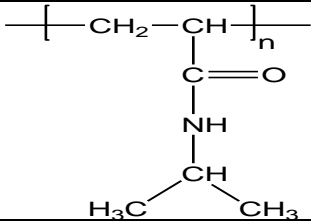


# Product Profile

## Identification

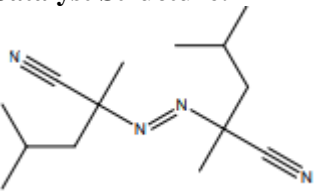
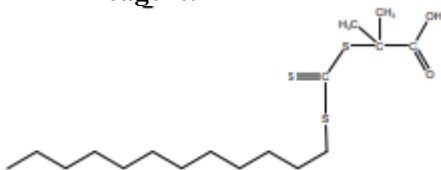
<b>Product Name:</b> Poly(N-isopropylacrylamide)	<b>CAS:</b> 25189-55-3
<b>Abbreviation:</b> PNIPAM	<b>Lot:</b> P5540-11-R-NIPAM
<b>Formula:</b> $\text{CH}_3(\text{C}_6\text{H}_{11}\text{NO})_n\text{CH}_3$	
<b>Product Chemical Architecture:</b>	

## Composition:

<b>Mn (g/mole)</b>	1,014,000
<b>Mw (g/mole)</b>	1,106,000
<b>Mw/Mn</b>	1.09
<b>dn/dc (mL/g)</b>	0.077

## Method of Synthesis

The polymer is prepared by Raft Polymerization.

<b>Catalyst Structure:</b> 	<b>RAFT Reagent:</b> 
2,2-azobis (2,4-dimethyl valeronitrile)	2-dodecylsulfonyl-2-methylpropionic acid

## Solubility in different solvents

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

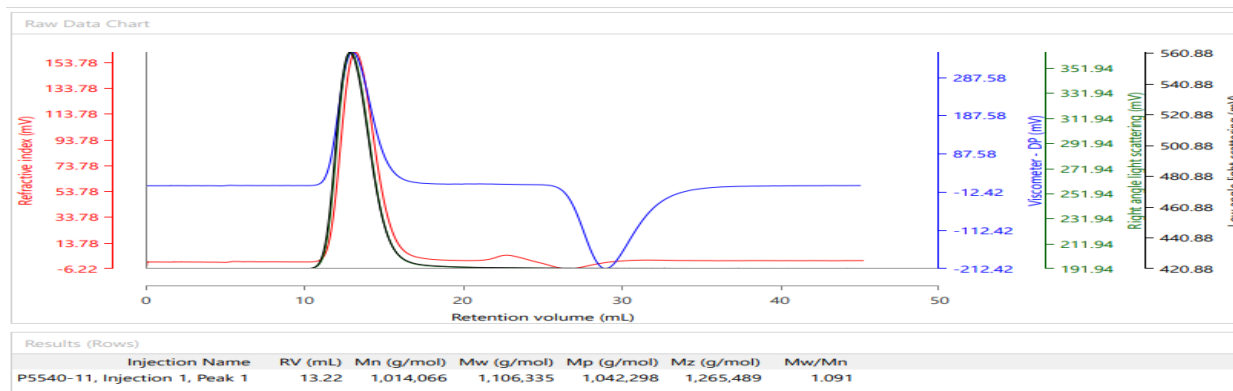
## Validation of Architecture

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

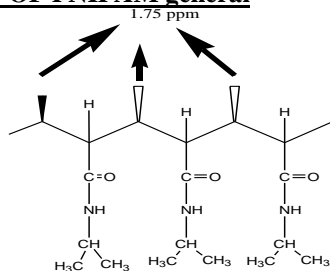
GPC – Malvern Omnisec Triple Detection ,2 Viscotek Mixed 300 x 8.0 mm columns at 35°C, flow 0.7mL/min. Mobile phase (MP): DMF + 0,023M LiBr

Polymer Source

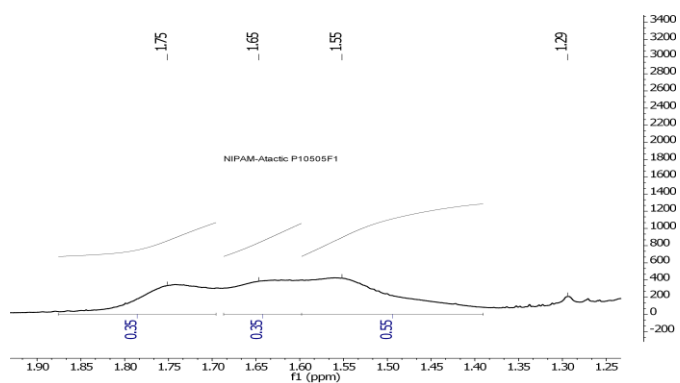
Malvern Panalytical



**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:**

