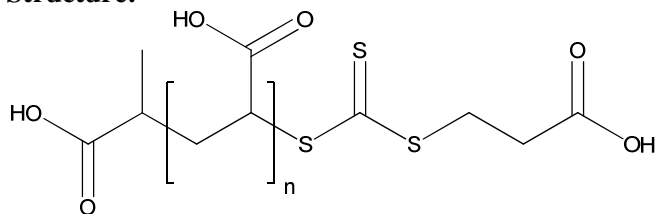


Sample Name: Poly(Acrylic acid)

Sample #: P16017-AA

**Structure:**

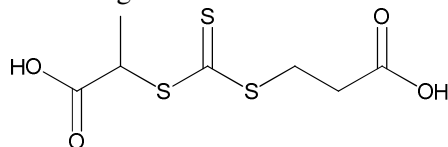


**Composition:**

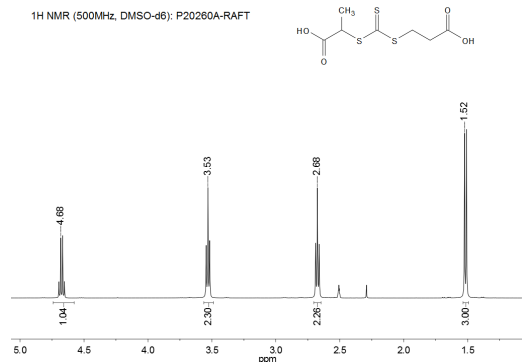
Mn x 10 <sup>3</sup>	Mw/Mn (PDI)
7.5	1.08

**Synthesis Procedure:**

Poly(acrylic acid) is synthesized by RAFT polymerization of acrylic acid xanthate as chain transfer agent shown as follows:



**<sup>1</sup>H NMR spectrum (500 MHz, DMSO-d<sub>6</sub>):**

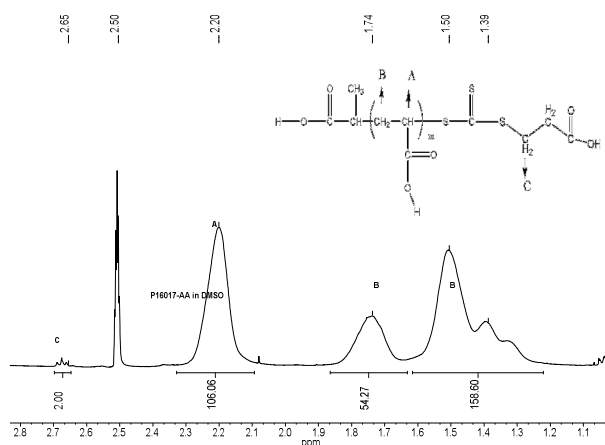
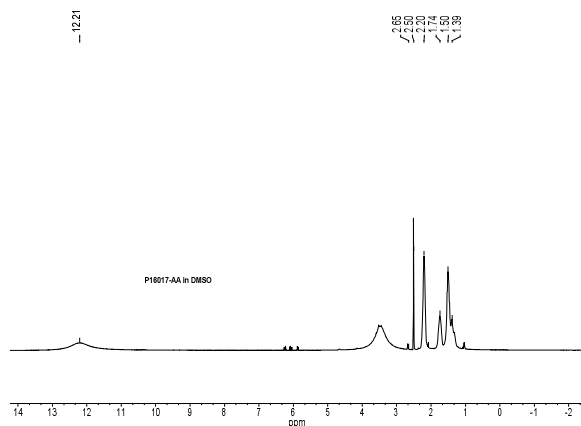


**Characterization:**

The polymer was characterized by <sup>1</sup>H NMR and SEC.

**Solubility:** Polymer is soluble in methanol and water.

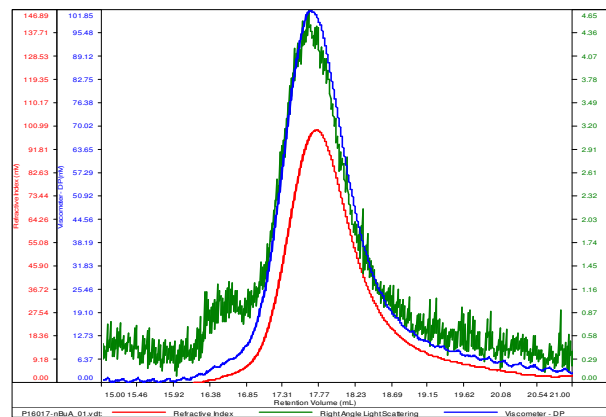
**<sup>1</sup>H-NMR Spectrum of the Polymer:**



**SEC was carried out to convert PAA into Poly n-Butylacrylate to determine molecular weight of the poly acrylic acid**

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

P16017-nBuA	
Conc (mg/mL)	6.4194
dn/dc (mL/g)	0.0650
Method	ps80k-May2016-0002.vcm
Solvent	DMF w/0.023M LiBr
Column	PSS



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