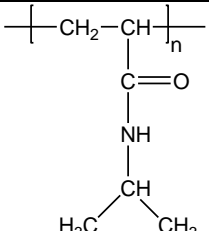


# Product Profile

## Identification

<b>Product Name:</b> Poly(N-isopropylacrylamide)	<b>CAS:</b> 25189-55-3
<b>Abbreviation:</b> PNIPAM	<b>Lot:</b> P2175-R-NIPAM
<b>Formula:</b> CH <sub>3</sub> (C <sub>6</sub> H <sub>11</sub> NO) <sub>n</sub> CH <sub>3</sub>	
<b>Product Chemical Architecture:</b>	

## Composition:

<b>Mn (g/mole)</b>	136,000
<b>Mw (g/mole)</b>	272,000
<b>Mw/Mn</b>	2.01
<b>dn/dc (mL/g)</b>	0.077

## Method of Synthesis

Poly(N-isopropyl acrylamide) is obtained by free radical polymerization.

## Solubility in different solvents

THF	√	DMF	√
Alcohol	√	CHCl <sub>3</sub>	√
Toluene	X	Water (LCST 32°C)	Depending on its LCST

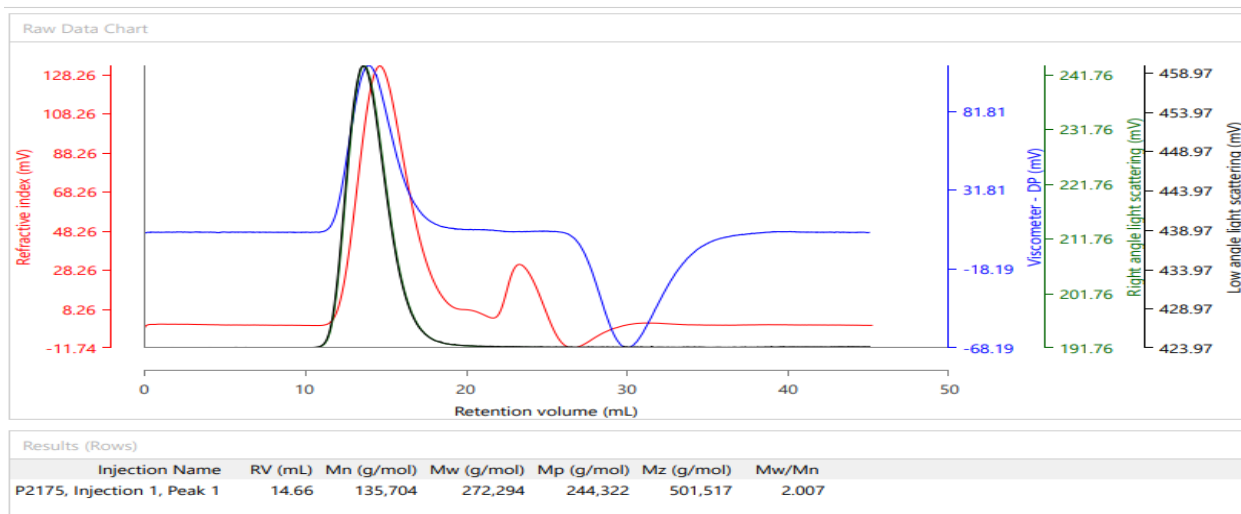
## Validation of Architecture

### A. Gel Permeation Chromatography (GPC), SEC- Profile:

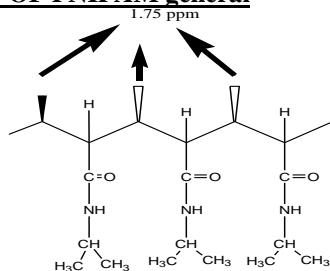
GPC – Malvern Omnisec Triple Detection ,2 Viscotek Mixed 300 x 8.0 mm columns at 35°C, flow 0.7mL/min. Mobile phase (MP): DMF + 0,023M LiBr

## Polymer Source

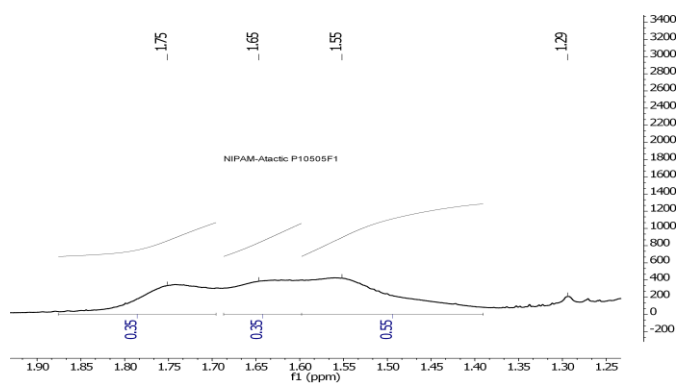
Malvern Panalytical



### B. NMR (HNMR) OF PNIPAM general



### An example of hetero (rmmr) triads



### C. Dependence of glass transition temperature ( $T_g$ ) of PNIPAM from its molecular weight:

