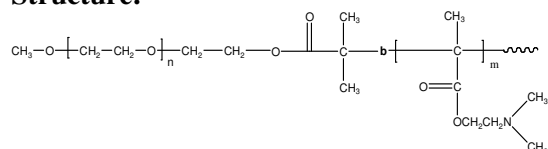


**Sample Name:** Poly (ethylene oxide-*b*-2-(dimethylamino) ethyl methacrylate)

**Sample #:** P40140A-EODMAEMA

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup> PEO- <i>b</i> -PDMAEMA	PDI
9.5- <i>b</i> -9.0	1.24
Dp;	216- <i>b</i> -47

**Synthesis Procedure:**

The polymer was synthesized by anionic and controlled radical processes.

**Characterization:**

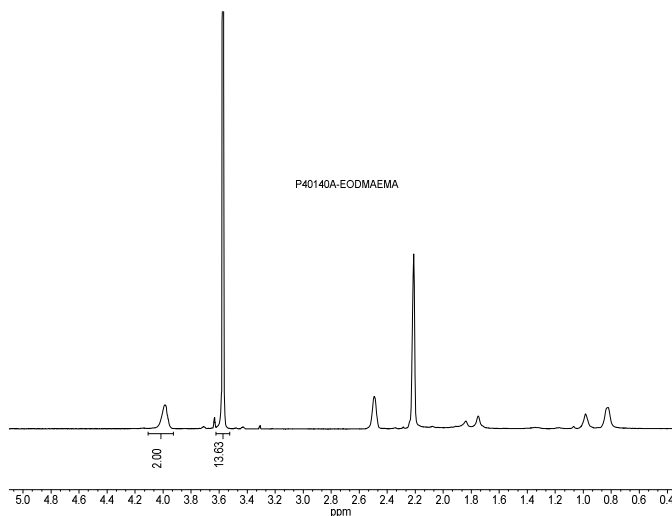
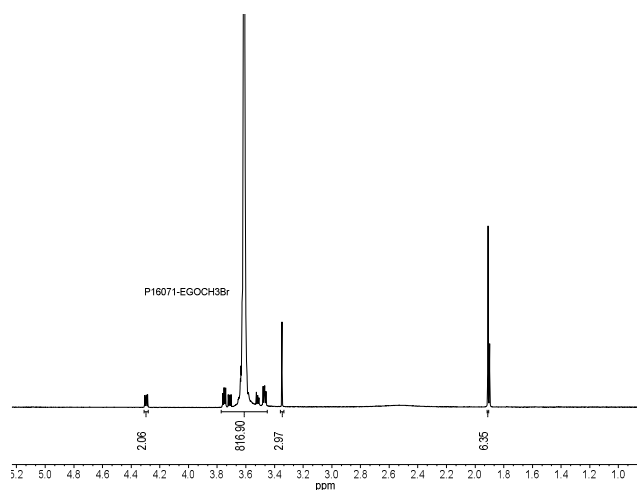
The polymer was characterized by SEC and <sup>1</sup>H NMR.

**Purification of the polymer and removal of any unreacted homopolyethylene oxide from the diblock copolymer:** By solvent non solvent process.

**Solubility:**

The polymer is soluble in water.

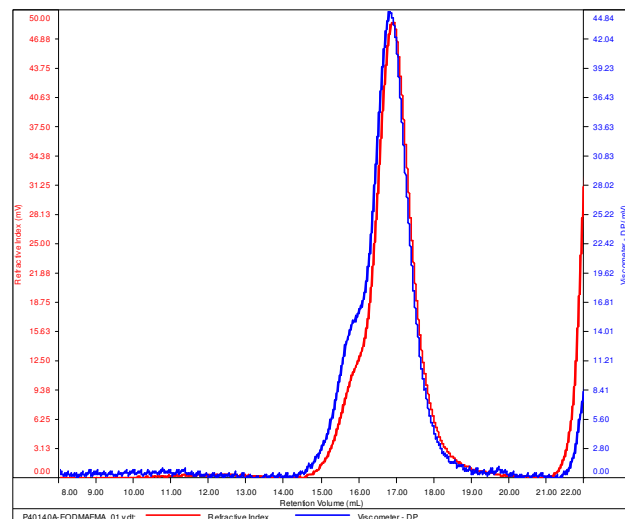
**<sup>1</sup>H-NMR Spectrum of the Macroinitiator used in the synthesis of block copolymer:**



**SEC elugram of the block copolymer:**

**P40140A-EODMAEMA**

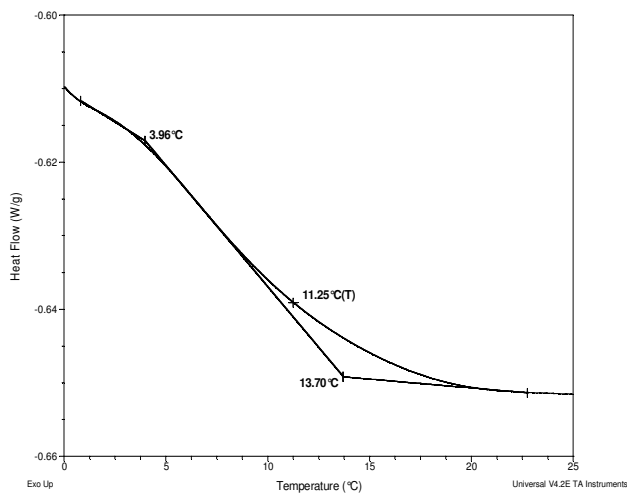
Conc (mg/mL)	2.6011
dn/dc (mL/g)	0.0640
Method	PS80k-August-08-2016-0000.vcm
Solvent	DMF w 0.023M LiBr
Column	PSS



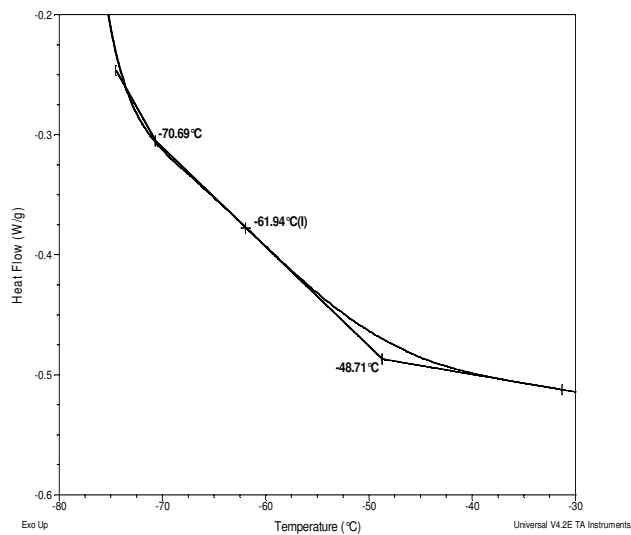
Sample	Mn	Mw	Mp	Mw/Mn	IV
P40140A-EODMAEMA_01.vdt	19,242	23,199	18,257	1.206	0.5218

## Thermograms for the sample

### For DMAEMA block



### For PEO block

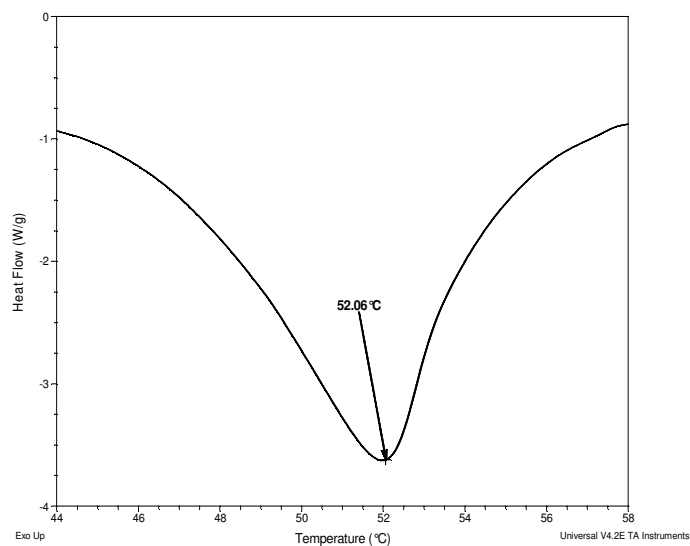


## Thermal analysis results at a glance

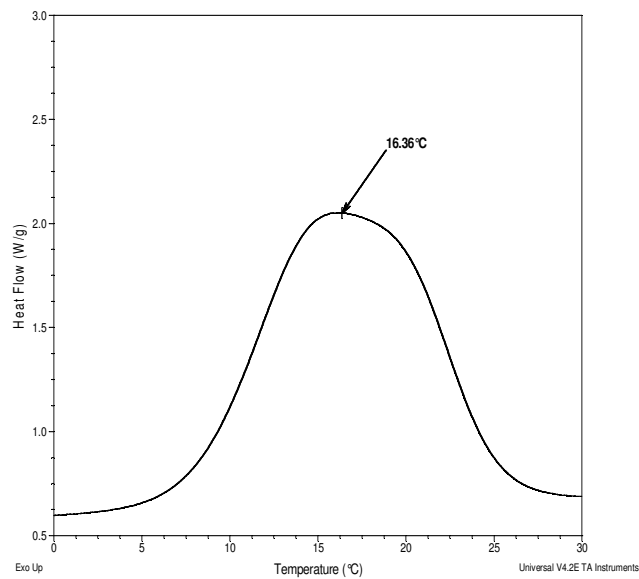
For DMAEMA block		
T <sub>g</sub> : 11°C	T <sub>m</sub> : -	T <sub>c</sub> : -
For PEO block		
T <sub>g</sub> : -62°C	T <sub>m</sub> : 52°C	T <sub>c</sub> : 16°C

minimum of the exothermic peak. The T<sub>c</sub> was calculated during **cooling ramp**.

### Melting curve for PEO block



### Crystallization curve for PEO block



## Melting and crystallization curve for the sample

The melting temperature (T<sub>m</sub>) was taken as the maximum of the endothermic peak where as the crystallization temperature (T<sub>c</sub>) was considered as the