

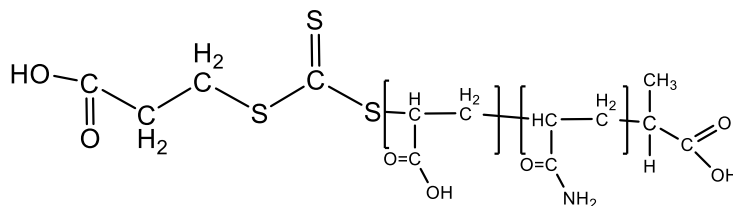
Product Profile

Identification

Product Name: Poly(acrylamide-co-acrylic acid), random

Sample #: P45662A-AMDAAran

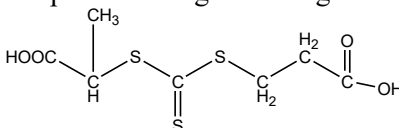
Structure:



Composition:

Mn x 10 ³	Mw/Mn (PDI)	PAA fraction by titration
165.0	1.05	3%

Method of Synthesis : By RAFT process using following RAFT reagent



Solubility in different solvents

THF	×		
CHCl ₃	×	Acetone	×
Water	√		

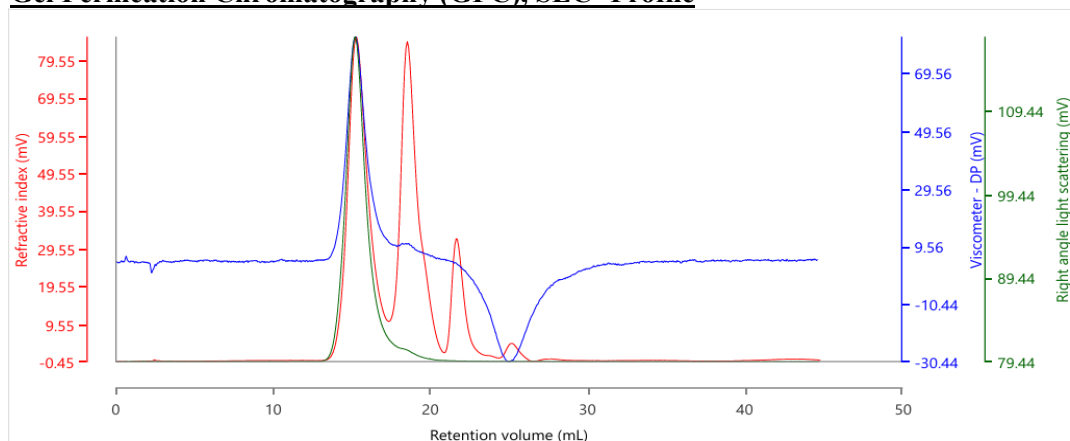
Purification of Polymer By Soxhlet in acetone to remove unreacted monomer and traces amount of RAFT reagent

Validation of Architecture:

Eluent water compositions was Buffer NaHCO₃ 0.05M; NaNO₃ 0.1M; NaN₃: 0.03 wt % and Tri ethanol amine :0.02M Column : TSK 3300SWX 2 columns.

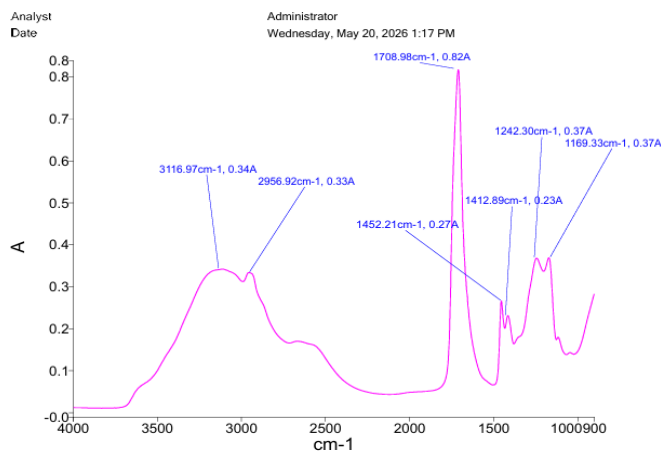
Conc: 2-3mg /ml of water. Higher concentration results in ambiguity in its analysis.

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

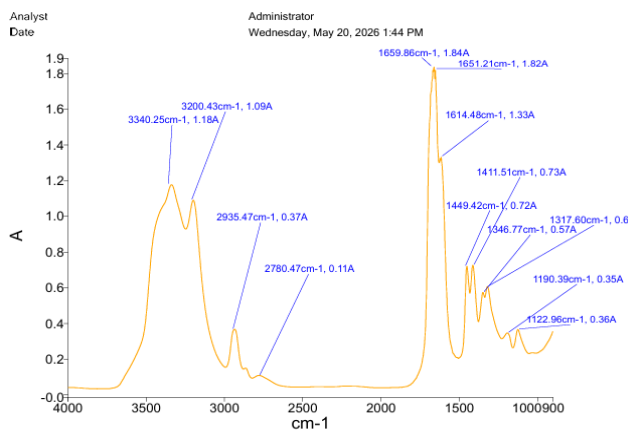


Results (Rows)					
Injection Name	RV (mL)	Mn (g/mol)	Mw (g/mol)	Mp (g/mol)	Mw/Mn
P45662A, Injection 1, Peak 1	15.3	165,389	175,461	176,900	1.061

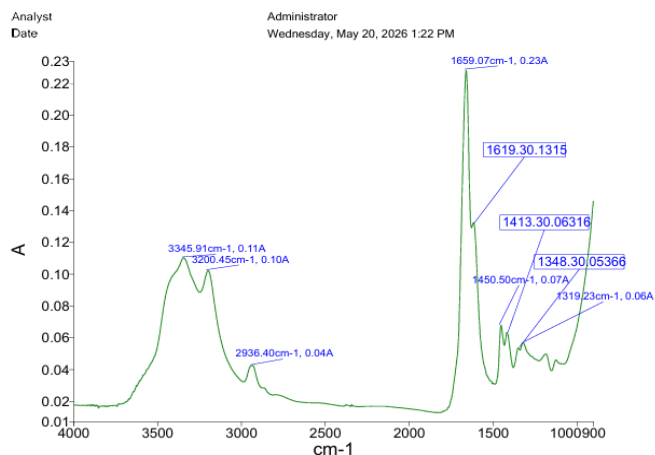
- **Poly(Acrylic acid) (P10680C-AA)**



- **Poly(Acrylamide) (P16221-AMD)**

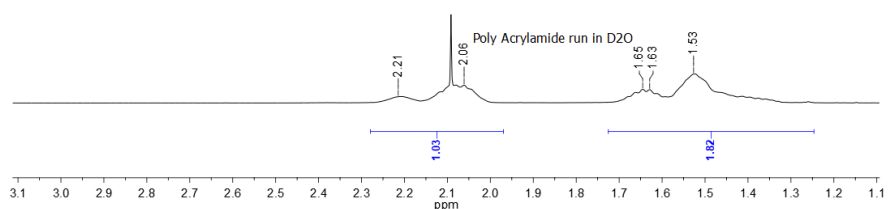
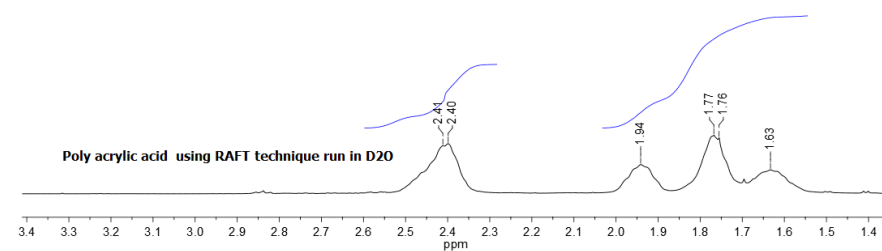


- **Poly(Acrylamide-ran-Acrylic acid) (P45662A)**



Samples	C=O (Strech)
Poly(Acrylic Acid)	1709 cm ⁻¹
Poly(Acrylamide)	1660 cm ⁻¹
P45662A	1659 cm ⁻¹

B. NMR (HNMR) of polymer:
1. Poly acrylic acid and Poly acrylamide prepared using RAFT process run in D2O



AMDAAran run in D2O: Chemical shifts at 1.93 presence of AA fraction

