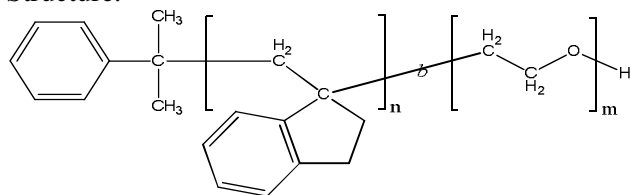


Sample Name: Poly(α -methyleneindane-b-ethylene oxide)

Sample #: P19579-MIEO

Structure:



Composition:

Mn x 10 ³ MI-b-EO	PDI
1.5-b-5.0	1.2

Synthesis Procedure:

Diblock copolymer is prepared by living anionic polymerization.

Characterization:

The polymer was characterized by ¹H NMR and size exclusion chromatography (SEC).

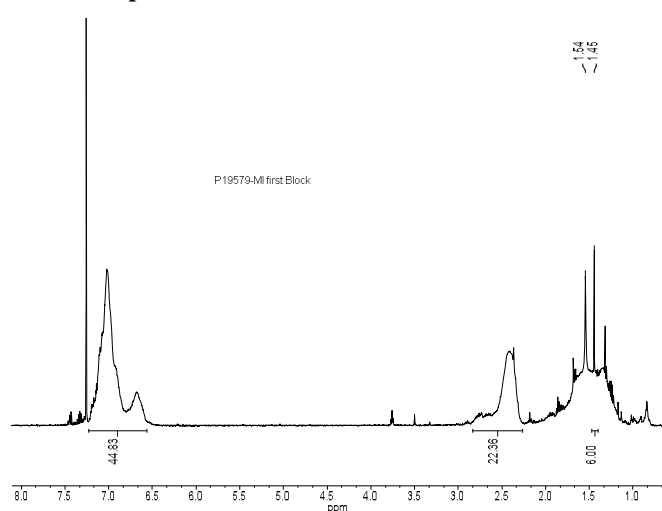
Solubility:

The polymer is soluble in THF (at 35 °C), CHCl₃, benzene, toluene, dioxane. Low molecular weight MIEO with high contents of the polyethylene oxide block can also be solubilized in methanol and water.

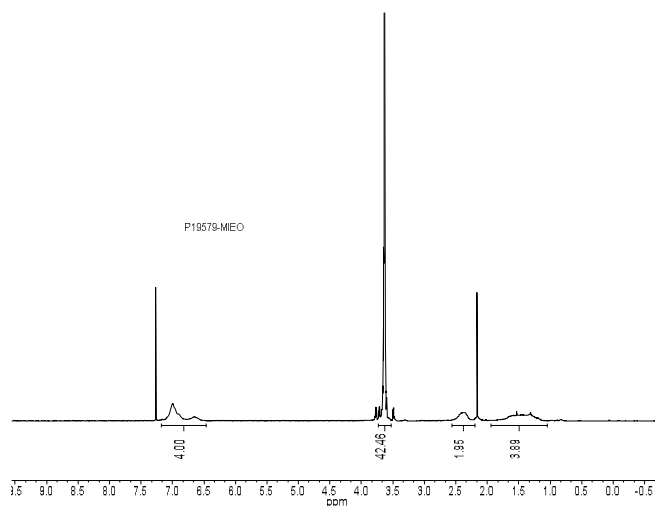
Thermal analysis results

Thermal analysis was done on a TA Q100 differential scanning calorimeter at a heating rate of 20°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).

¹H NMR spectrum of the MI-block:



¹H NMR spectrum of the diblock copolymer MI-b-EO:

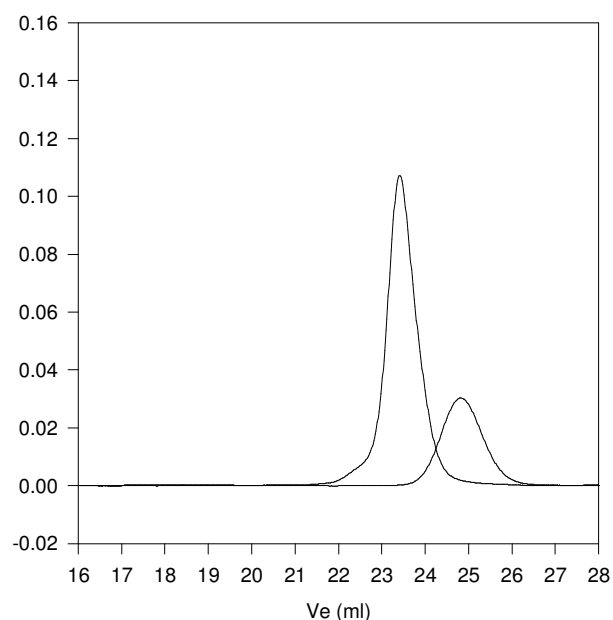


The melting temperature (T_m) was taken as a maximum of the endothermic peak.

For MI block: T _g :	
For PEO block:	
T _g : -63°C	T _m : 61°C

SEC elugram of the block copolymer:

P19579-MIEO



Size exclusion chromatography of poly(MI-b-ethylene oxide)

— Poly(MI), M_n=1,500, M_w=1,800, PI=1.24

— Block Copolymer PMi(1,600)-b-PEO(5,000), PI=1.2