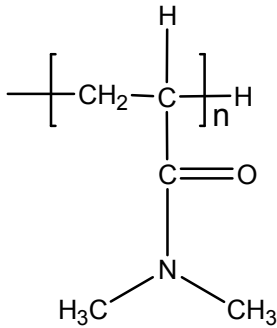


Sample Name: Poly(N-N-dimethylacrylamide)

Sample #: P40563D-DMA

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
937.0	1.22
T <sub>g</sub> (°C)	121 °C

**Synthesis Procedure:**

The polymer is synthesized by radical 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<sub>g</sub>).

**Solution Viscosity:**

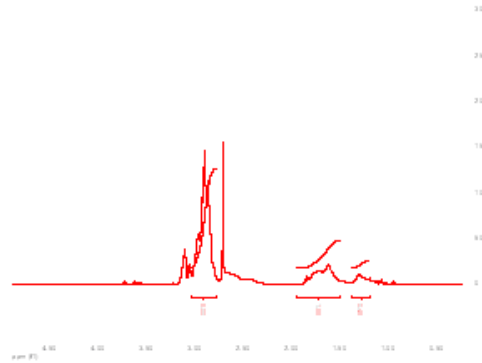
Intrinsic viscosity was determined in methanol at 25 °C using Ubbelohde viscometer. Molecular weight is calculated based on the following constant in Methanol at 25 °C:

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

**Solubility:**

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

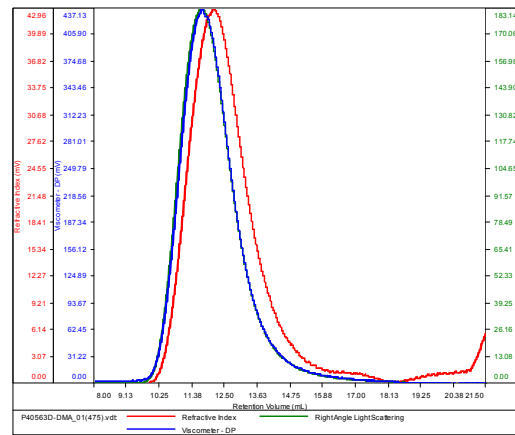
**<sup>1</sup>H NMR of the product:**



**SEC of Homopolymer:**

P40563D-DMA

Conc	7.2823
dn/dc	0.0870
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k-March2017-0002.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P40563D-DMA_01(475).vdt	936,965	1.147 e 6	1.080 e 6	1.225	1.4166