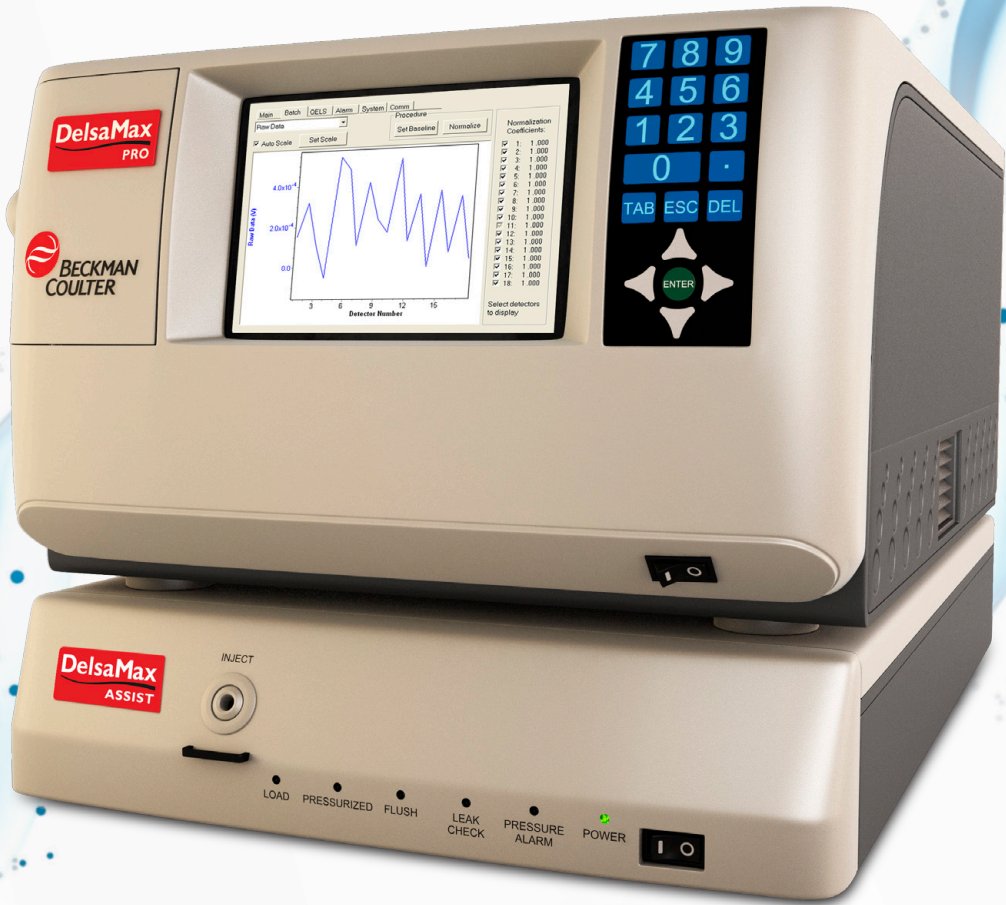## DELSAMAX ANALYSIS SOFTWARE

- Fully customizable autocorrelation analysis, with easy and fast interface, allows users to ignore artifacts.
- Create overlays, custom user variables, reports.

DELSAMAX ANALYSIS SOFTWARE	
General	
System Requirements	32-bit or 64-bit editions of Windows® 7, Windows Vista®, or 32-bit Windows® XP
Processor	Intel® Core™ 2 Duo or higher
Graphics	Able to support Microsoft® DirectX® 9 with 128 MB of graphics memory
RAM	4 GB
Available Disk Space	1 GB
Connectivity	Ethernet or USB 2.0
Installation	Customers will be able to self-install the DelsaMax software
Software Keys	The software will be shipped without any copyright key
Analysis Features	
Size Distribution Analysis Methods for DLS/QELS	Cumulants and regularization
Static Light Scatter Analysis Methods	Molar mass determination
Overlay Statistics	Mean, minimum, maximum, standard deviation
Transition Analysis	Temperature- and concentration-based curves
Transition Fitting	Linear, sigmoidal, onset
Size Distribution Statistic	Radius, diameter, diffusion coefficient, polydispersity, % polydispersity, polydispersity index
Regularization features	Peak labeling, intensity and mass distributions
Cumulative Size Distribution Analysis	Cumulative size distribution and D10, D50, D90; (D90–D10)/D50
Solvent Database	200 of the most common solvents viscosity, refractive index, dielectric constant
Variable Data Filter	Allows removal of outliers from analysis
Data Exporting	Shortcut methods for export of graphs and data to Microsoft® Office compatible formats
Standard Operating Procedures	Allows customizable method development
Calculator Windows	Temperature ramp calculator, optimization calculator, apparent fraction calculator, axial ratio calculator

DelsaMax™ Series
Technical Supplement

Characterized
by ingenuity

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For Beckman Coulter's worldwide office locations and phone numbers, please visit "Contact Us" at **www.beckmancoulter.com**

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DELSAMAX PRO KEY BENEFITS.

