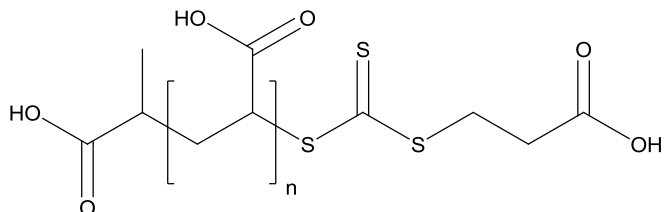


Sample Name: Poly(Acrylic acid)

Sample #: P6711-AA

Structure:

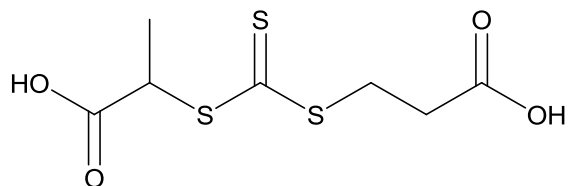


Composition:

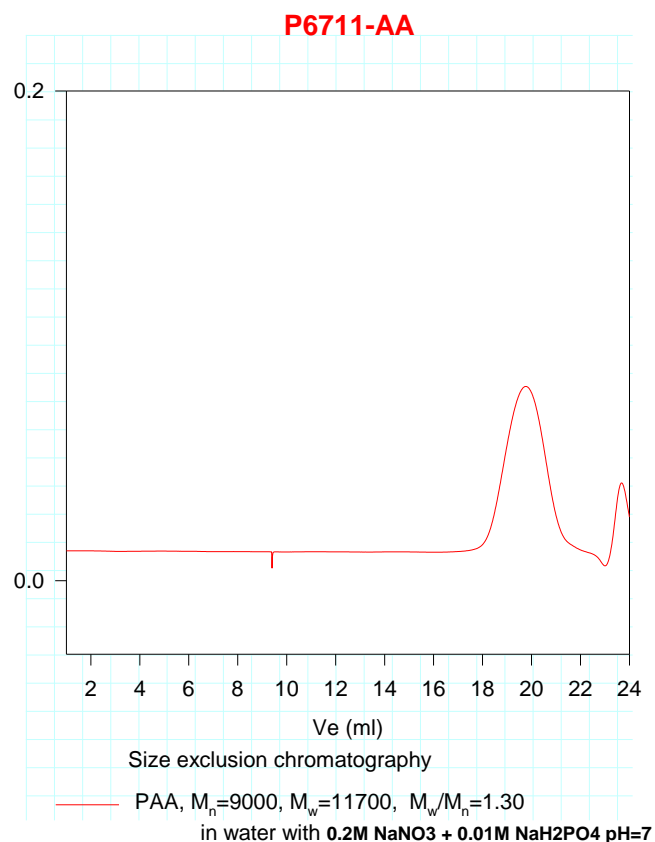
Mn x 10 ³	Mw/Mn (PDI)
9.0	1.3

Synthesis Procedure:

Poly(acrylic acid) is directly synthesized by RAFT polymerization of acrylic acid in isopropanol using the following chain transfer agent:



SEC of Sample of the polymer:



Characterization:

Polyacrylic acid was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI) using water containing 0.1M NaNO₃ and 0.01M NaH₂PO₄ and 4 Vol% acetonitrile as eluent. The polymer architecture was also verified by ¹H-NMR spectroscopy by comparing the peak area of the terminal moieties bearing trithiocarbonate unit. The molecular weight can also be varied by HNMR and by SEC the distribution of the polymer calculated using poly acrylic acid standard polymers.

Solubility:

Polymer is soluble in water, methanol and DMF. It is precipitated from ether, hexanes.