

Sample Name:

**Amino-terminated poly(N-isopropyl acrylamide)**

Sample # **P10405A-NIPAMNH2**

**Structure:**

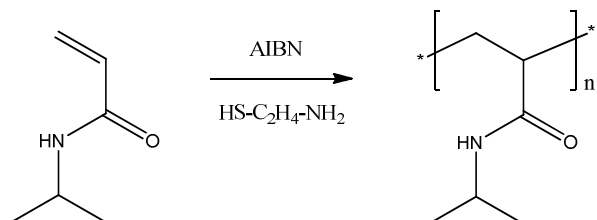


**Composition:**

$M_n \times 10^3$ (g/mol)	$M_w/M_n$
8.0	1.6

**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:**

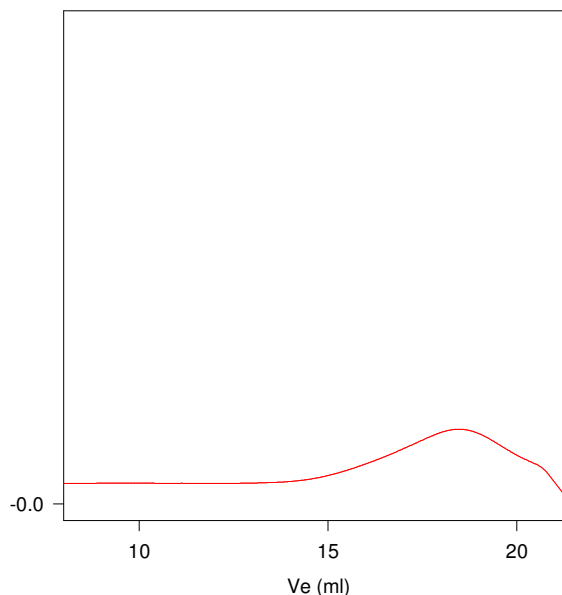
The molecular weight and functionality degree of the polymer were calculated by titration using  $\text{HClO}_4$ /Crystal violet in  $\text{CHCl}_3$ /acetic acid. The polydispersity index ( $M_w/M_n$ ) was determined by size exclusion chromatography (SEC) on a Varian liquid chromatograph equipped with a triple detector.

**Solubility:**

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

**SEC elugram:**

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Size exclusion chromatography of poly(N-isopropylacrylamide) with respect to polystyrene standards: ( $M_n$ : 28,000) Eluent: DMF  $M_w/M_n=1.6$ ,  $M_n$  by titration: 8,000