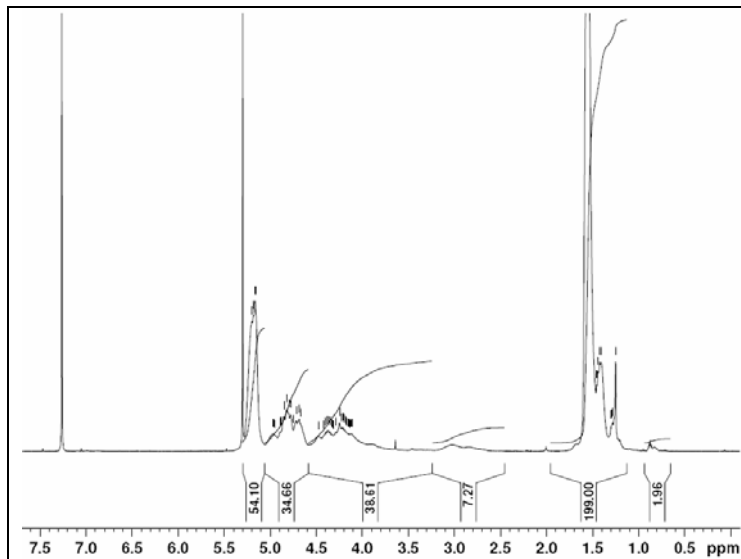


No. AP90

Certificate of Analysis

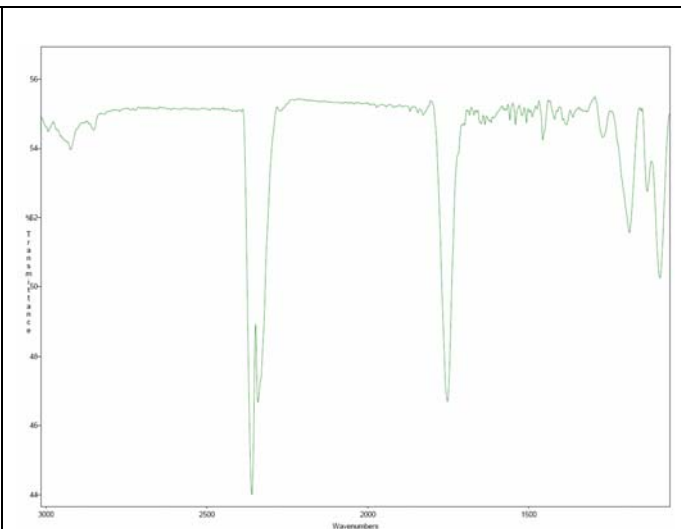
Product Name: Poly(lactic-co-glycolic) acid-citric acid-3-arm- sodium salt endcap (80:20 LA:GA; inherent viscosity- 0.05-0.15 dl/g in DCM) (Lot#: 30607JSG)

H-NMR



H-NMR Spectrum of PLGA copolymers in CDCl₃ (Varian Inova 500 MHz instrument), NMR of PLGA copolymers:
GA/LA = 21%/79%

FTIR



Analysis Method: Collected from cast-film on KBR salt-plate placed in Satellite FTIR (Thermo-Mattson) and analyzed in transmission mode.

- Inherent Viscosity (IV) of Poly(lactic-co-glycolic) acid 3 arm COONa⁺**

Analysis Method: testing performed with a Cannon-Manning Ubbelohde type Semi-Micro calibrated viscometer (size 50 No C286). Sample was 3 x 1.0 ml of 2% w/v Poly(lactic-co-glycolic) acid 3 arm COONa⁺ in DCM tested at 30°C. Each sample IV determined in triplicate. Values shown are mean ± standard deviation (N=3).

Sample	Inherent Viscosity
AP90 – 30°C in dichloromethane	0.09 ± 0.01

- Water solubility- 1% w/v aqueous solution pictured below**



- Structure of PLGA 3 arm copolymers**

