

Product Profile

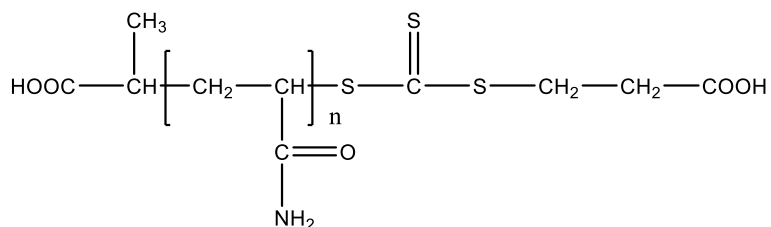
Identification

Product Name: Poly(Acrylamide)

Product Lot Number: P20269A-AMD

CAS #: 9003-05-8

Chemical Architecture:

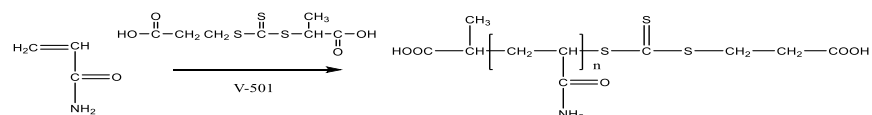


Composition:

Mn (g/mole)	14,000
Mw (g/mole)	19,000
Mw/Mn	1.35
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 trithiocarbonate as chain transfer agent in water. The reaction scheme is shown below:



Solubility in different solvents:

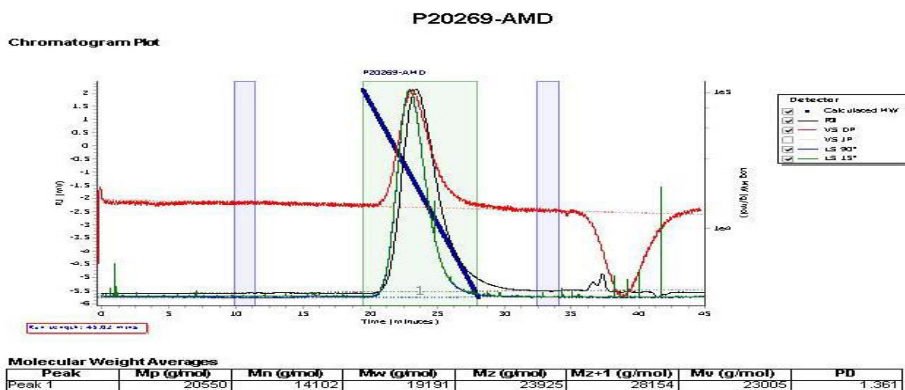
Water	√
THF	X
Alcohol	X

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.

Agilent GPC/SEC Software



B. DSC thermogram for the polymer:

