Product Profile

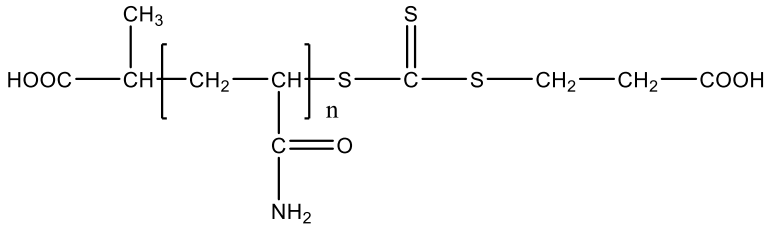
Identification

Product Name: Poly(Acrylamide)

Product Lot Number: P41559-AMD

CAS #: 9003-05-8

Chemical Architecture:



Composition:

Mn (g/mole)	**212,000**
Mw (g/mole)	**257,000**
Mw/Mn	**1.21**
Tg (°C)	**184**
dn/dc (mL/g) in THF at 30 ºC	**0.180**

Method of Synthesis

Poly (Acrylamide) was synthesized by controlled radical polymerization process.

Solubility in different solvents:

Water	√
THF	**X**
Alcohol	**X**

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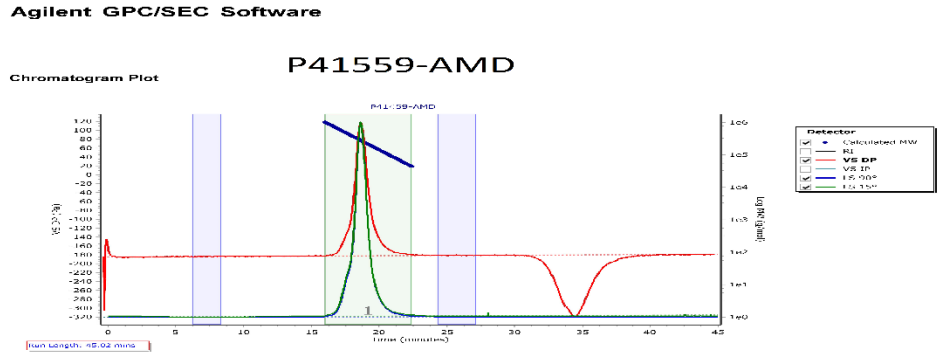
Validation of Architecture

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

The polymer was characterized by size exclusion chromatography (SEC) using State-of-the-art Agilent Technologies 1260 Infinity II GPC system Equipped with triple detector:

Solvent (mobile phase) 2% acetic acid in Millipore water
Filtration: 0.45 µNylon Syringe Filter
Columns: Agilent three columns
Flow Rate: 1 ml/min
Injection Volume: 100 µL
Column Temperature: 30 °C
Calibration of Instrument using PEO polymer.

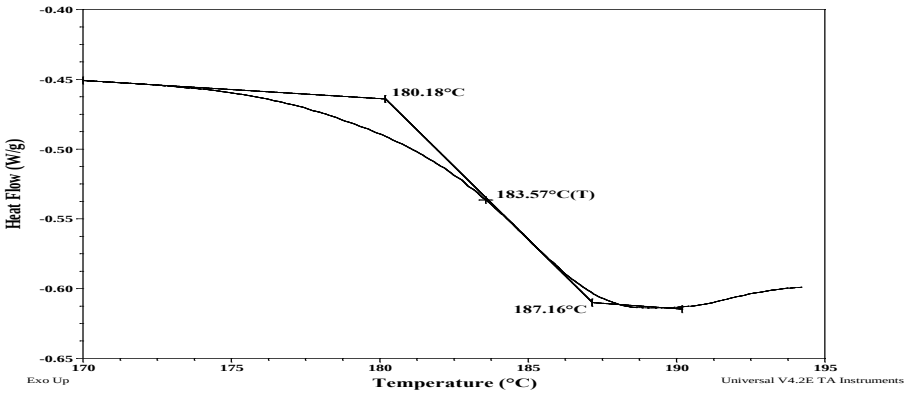
Note: Polyacrylamide bearing Mw > 1M are difficult to filter therefore this equipment is highly sensitive where less than 1mg/ml polymer solution can be detected by triple detector.



Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	279479	212101	257252	293644	329478	287637	1.213

B. DSC thermogram for the polymer:



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