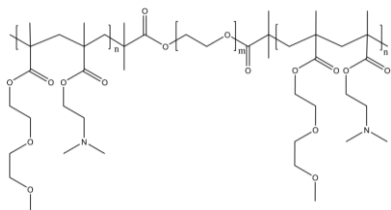


Sample Name: Poly (Diethylene glycol methylethermethacrylate-co-[N,N-dimethylamino]ethyl methacrylate)-b-Poly ethylene glycol-b- Poly(Diethylene glycol methylethermethacrylate-co-[N,N-dimethylamino]ethyl methacrylate)

Sample #: P43948C-DEGMEOMA-DMAEMA-b-PEG-DEGMEOMA-DMAEMA

Structure:



Composition:

Mn $\times 10^3$ PEG Block	Mn $\times 10^3$ total	Mw/Mn
20.0	90.5	1.6
DEG-MeOMA (167)-DMAEMA(28)-PEG(454)- DEGMeOMA(167)-DMAEMA(28)		

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.

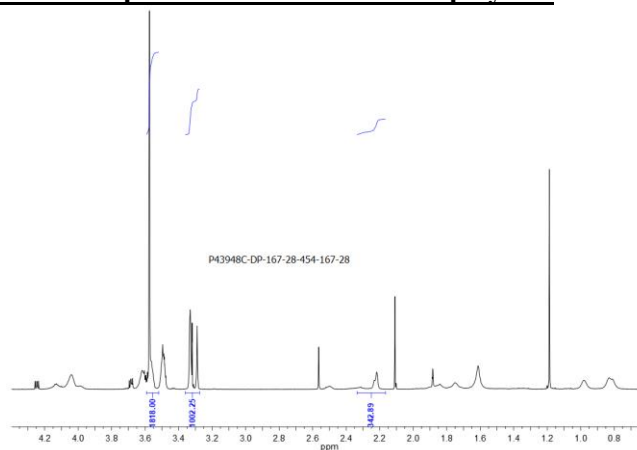
Solubility:

The polymer is soluble in water. 1mg polymer in Water does not give a clear solution. After heating solution to about 90 °C by bubbling CO_2 , it gives clear solution immediately.

CO₂- responsive Polymer Materials

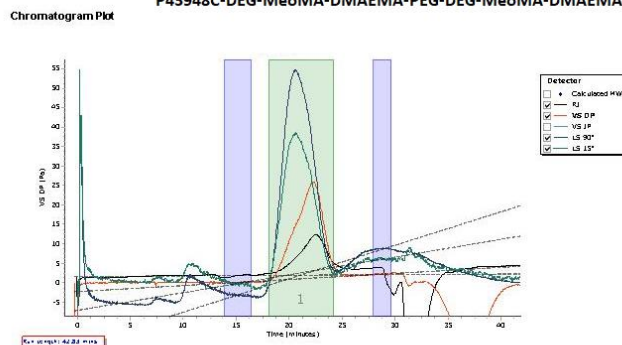


$^1\text{H-NMR}$ Spectrum of the random copolymer



SEC of the random copolymer

P43948C-DEG-MeOMA-DMAEMA-PEG-DEG-MeOMA-DMAEMA



Molecular Weight Averages							
Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PDI
Peak 1	84443	90818	147137	263021	421396	204152	1.62