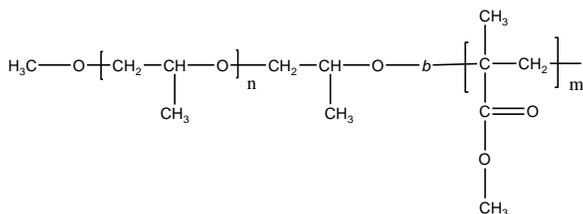


Sample Name: Poly (propylene glycol-b- methyl methacrylate)

Sample #: P14268-POMMA

Structure:

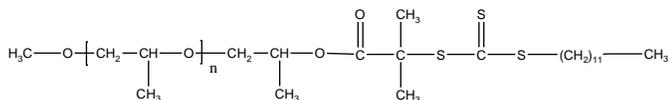


Composition:

$\text{Mn} \times 10^3$	PDI
5.0(PPO)-b-86.0 (MMA)	1.27

Synthesis:

The block copolymer was prepared by RAFT polymerization of methyl methacrylate with a PPO-CTA macroinitiator. The structure of PPO-CTA macroinitiator is shown as follows:



Characterization:

Polymer analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The final block copolymer composition was calculated from $^1\text{H-NMR}$ spectroscopy by comparing methyl group from MMA at 3.5 ppm with methyl group from PO at 1.08 ppm.

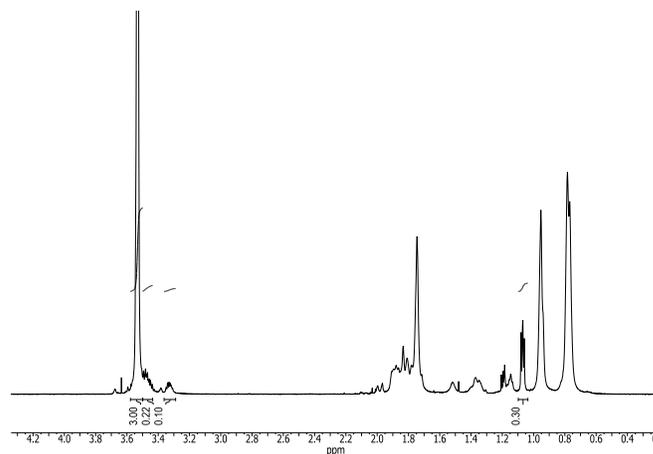
Solubility:

The polymer is soluble in chloroform, DMF, methanol and precipitates from, ether and hexane.

Thermal analysis

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of $20^\circ\text{C}/\text{min}$. 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).

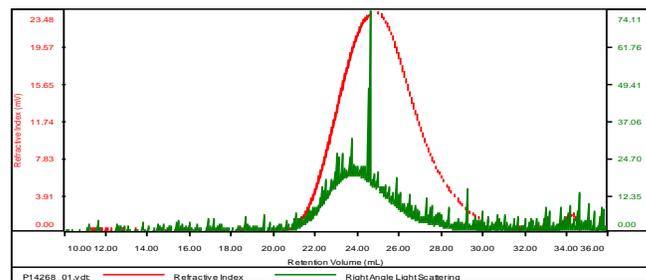
$^1\text{H NMR}$ spectrum of the polymer:



SEC elugram of the copolymer:

P14268

Concentration (mg/mL)	5.1623
Sample dn/dc (mL/g)	0.0840
Method File	PS80K-mar5-2018-0002.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Mp (Da)
P14268_01.vdt	90,946	115,632	1.271	0.3725	99,049