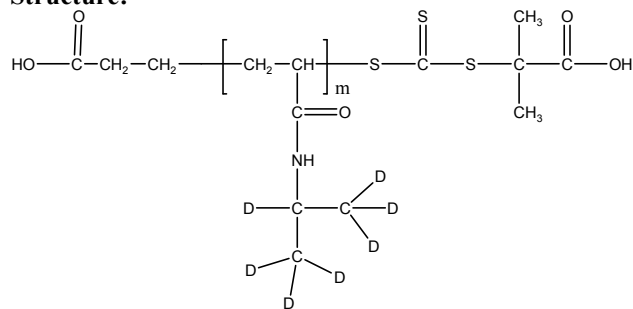Sample Name: **Deuterated-d7 α–ω dicarboxylic acid terminated Poly(N-isopropyl acrylamide)**

Sample #:   **P11128A-d7NIPAM2COOH**

Structure:

Composition:

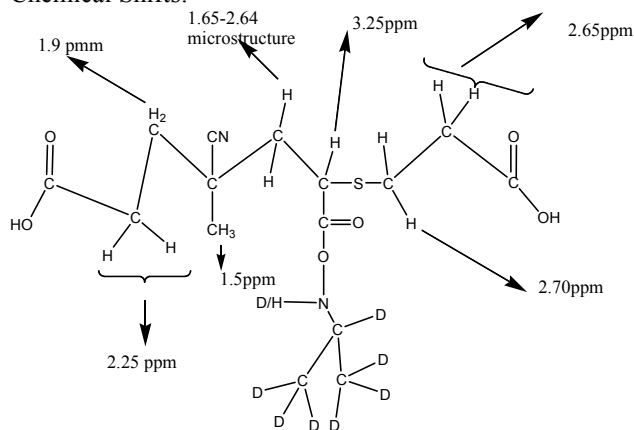| Mn x 10³	PDI
8.0	1.18

Synthesis Procedure:
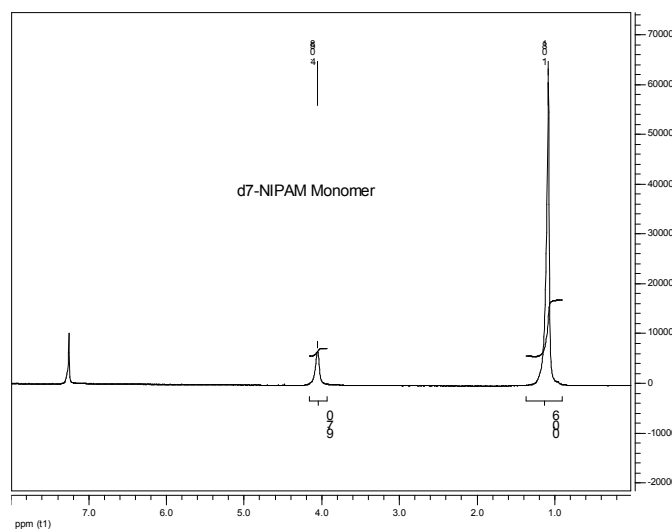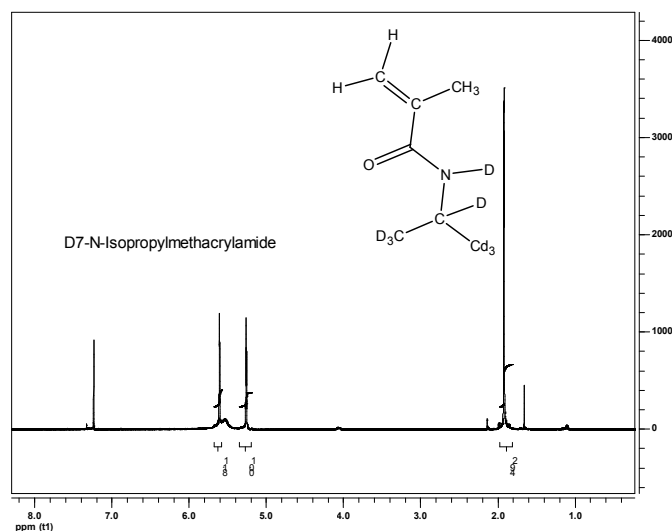Polymer is obtained by RAFT control radical polymerization.

Characterization:
Size exclusion chromatography (SEC) was carried out on a Varian liquid chromatograph equipped with a refractive index detector. A Shodex 806L GPC columns from Supelco was used with DMF(0.01M LiBr) as the eluent. The columns were calibrated with monodisperse polystyrene standards. The polydispersity index was calculated.

Viscosity measurement was carried out in a Ubbelohde viscometer at 25°C. Four solutions in methanol of different concentrations were measured. The intrinsic viscosity was obtained by extrapolation to c=0. From viscosity-molecular weight relationship [ ]$=2.99\times10^{-2}$ $M^{0.64}$ (Makromolecular Chem. V180, P969, 1979), the viscosity average molecular weight was calculated accordingly.
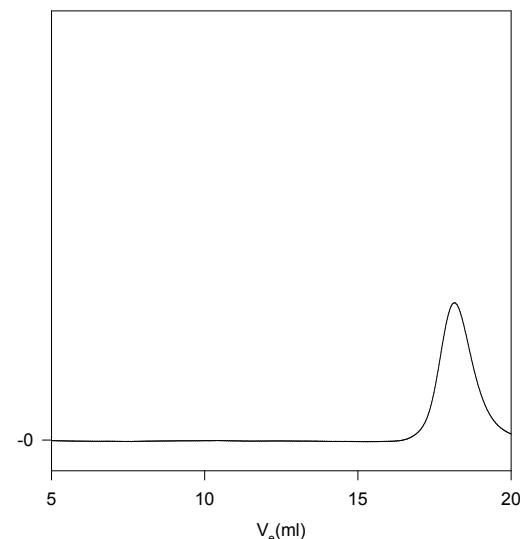
Chemical Shifts:

H-NMR Spectrum of the product:

D7-N-Isopropylmethacrylamide

d7-NIPAM Monomer

SEC of the Product:

P11128A-d7NIPAM2COOH

Size exclusion chromatography of N-Isopropyl Acrylamide in DMF/LiBr(0.05M)
Molecular Weight Distribution with respect to Polystyrene Standards:

Mn: 8,000 Mw: 9,300 M_w/M_n= 1.18