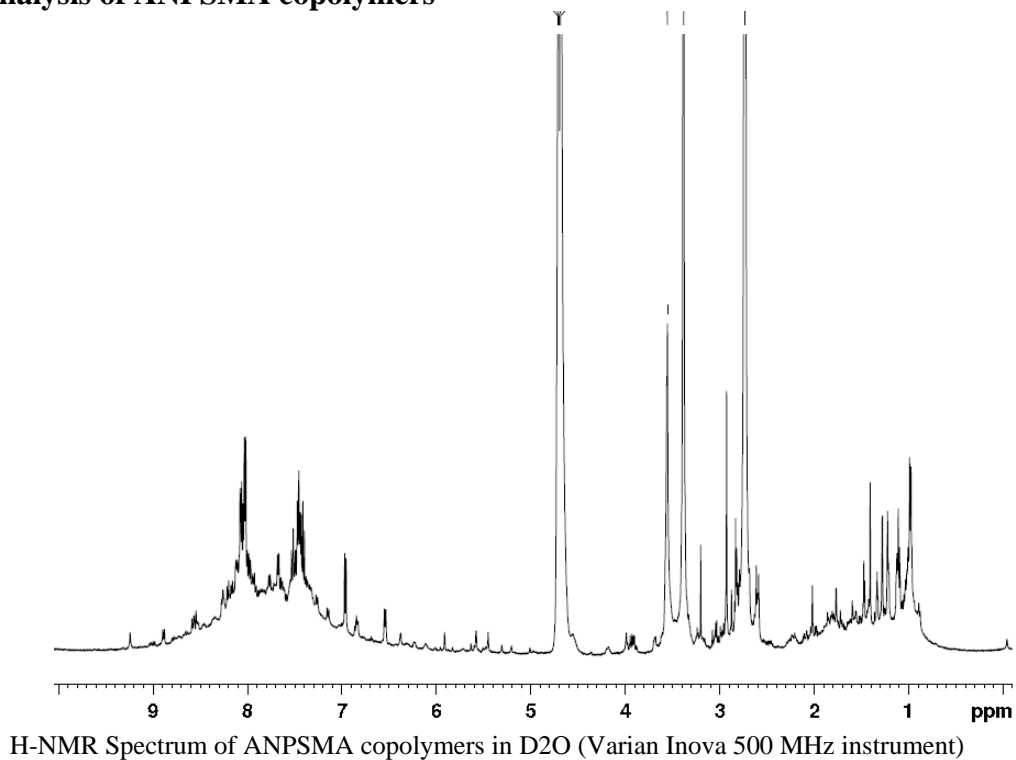


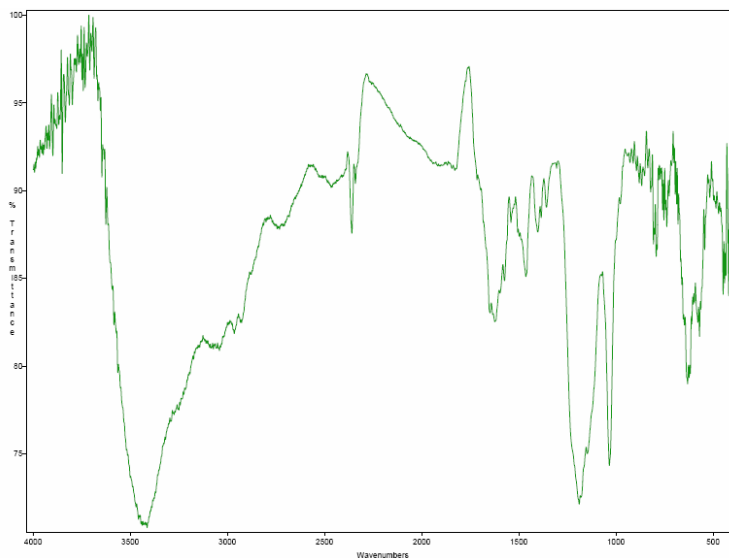
No.AO27 Certificate of Analysis

Product Name: Poly (5-Amino-2-naphthalenesulfonic acid-methacrylate) (IV ~0.15-0.05)
(ANPSMA) (Lot#: 30201JSG)

- **H-NMR analysis of ANPSMA copolymers**



- **FTIR analysis of ANPSMA copolymers**



Analysis Method: Collected from KBR pellet placed in Satellite FTIR
(Thermo-Mattson) and analyzed in transmission mode.

Viscosity in Water

Method: 1g/dL solution of ANPSMA dissolved in distilled water and viscosity tested using a Cannon mini-viscometer (C286) in a 30C water bath. Average of 3 times taken and viscosity compared to literature reported values for pure water at 30C to obtain inherent viscosity.

ANPSMA Inherent Viscosity in water (30C)	0.10 dL/g
--	-----------

- **Structure of ANPSMA copolymers**

