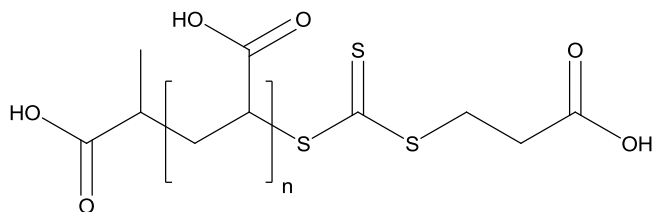


Sample Name:

Poly(Acrylic Acid) (by RAFT polymerization)

Sample #: P14691-AA

Structure:

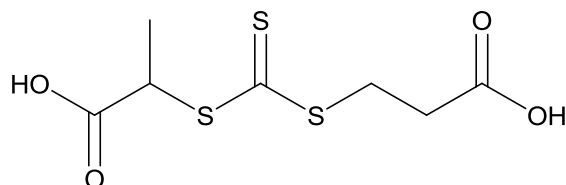


Composition:

$M_n \times 10^3$ (g/mol)	$M_n \times 10^3$ (g/mol)	PDI
8.0	9.3	1.17

Synthesis Procedure:

Polyacrylic acid was synthesized by RAFT polymerization of acrylic acid using 2,2'-azobis isobutyrate (CAS 2589-57-3) as initiator and xanthate as chain transfer agent:



Solubility:

The polymer is soluble in water.

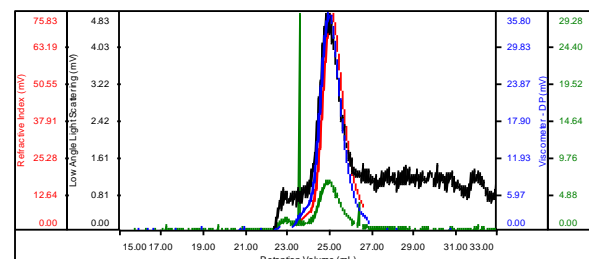
Characterization:

The molecular weight and polydispersity index (PDI) of polyacrylic acid was determined by size exclusion chromatography (SEC) using water containing 0.1M NaNO₃ and 0.01 M NaH₂PO₄ and 4 vol% acetonitrile as an eluent. The molecular weight was verified by converting polyacrylic acid to poly(n-butyl acrylate) by reaction of esterification followed by SEC analysis of the polymer in THF.

SEC elugram of P14691-AA converted to poly(n-butyl acrylate):

Sample ID: P14691-nBuA

Concentration (mg/mL)	3.8456
Sample dn/dc (mL/g)	0.0640
Method File	PS80K-March13-2014-0000.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	Mn	Mw	Mp	Mw/Mn	IV
P14691-nBuA_01.vdt	14,226	16,711	15,815	1.175	0.2437