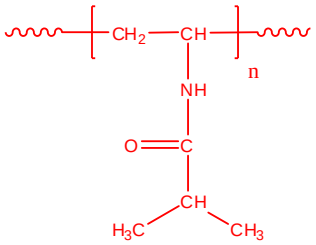
Sample Name:
Poly(N-vinyl isobutyramide)

Sample #**P6367-NVIBA**

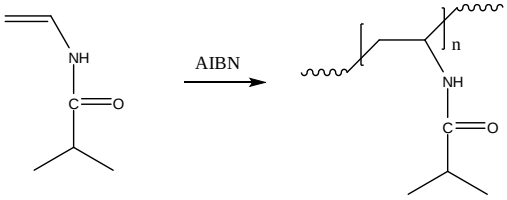
Structure:



Composition:

Mn ×10^3	PDI
20	1.79
T_g (^{o}C)	103

Synthesis Procedure:
The monomer of N-vinyl isobutyramide was synthesized according to literature, and purified by recrystallization from hexanes. Polymer is obtained by free radical polymerization using AIBN as free radical initiator.

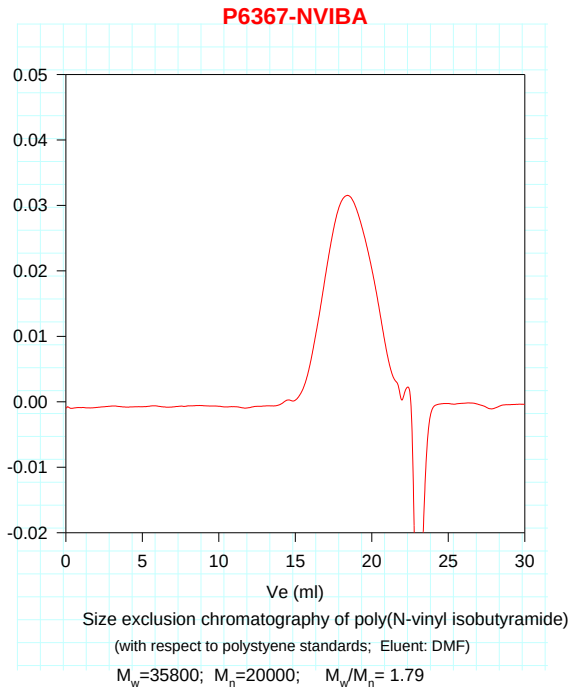


Characterization:
The molecular weight and polydispersity index (PDI) of polymer is obtained by size exclusion chromatography in DMF. The columns were calibrated with polystyrene standards.

Thermal Analysis:
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10^{o}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:
Polymer is soluble in water(<38°C), acetone, methanol and precipitated out from hexane, ether.

SEC of Homopolymer:



Size exclusion chromatography of poly(N-vinyl isobutyramide)
(with respect to polystyene standards; Eluent: DMF)
M_w=35800; M_n=20000; M_w/M_n= 1.79

DSC thermogram for the polymer: