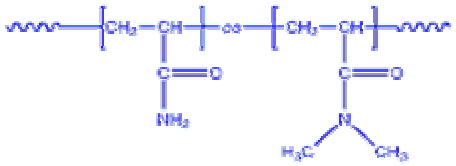
Sample Name:
Random Copolymer Poly(acrylamide-co-N,N-dimethyl acrylamide)

Sample #: P4398-AMDNNDMA

Structure:



Composition:
PAMD (mol%) : 56

Mn x 10^3	PDI
1000.0	5.0
T_g for the random copolymer	189°C

Synthesis Procedure:

The polymer is prepared by RAFT process.

Characterization:

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

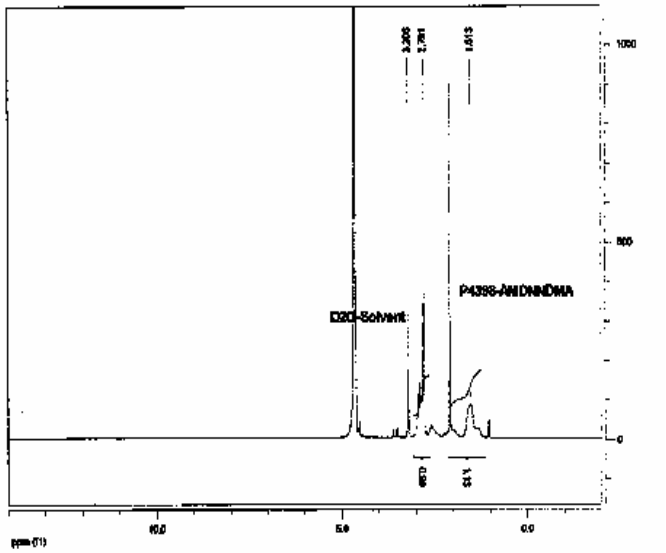
Thermal analysis:

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 20°C/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).

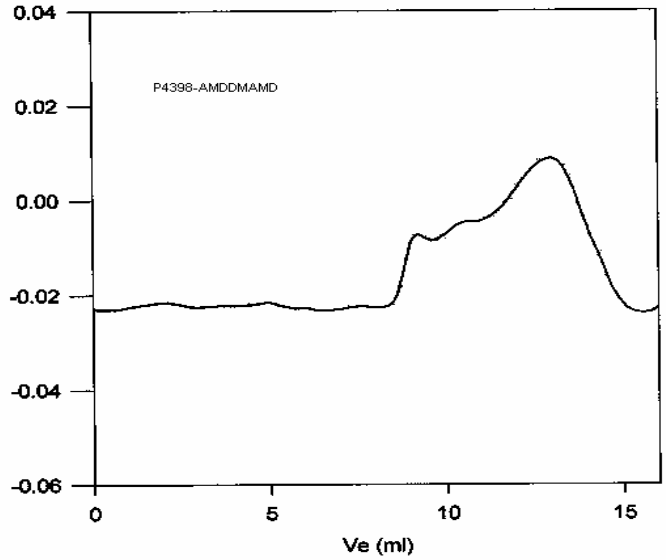
Solubility:

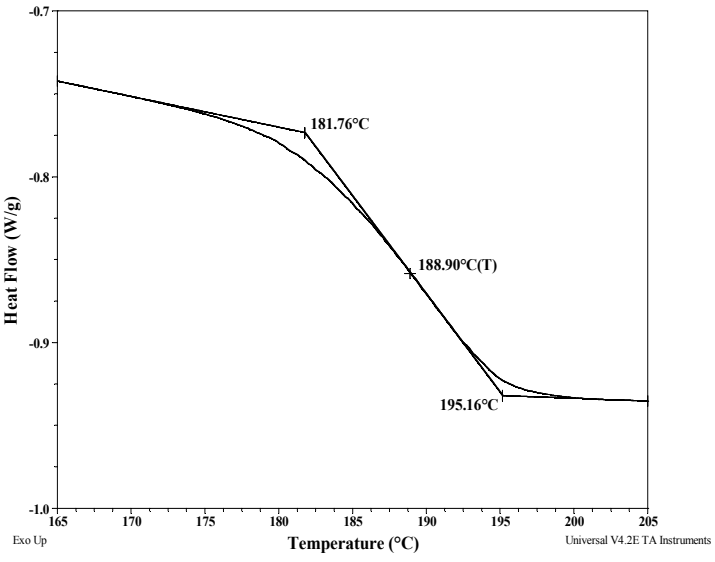
The polymer is soluble in acetone, insoluble in ether , hexane.

^{1}H-NMR Spectrum of the random copolymer before hydrolysis:



SEC of the random copolymer before hydrolysis:



Size exclusion chromatograph of random copolymer of Acrylamide and N,N-dimethyl acrylamide:
Eluent: Water containg).5M acetic acid and 0.5M NaNO3
M_w= 1000000 Reduced viscosity in water at 30 °C: 290 ml/g

DSC thermogram for the sample: