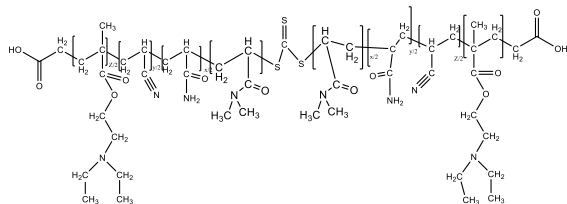


Sample Name: Poly(acrylamide-co-acrylonitrile-co-2-[N,N-diethylamino]ethyl methacrylate)-b-poly(N,N-dimethylacrylamide)-b-poly(acrylamide-co-acrylonitrile-co-2-[N,N-diethylamino]ethyl methacrylate)

Sample #: P43772A-AAmANDEAEMArAN-DMA-AAmANDEAEMArAN

Structure:



Composition:

Feed molar ratio			Mn (g mol ⁻¹)	Mn (g mol ⁻¹) PDMA	Mw/Mn
Aam 81.9	AN 15	DEAEMA 3.1	27,000	54,000	3.5

Synthesis Procedure:

The polymer is prepared by RAFT process using RAFT reagent.

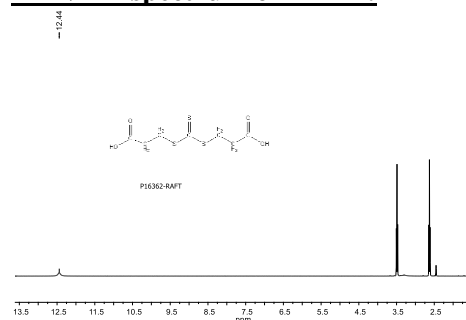
Characterization:

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

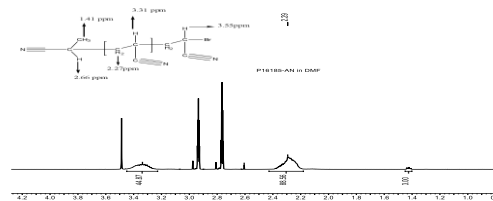
Solubility:

The polymer is soluble in water. 5mg polymer in Water gives cloudy solution with some insoluble particles. By bubbling CO₂, it gives clear solution immediately.

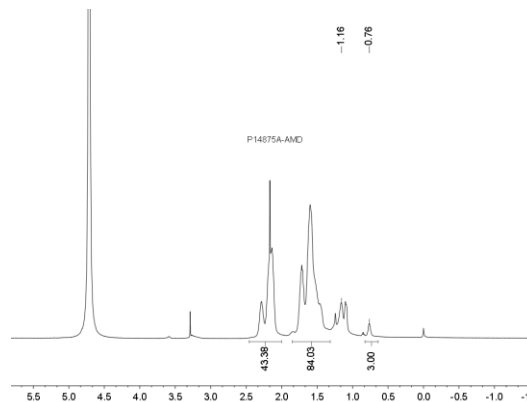
¹H-NMR spectrum of RAFT:



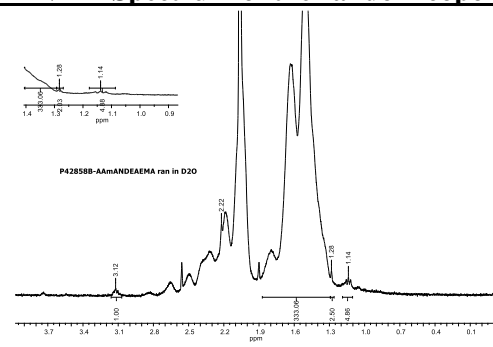
¹H-NMR Spectrum of PAN In d⁷DMF:



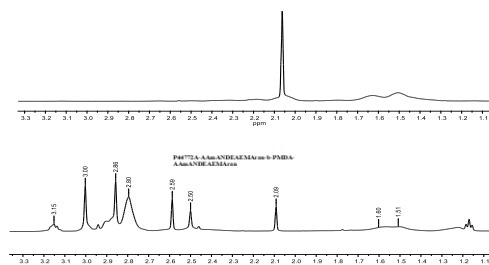
¹H-NMR Spectrum of PAAm in D2O:



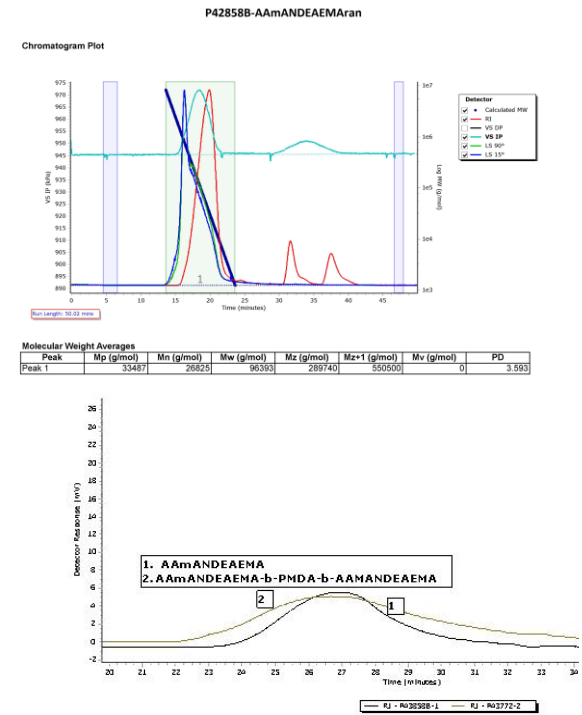
¹H-NMR Spectrum of the random copolymer



¹H-NMR of final Polymer run in D2O



SEC of the random copolymer carried out in water:



FT-IR Spectrum of the sample:

