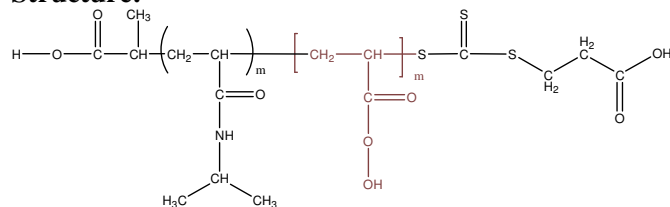


**Sample Name:** Poly(acrylic acid -b- N-isopropylacrylamide)

**Sample #:** P16017A-AANIPAM

**Structure:**



**Composition:**

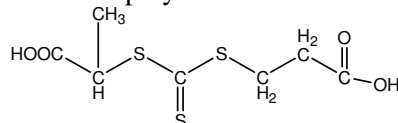
Mn x 10 <sup>3</sup> PAA-b-PNIPAM	7.5-b-2.0
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PDI	1.1
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DP of each block: PAA-b-PNIPAM	106-b-17
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**Synthesis Procedure:**

Poly(acrylic acid-b-N-isopropylacrylamide) is prepared by RAFT polymerization and sequential addition of acrylic acid monomer and N-isopropylamide monomer. The CTA used in polymerization is shown as follows:

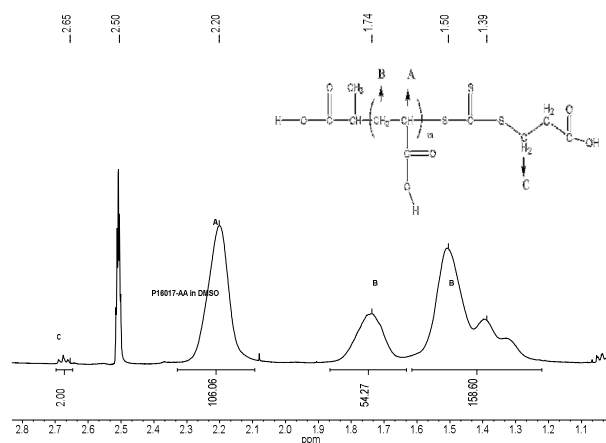


**Characterization:**

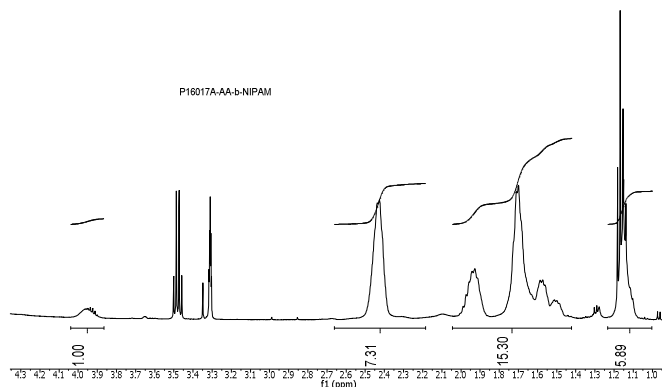
The molecular weight, polydispersity and composition of polymer were characterized by SEC and <sup>1</sup>H NMR.

**Solubility:** Poly(acrylic acid -b- N-isopropylacrylamide) is soluble in MeOH and water.

**<sup>1</sup>H-NMR spectrum of the PAA-RAFT macroinitiator in DMSO-d<sub>6</sub>**

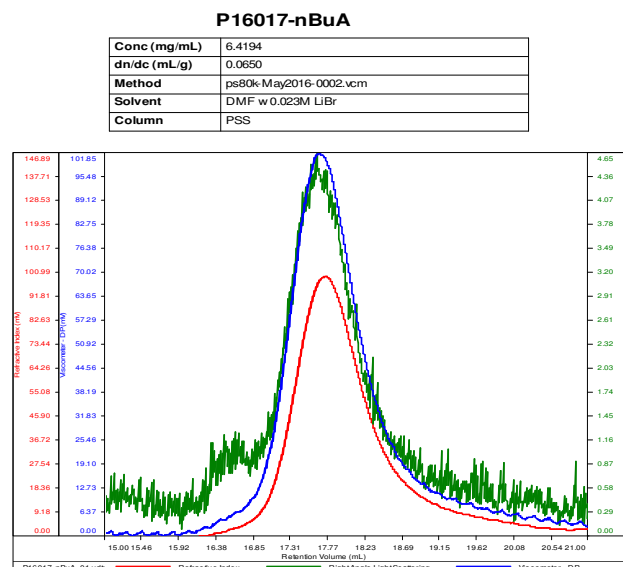


**<sup>1</sup>H NMR spectrum of the diblock copolymer PAA-NIPAM in MeOH-d<sub>3</sub>**



SEC of first block was carried out to convert PAA into poly n-Butylacrylate to determine molecular weight of the poly acrylic acid.

**SEC elugram of the first block of poly(n-butyl acrylate):**



Sample	Mn	Mw	Mp	Mw/Mn	IV
P16017-nBuA_01.vcl	14,065	15,237	12,717	1.083	0.1989