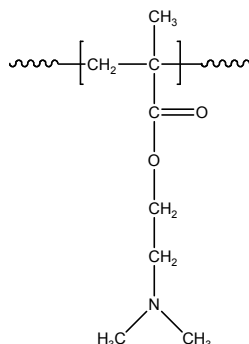<u>Sample Name</u>:
Poly(N,N-dimethylaminoethyl methacrylate)

<u>Sample #</u>: **P9583-DMAEMA**
 (obtained by anionic polymerization)
Structure:

Composition:

Mn × 10³	PDI
5.5	1.08
T$_g$ (^{o}C)	29
Microstructure of polymer	Syndio: hetero:iso 68:30:2

Synthesis Procedure:
Poly(N,N-dimethylaminoethyl methacrylate) is obtained by anionic or free radical or by GTP process.

Characterization:

The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple detectors from Viscotek Co.
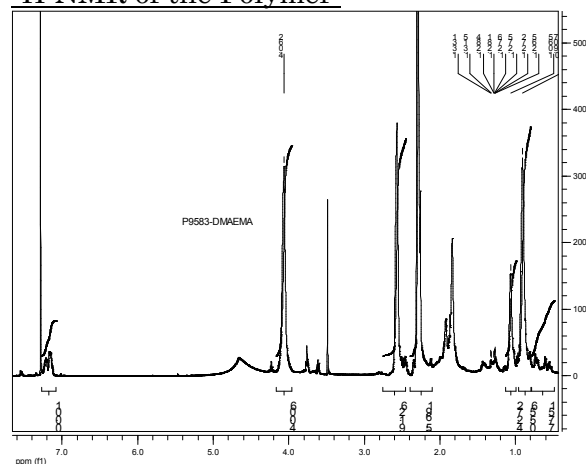
Thermal analysis:
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min.The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T$_g$).
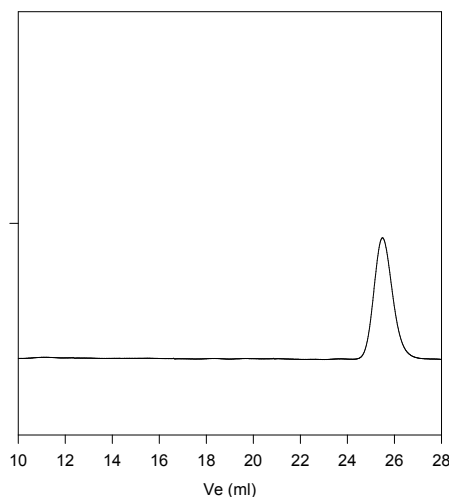
Solubility:
Poly(N,N-dimethylaminoethyl methacrylate) is soluble in THF, CHCl$_3$, toluene and dioxane. The polymer precipitates from hexanes, methanol and ethanol.

<u>^{1}H NMR of the Polymer:</u>

<u>SEC of Homopolymer:</u>
P9583-DMAEMA

Size Exclusion Chromatography of poly(N,N-dimethylaminoethyl methacrylate):
—— M$_n$ = 5500, M$_w$ = 5800, M$_w$/M$_n$ = 1.06

DSC thermogram for the polymer: