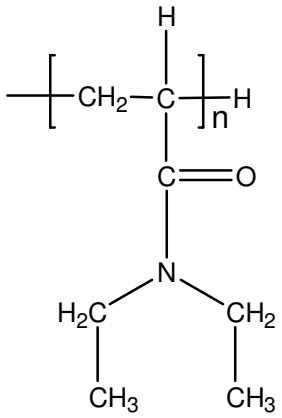
Sample Name:
Poly(N-N-diethylacrylamide)

Sample #: P18112B-DEAMD

Synthesis by GTP polymerization

Structure:



Composition:

Mn x 10^3 w.r.t Polystyrene reference	Mw/Mn
85.0	1.25
22.0 w.r.t PEO reference	1.25
T_g (°C)	81

Synthesis Procedure:
The polymer is synthesized by GTP polymerization.

Characterization:
The molecular weight and polydispersity index (PDI) of the polymer are obtained by size exclusion chromatography

Thermal analysis:
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°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).

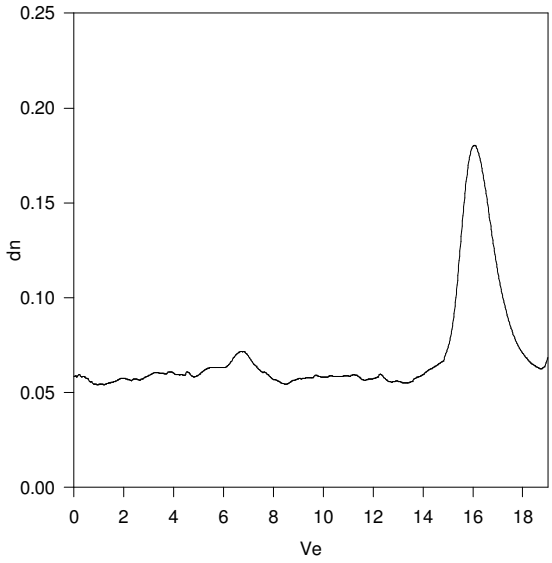
Solution viscosity:
Intrinsic viscosity was determined in methanol at 25 °C using ubbelhode viscometer. The molecular weight is calculated based on the following equation in Methanol at 25 °C:

$$[\eta] = 0.0175 \times M_v^{0.68}$$

Solubility:
Polymer is soluble in methanol, ethanol and water, precipitated in hexane.

SEC of Homopolymer:

P18112B-DEAMD



Size Exclusion Chromatography of Poly(N,N-diethyl acrylamide)

M_n=85,000, M_w=106,000, PI=1.25

DSC thermogram for the polymer: