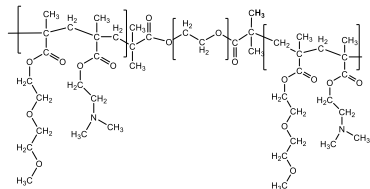


Sample Name: Poly (Diethylene glycol methylethermethacrylate-co-[N,N-dimethylamino]ethyl methacrylate)-b-Poly ethylene glycol-b- Poly(Diethylene glycol methylethermethacrylate-co-[N,N-dimethylamino]ethyl methacrylate)

Sample #: P43862A-DEGMEOMA-DMAEMA-b-PEG-DEGMEOMA-DMAEMA

Structure:



Composition:

Mn $\times 10^3$ PEG Block	Mn $\times 10^3$ total	Mw/Mn
20	29	2.5
Feed mole DEG-MeOMA 0.0420 mole DMAEMA 0.01 mole PEG central Block 0.5 mole		
DEG-MEOMA(29)-DMAEMA(5)-PEG(454)- DEG-MEOMA(29)-DMAEMA(5)		

Synthesis Procedure:

The polymer is prepared by ATRP process using α - ω -dibromo PEG.

Characterization:

The molecular weight and polydispersity index (PDI) were calculated by SEC using water as eluent. The copolymer composition was calculated from $^1\text{H-NMR}$ spectroscopy.

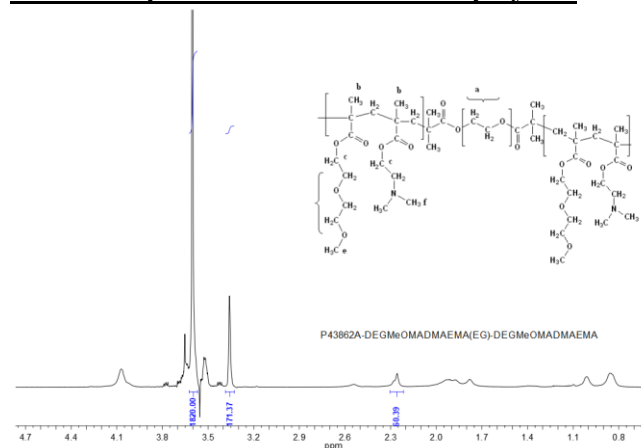
Solubility:

The polymer is soluble in water. 1mg polymer in Water does not give a clear solution. After heating solution to about 40 °c by bubbling CO₂, it gives clear solution immediately.

CO₂- responsive Polymer Materials:



$^1\text{H-NMR}$ Spectrum of the random copolymer



SEC of the random copolymer:

