

Sample Name:

Amino-terminated poly(N-isopropyl acrylamide)

Sample # **P20149-NIPAMNH2**

Structure:

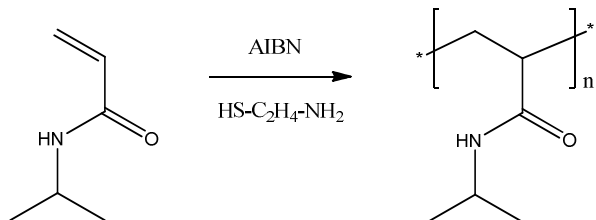


Composition:

| $M_n \times 10^3$ (g/mol) | M_w/M_n |
|---------------------------|-----------|
| 37.0 | 1.8 |

Synthesis Procedure:

Amino-terminated poly(N-isopropyl acrylamide) was prepared by free-radical polymerization of N-isopropyl acrylamide in presence of an amino-group containing chain-transfer agent. The product was purified by fractionation. The scheme of reaction is shown below:



Characterization:

The molecular weight and functionality degree of the polymer were calculated by titration using HClO_4 /Crystal violet in CHCl_3 /acetic acid. The polydispersity index (M_w/M_n) was determined by size exclusion chromatography (SEC) on a Varian liquid chromatograph equipped with a triple detector.

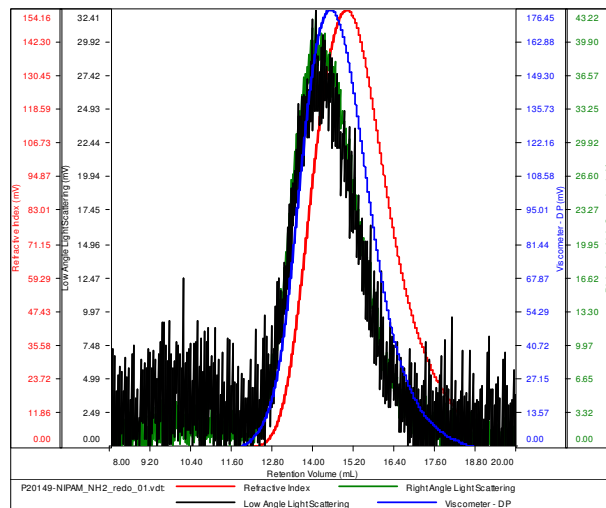
Solubility:

The polymer is soluble in water, THF, chloroform and dichloromethane; and is insoluble in hexane and ether.

SEC elugram of the polymer:

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| | |
|--------------|--------------------------|
| Conc (mg/mL) | 15.0822 |
| dn/dc (mL/g) | 0.0770 |
| Method | PS80K-17SEP2014-0000.vcm |
| Solvent | DMF w 0.03M LiBr |
| Column | PSS |



| Sample | M_n | M_w | M_p | M_w/M_n | IV |
|------------------------------|--------|--------|--------|-----------|--------|
| P20149-NIPAM_NH2_redo_01.vdt | 37,101 | 68,722 | 73,469 | 1.852 | 0.2646 |