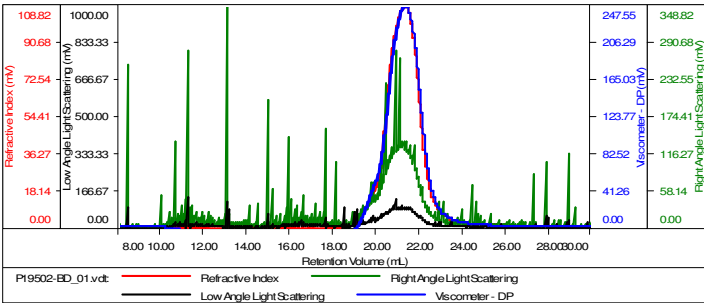
¹H NMR (500 MHz, CDCl₃):



SEC elugram of the first block:

Sample IDP19502-Bd

Concentration (mg/mL)	1.4641
Sample dn/dc (mL/g)	0.1270
Method File	PS80K-June30-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF

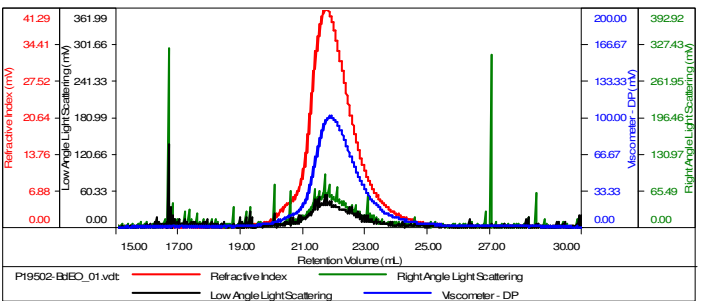


Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19502-BD_01.vdt	145,514	161,229	130,231	1.108	8.5857

SEC elugram of the diblock copolymer:

Sample IDP19502-BdEC

Concentration (mg/mL)	0.5750
Sample dn/dc (mL/g)	0.1070
Method File	PS80K-June30-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF

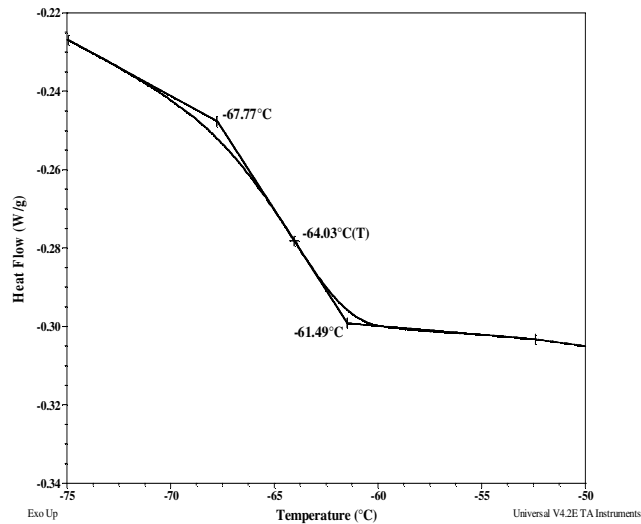


Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19502-BdEO_01.vdt	188,016	193,132	172,888	1.027	8.0009

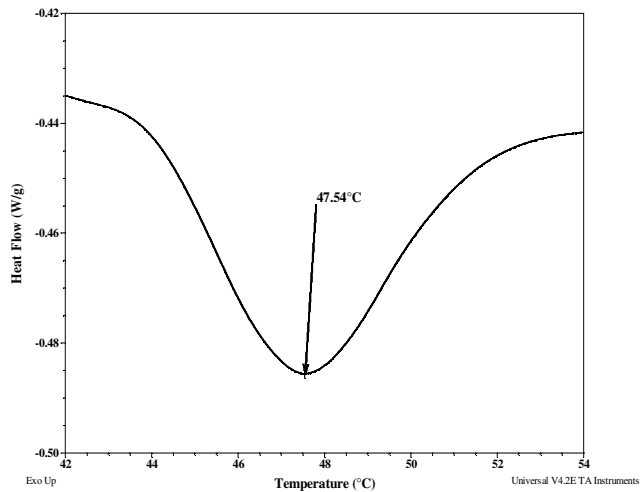
DSC thermal analysis:

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g). The melting temperature (T_m) was taken as the maximum of the endothermic peak where as the crystallization temperature (T_c) was considered as the minimum of the exothermic peak.

DSC thermogram for PEO block:



DSC melting curve for PEO block:



Summary of thermal analysis results:

For Bd block		
T_g : -31°C	T_m : -	T_c : -
For PEO block		
T_g : -64°C	T_m : 48°C	T_c : not found

DSC thermogram for PBd block:

