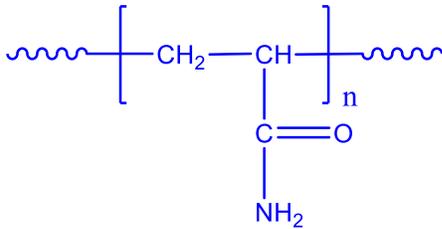


Sample Name: Poly(acrylamide)

Sample #: P6710A-AMD

Structure:

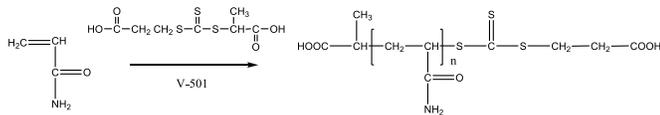


Composition:

Mn × 10 ³	Mw/Mn (PDI)
7.0	1.02

Synthesis Procedure:

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



Characterization:

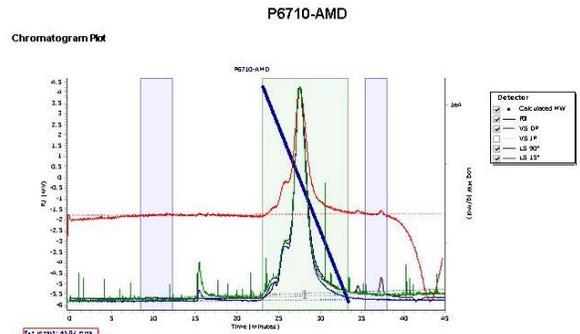
Polyacrylamide was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight polydispersity index (PDI) using water containing 0.2M NaNO₃ and 0.01M NaH₂PO₄ as eluent. The molecular weight can be calculated by intrinsic viscosity and by SEC the distribution of the polymer calculated using PEG standards polymers. [Ref. Suresh K. Jewrajka, and Broja M. Mandal, *Macromolecules*, 2003, 36 (2), 311-317]

Solubility:

The polymer is water soluble only.

SEC elugram of the polymer:

Agilent GPC/SEC Software



Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PDI
Peak 1	7205	7113	7221	7325	7428	7297	1.015

Processing Parameters

Method: Last modified by GPC/Agilent at 10:33:31 AM on August 29, 2018
Concentration Detector Used in Analysis: RI
Injection volume (μL): 100.00
Flow rate (mL/min): 1.00
Concentration options: Calculate Sample Concentration from Entered Sample Properties
Entered dn/dc (mL/g): 0.180
Entered Ext Coeff ((mg/mL)⁻¹cm⁻¹): 1.000
Calculated RI concentration (mg/mL): 4.091