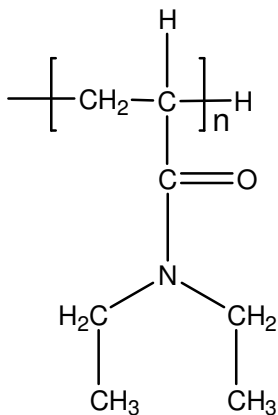


Sample Name:
Poly(N-N-diethylacrylamide)

Sample #: P9637D-DEAMD

Synthesis by Radical polymerization

Structure:



Composition:

$M_n \times 10^3$ w.r.t Polystyrene	PDI
40.0	1.4
$M_w \times 10^3$ 56.0	1.4
T_g (°C)	80
Viscosity in Methanol at 25 °C: [η]= 30ml/g	M_v :57,000

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 ubbelohde viscometer. The molecular weight is calculated based on the following equation in Methanol at 25 °C:

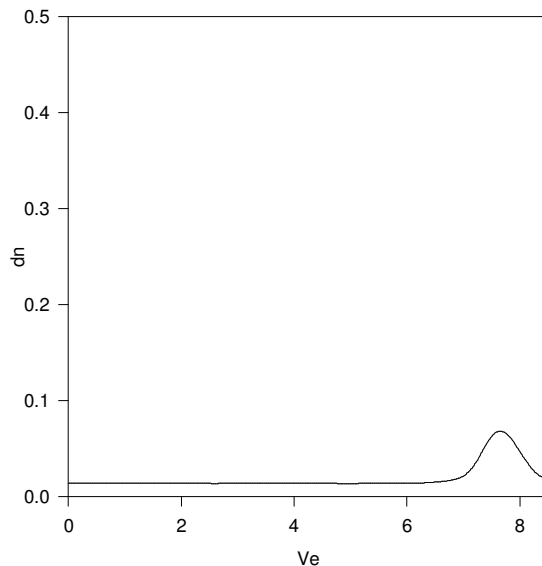
$$[\eta] = 0.0175 \times M_v^{0.68}$$

Solubility:

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

SEC of Homopolymer:

P9637D-DEAMD



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

$M_n=40,000$, $M_w=56,000$, $PI=1.4$

DSC thermogram for the polymer:

