Lucidant ELPA 1: high molecular weight polyacrylamide synthesized by inverse emulsion polymerization

In an inverse emulsion polymerization process, acrylamide, in aqueous solution, is emulsified in a continuous oil phase using a water-in-oil emulsifier and polymerized using either an oil-soluble or water-soluble initiator.

Physical Properties of ELPA 1

Molecular weight determined by AFFF-MALLS

M_w (g/mol)	R_z (nm)	PDI
2.7×10^7	310	1.9

Zero-Shear Viscosity of ELPA 1

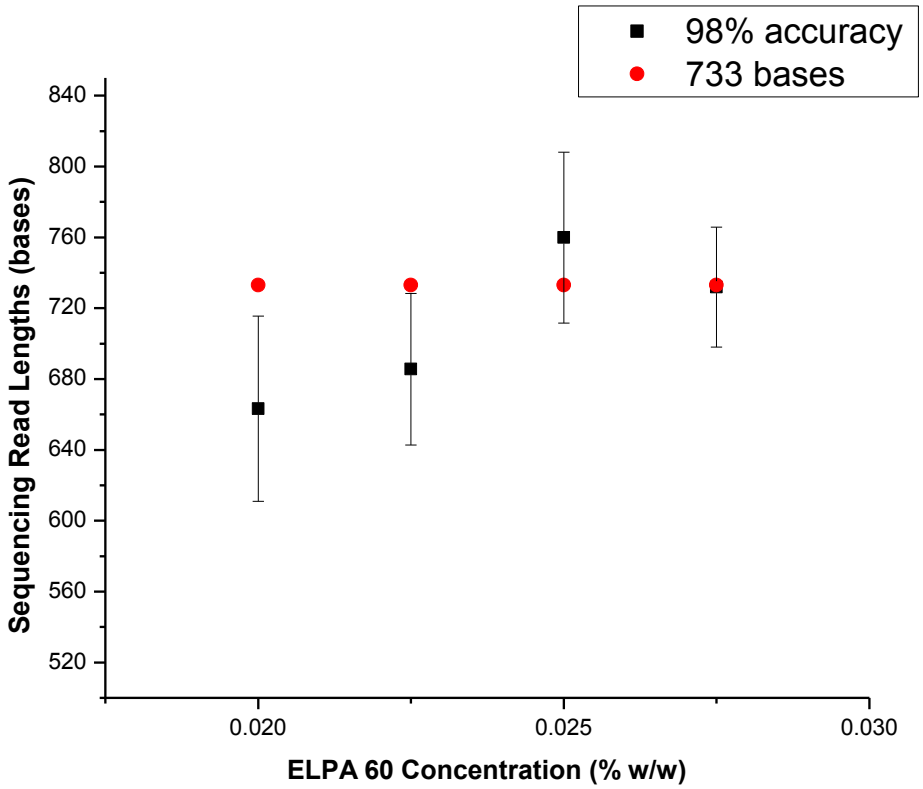
ELPA 60 Conc. (% w/w)	Zero-Shear Viscosity (cP)
2	1,070,000
2.25	1,250,000
2.5	1,950,000
2.75	2,470,000
3	4,160,000
3.5	5,810,000

DNA sequencing separations

Bare capillary arrays coated with Lucidant MCP-1

DNA samples: Size Standard 600 (33 fragments ranging from 60 to 640 bases)
Sequencing Standard

Electrophoresis conditions:
Total Voltage: 4.5 kV
Total Length: 33 cm
Electric Field Strength: 136 V/cm
Detection Length: 30 cm
Buffer: 49 mM Tris, 49 mM TAPS, 2 mM EDTA, 7 M urea
Temperature: 52°C



ELPA 60 Conc. (% w/w)	Average read length (bases)	Standard Deviation	RSD (%)
2	663 (n = 16)	52	7.88
2.25	686 (n = 16)	43	6.24
2.5	760 (n = 16)	48	6.34
2.75	732 (n = 16)	34	4.63