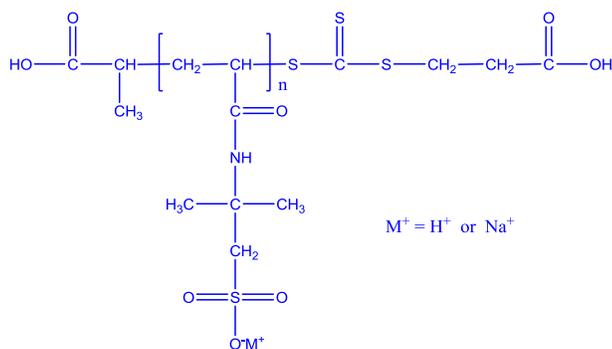


Sample Name: Poly(2-acrylamido-2-methylpropanesulfonic acid)

Sample #: P6730-AMPS

Structure:

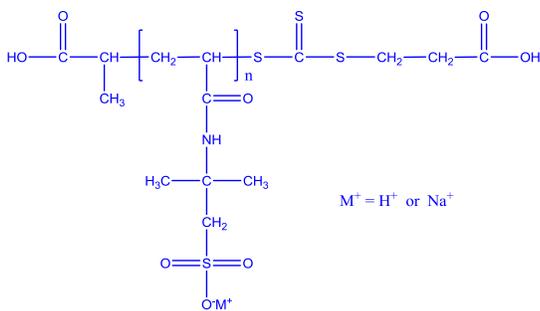
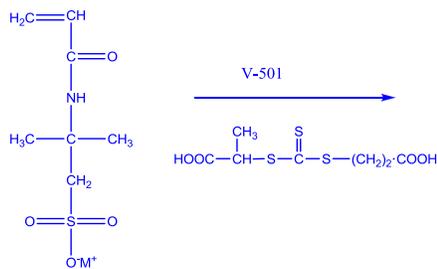


Composition:

$M_n \times 10^3$	M_w/M_n (PDI)
4.1	1.25

Synthesis Procedure:

Poly(2-acrylamido-2-methylpropanesulfonic acid) is synthesized by RAFT polymerization of acrylamido-sulfonic acid monomer using 4,4'-azo(4-cyanopentanoic acid) as initiator and trithiocarbonate as chain transfer agent in water. The reaction scheme is shown below:



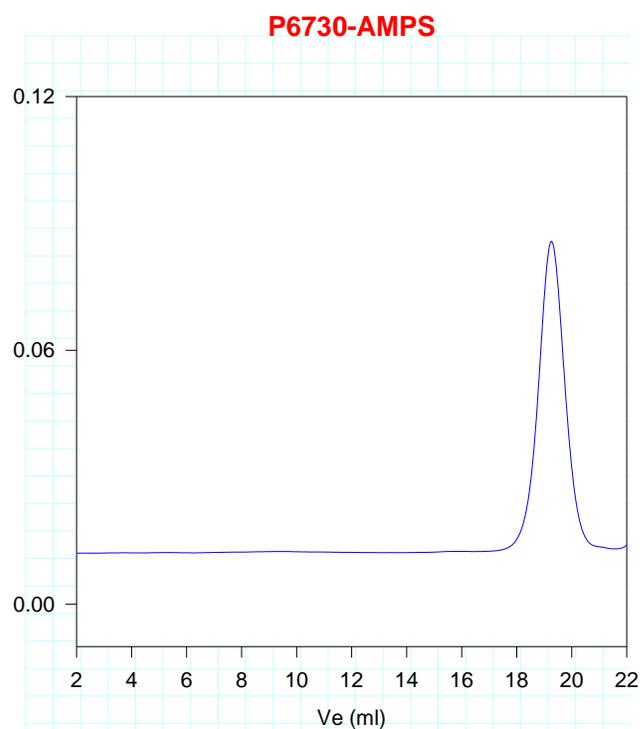
Characterization:

Poly(2-acrylamido-2-methylpropanesulfonic acid) was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight polydispersity index (PDI) using water containing 0.2M NaNO₃ and 0.01M NaH₂PO₄ as eluent. The molecular weight and its distribution can be calculated by SEC based on PEG standards calibration.

Solubility:

The polymer (acid form) is soluble in water, methanol, and ethanol.

SEC of Sample of the polymer:



Size Exclusion Chromatography of Poly(AMPS)
in 0.2M NaNO₃, 0.01M NaH₂PO₄
 $M_n = 4100$, $M_w = 5100$,
 $M_w/M_n = 1.25$ (Using PEG as standard)