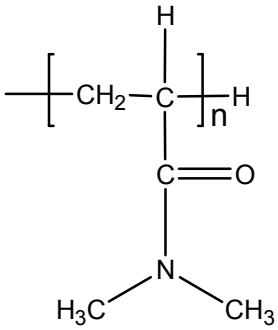
Sample Name: **Poly(N-N-dimethylacrylamide)**

Sample #: **P40563-DMA**

Structure:



Composition:

Mn x 10^3	PDI
1,192.0	1.14
T_g (^oC)	121 ^oC

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

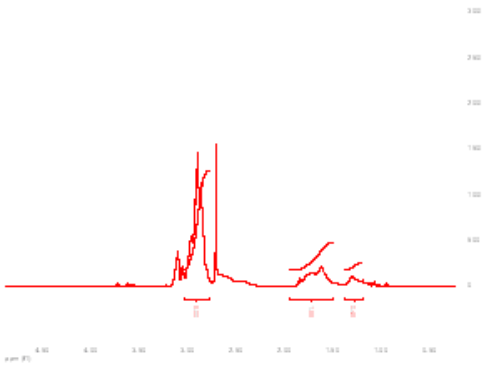
Thermal analysis:
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10^{o}C/min.The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solution Viscosity:
Intrinsic viscosity was determined in methanol at 25 ^{o}C using ubbelhode viscometer. Molecular weight is calculated based on the following constant in Methanol at 25 °C:

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

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

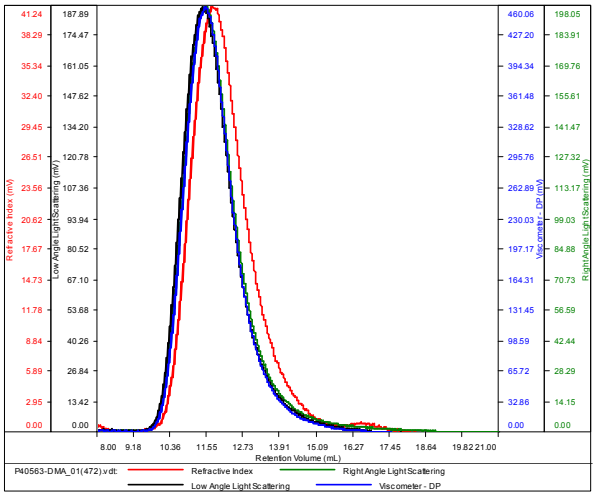
^{1}H NMR of the product:



SEC of Homopolymer:

P40563--DMA-

Conc	6.2078
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
P40563-DMA_01(472).vdt	1.192 e 6	1.362 e 6	1.370 e 6	1.143	1.5540