



Product Profile

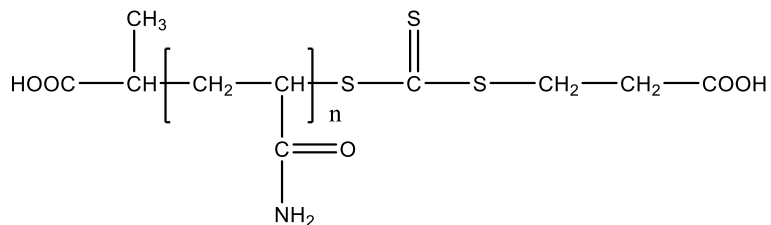
Identification

Product Name: Poly(Acrylamide)

Product Lot Number: P16208-AMD

CAS #: 9003-05-8

Chemical Architecture:

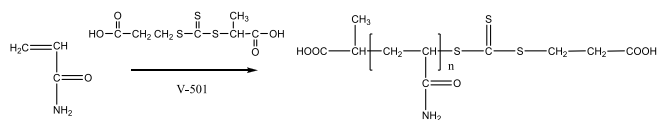


Composition:

Mn (g/mole)	5,000
Mw (g/mole)	5,600
Mw/Mn	1.12
Tg (°C)	184
dn/dc (mL/g) in THF at 30 °C	0.180

Method of Synthesis

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



Solubility in different solvents:

Water	√
THF	X
Alcohol	X

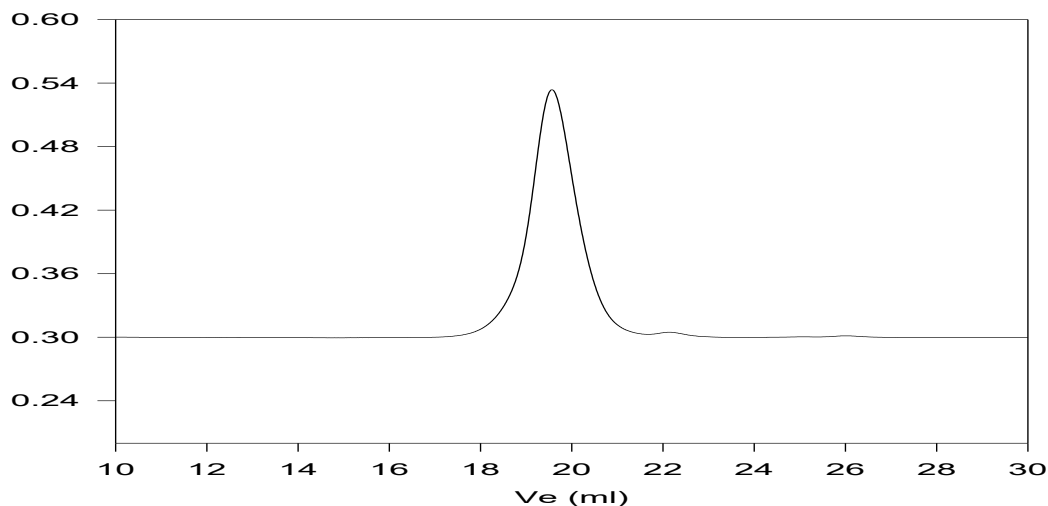


Validation of Architecture

A. Gel Permeation Chromatography (GPC), SEC Profile:

Polyacrylamide and 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.

P16208-AMD



Size Exclusion Chromatography of Poly(acrylamide)
 $M_n=5000$, $M_w=5600$ $M_w/M_n=1.12$ (using PEG as standard)

C. DSC thermogram for the polymer:

