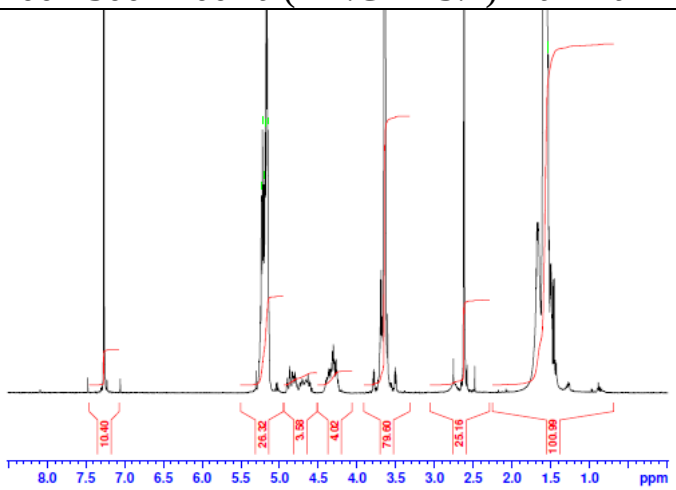
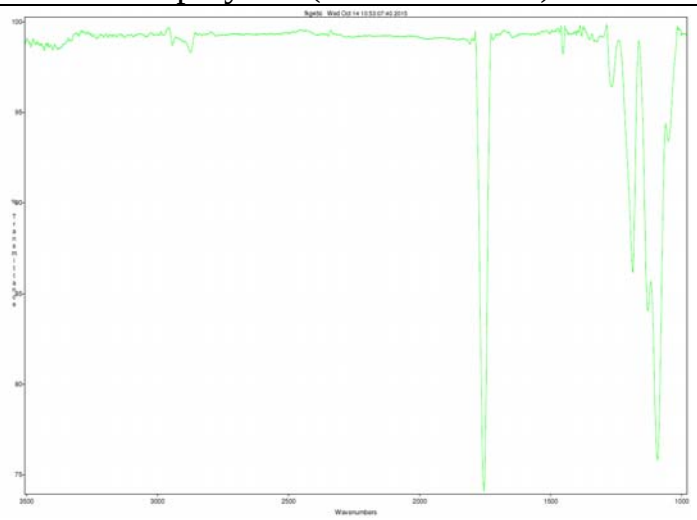
# No. AV026 Certificate of Analysis

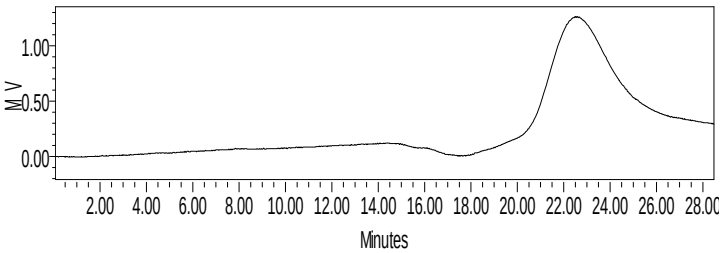
Product Name: Poly(lactide-co-glycolide)-b-Poly(ethylene glycol)-b-Poly(lactide-co-glycolide) (1700-1500-1700Da (LA:GA 15:1) Flamma-Fluor FKG456 copolymer (Lot#: 50930ELH)




H-NMR Spectrum of PLGA-PEG-PLGA-FKR456 copolymers in CDCl3 (Varian Inova 500 MHz instrument), NMR of PLGA-PEG-PLGA-FKR456 copolymers:
EG-LA/GA = 79.6-26.32/3.58 (Mn: 1498-3238/178Da)



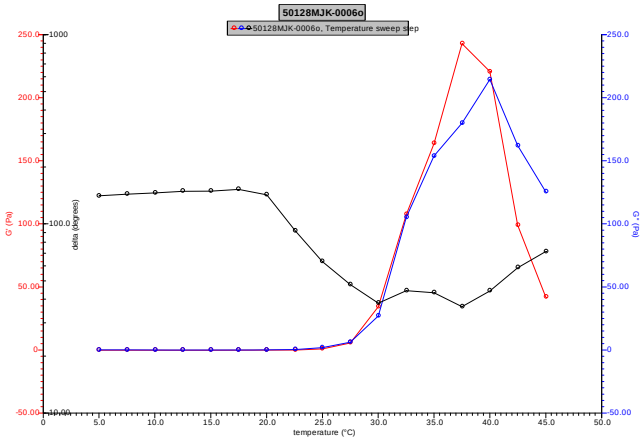
FTIR Analysis: Collected from cast-film on KBR salt-plate placed in Satellite FTIR (Thermo-Mattson) and analyzed in transmission mode.




Analysis Method: Waters Breeze 2 system with 1 ml/min DCM flow across two Phenogel 5µm columns and one PLgel Resipore column (Agilent). Detection via UV/Vis, calibrated against polystyrene standards.

| Polymer | $M_n$ (GPC) | $M_w$ (GPC) | PDI |
|---|---|---|---|
| PLGA-PEG-PLGA-FKR456 | 5784 | 8242 | 1.42 |
| PEG precursor | Mn – Da* (MFG) 1485 | | |

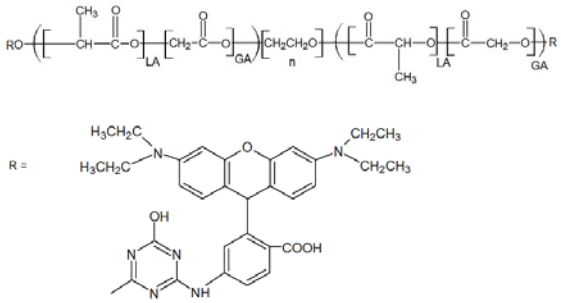
*-MFG data




Rheology performed on AR550 (TA instruments) with 60mm 2degree cone on 20% w/v polymer in water dissolved over 3 dayst with stirring at 4°C. Viscosity of solution at 0.1 ($sec^{-1}$) and 5°C was measured (1minute peak hold 5 second test intervals). Rheology performed by oscillating at constant 6.283 rad/s, 0.1% strain, in increments of 2.5°C ranging from 5-45°C with 3 minutes of temperature equilibration at each point.

| Viscosity 20% w/v solution at 5°C | 0.0394 Pa/s |
|---|---|

- **Structure of PLGA-FKR456 copolymers**

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