- Size and zeta potential measured simultaneously.
- Parallel detection systems (2 independent detectors).
- 31 detector array for zeta potential measurement.
- Ultra-low sample volumes (45 microliter).
- Fast measurement (less than 1 second).
- Operate instrument experiment from instrument.
- Integration with Agilent HPLC equipment.
- Instrument operable via network.
- Optional cell pressurization system for bubble elimination.
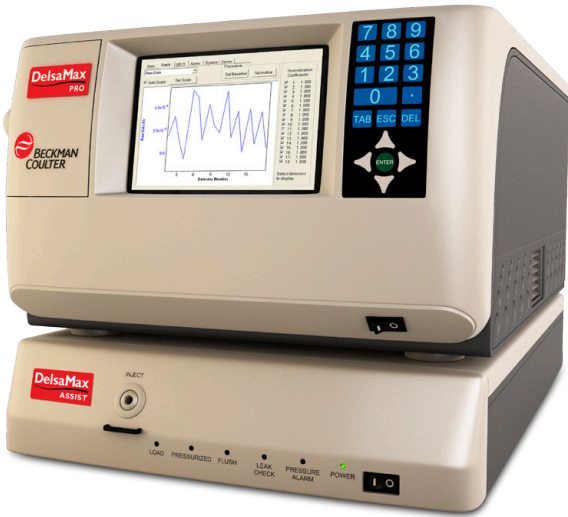
DELSAMAX CORE KEY BENEFITS.

- Static and dynamic light scatter detection.
- 2 parallel independent detection systems.
- 1 microliter minimum sample volume.
- Cuvette-based system.
- Instrument operable via network.
- 15° C to 150° C temperature range.

DELSAMAX PRO

General

Light Source	50 mW diode pumped solid state (DPSS) single-longitudinal-mode laser
Laser Wavelength	532 nm; other wavelengths available upon request
Laser Lifetime	> 10,000 hours
Detectors	31 detector channels for multi-angle detection
Detector Type	Multi-element photodiode array for mobility measurements; Single photon counting module for QELS option
Instrument Options	Embedded Quasi-Elastic Light Scattering (QELS)
Cell Options	Reusable PEEK flow cell with optical quality windows for aqueous and organic solvents; Disposable COC cell for aqueous and polar organic solvents (QELS only)
Temperature Range	4º C to 70º C
Inputs/Outputs	Alarm in, alarm re-transmit, and remote start contact closure
Electrodes	(Replaceable) Platinum-coated electrodes
Signal Processing	Proprietary demodulation algorithm for efficient optical phase detection
Communications	Ethernet interface
Front Panel Display	162.5 mm 16-bit high resolution LCD display with graphical user interface
Power	200 W typical, 400 W maximum
AC Voltage	90–250V @ 50–60 Hz, universal power input
Dimensions	59 cm (L) x 36 cm (W) x 21 cm (H); 23" x 14" x 8"
Weight	19 kg (41 lb)
Autosamplers	Integration through contact closure synchronization; Integrated control of select Agilent autosamplers/pumps

Size Measurement

Size Range	0.2 to 5000 nm, hydrodynamic radius (limited by particle sedimentation)
Molar Mass Range	$< 5 \times 10^7$ g/mol (Da) (dependent on molecular shape model)
Minimum Sample Volume	45 µL
Minimum Measurement Time	1 second

Zeta Measurement

Minimum Sample Volume	170 µL, excluding tubing
Ionic Strength Range	0 to 50 mS/cm (4 times the conductivity of physiological saline)
Mobility Range	No practical limit
Mobility Size Range	1 nm to 15 µm radius (depending on sample)
Mobility Sensitivity	1 mg/mL Lysozyme[†]
Minimum Measurement Time	1 second

DELSAMAX CORE

General

Laser Wavelength	658 nm (785 nm custom)
Laser Power	10 mW to 100 mW (Programmable)
Cuvette Materials	Quartz Cuvette is optional; Disposable COC Polymer Cuvette is standard
Temperature Range	-15° C to 150° C (Quartz Cuvette) / -15° C to 80° C (Disposable)
Dimensions	35.7 cm (L) x 17.5 cm (W) x 59.5 cm (H)
Weight	13.5 kg (29.8 lb)
PC ports	Ethernet connectivity
Optical Fiber	Multi-Mode

Size Measurement

Dynamic Light Scatter Size Range (Radius–nm):	0.2 to 2500
Static Scattering Molecular Weight Range	300 Da to 10^6 Da (concentration dependent)
Minimum Sensitivity	0.1 mg/mL Lysozyme
Scattering Angle	90°
Minimum Sample Volume	1.25 µl standard cuvette; 4µl disposable cuvette
Correlator	512 channels (100 nsec sampling time in a multi-tau layout)
Data Acquisition Time	1 to 3,600 seconds
Minimum Measurement Time	1 second