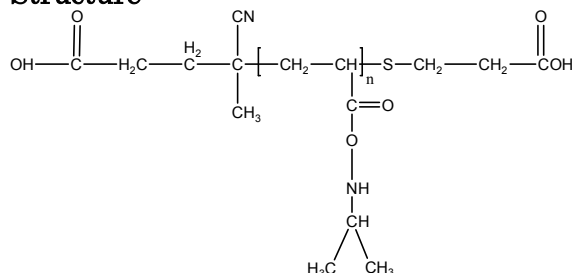


Sample Name: **α,ω -dicarboxy terminated poly(N-isopropyl acrylamide)**

Sample #: **P9110E-NIPAM2COOH**

Structure:

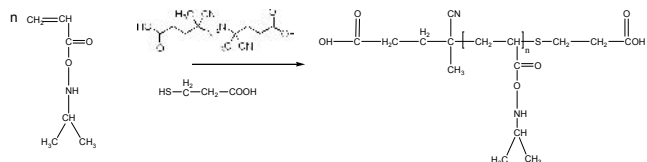


Composition:

| Mn x 10 ³ By acid base titration | PDI | Mn with reference to Polystyrene Calibration |
|--|-----|--|
| 10.0 | 2.2 | 47000 |
| T _g (°C) | 127 | |

Synthesis Procedure:

α,ω -dicarboxy Terminated Poly(N-isopropyl acrylamide) was prepared by free-radical polymerization of N-isopropyl acrylamide with a carboxyl containing chain-transfer agent. The final polymer was purified by fractionation and the scheme of the reaction is illustrated below:



Characterization:

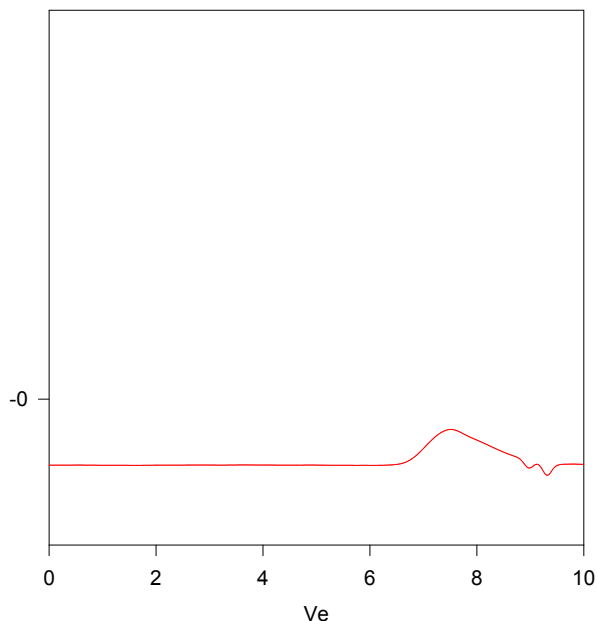
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

Thermal analysis:

Thermal analysis of the samples was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of 10°C/min. The inflection glass transition temperature (T_g) has been considered.

SEC of Sample:

P9110E-NIPAM2COOH



Size Exclusion Chromatography profile of the product in DMF at 40 °C containing KBr 0.01M, w.r.t polystyrene calibration: dicarboxy terminated Poly(N-isopropyl acrylamide)
M_n = 10000 (by Titration) PI=2.2
(Mn with reference to Polystyrene 47000)

DSC thermogram for the polymer:

