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TECHNOLOGY GROUP

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along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
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Expert team | Trust guarantee | 100% satisfaction

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Find the *Beckman Coulter DU 640B* at our website: *Click HERE*

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Gel and Film Scanning Accessories.

Semi-Microcells.

Auto 6 Cell Holder.

Single Cell Holder for 50 µL Microcell.

Micro-Auto 12 Cell Holder.

5 µL Capillary Ultra-Microcell.

50 µL Aspiratable Sipper Cell.

100 µL Multi Microcell.

50 µL Microcell.

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POWERFUL APPLICATIONS SOF

Advanced Software for Superior Results

For simple and demanding applications, the DU® Series 600 and 7000 spectrophotometers are the systems of choice.

Kinetic measurements, both quantitative and qualitative analyses, and a variety of other applications are addressed with easy-to-use integrated applications programs.

A state-of-the-art, window-oriented user interface and sophisticated algorithms produce quality results with a click of your mouse.

QUANTITATIVE APPLICATIONS

PROTEIN ANALYSIS — Simple-to-use methods automatically determine the amount of protein in your samples. Just click on preselected parameters for the most common protein analyses:

- *Bradford*
- *Lowry (low & high sensitivity)*
- *Biuret*
- *Colloidal Gold*
- *Bicinchoninate*
- *Direct UV*
- *User Defined*

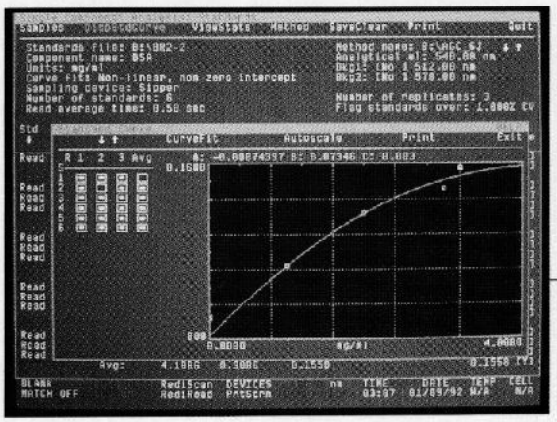
FRACTION READ — Sets of fractions are quickly and easily analyzed with the Fraction Read capabilities. Data are plotted and tabulated as a function of either fraction number or volume. The "*n*th" sample feature conserves sample volumes when you are running automatic batch studies.

GEL QUANTITATION — Automatically determine and report relative gel sample peak areas and individual component concentrations.

NUCLEIC ACID ANALYSIS — To simplify your analysis, the Nucleic Acid program contains preselected parameters for the most common assays.

Generic Mode - Determine the concentration and purity of your nucleic acid samples by selecting parameters suited to your samples, or use coefficients determined by Warburg and Christian.

DNA/RNA/Oligo Quant Mode - Accurately quantify and characterize DNA, RNA and oligonucleotide samples, and check for protein contamination using multiple ratios. The oligo methods determine and report molecular weight, molar absorptivity (extinction coefficient, ε) and concentration. For DNA samples, the theoretical melting point (T_m) can be obtained using the nearest-neighbor interaction model for short oligos to optimize your PCR process.



In single component analysis calibration, standard data parameters and curves may be viewed and edited with instant recalculation. No need to rerun the standards.

The system automatically selects and uses the optimal number of vectors when performing multicomponent analysis. Yet the user can view and override this decision, if desired.

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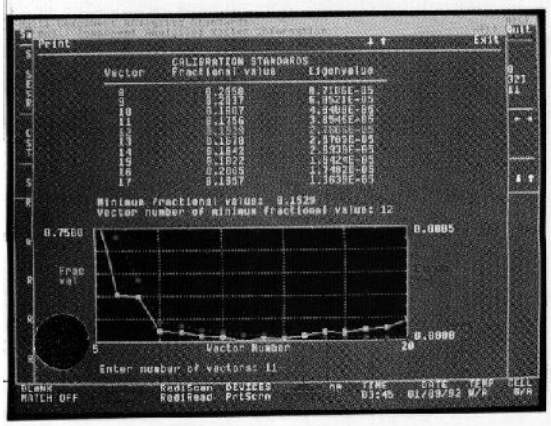
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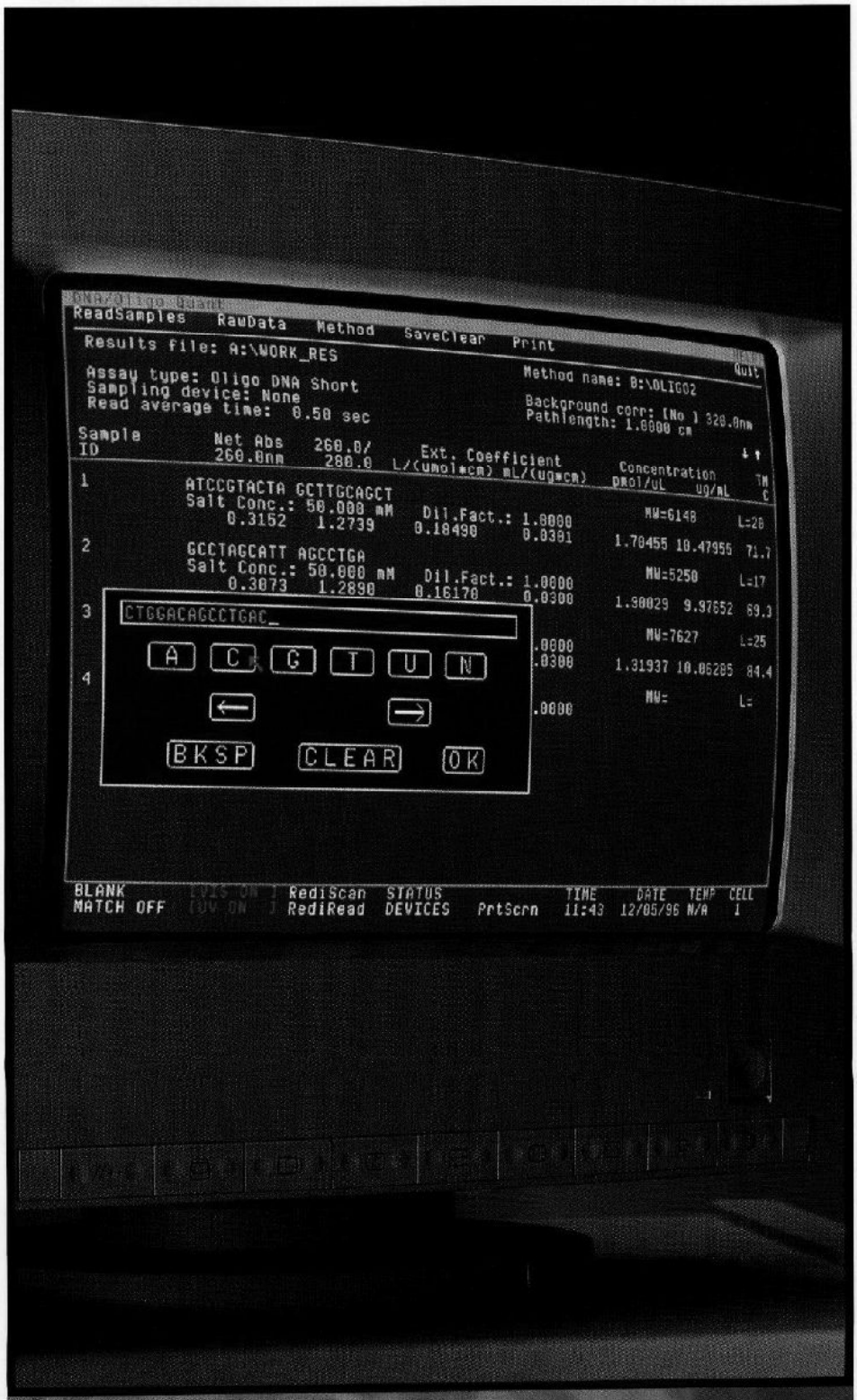
TWARE

Single Component Analysis — To obtain the most accurate analyses, use up to 30 standard values, with up to three replicates for preparation of the standard curve. Then obtain the best linear fit or a quadratic curve for optimal results. Use one or two background wavelengths to correct for turbidity or a sloping baseline.

Multicomponent Analysis — Full Spectrum Quantitation (FSQ™) provides you with an economical, sensitive and non-destructive alternative technique for multicomponent analysis. FSQ is the fastest, most accurate and easiest to use method available to quantitate components in a mixture. Applying Fourier transformation, it is the most advanced and powerful algorithm for multicomponent analysis and is capable of analyzing components of complex mixtures with severe spectrum overlap.

- *Uses the full spectrum of a mixture instead of discrete wavelengths like conventional multicomponent techniques*
- *Recover all of your sample since there is no need to add reagents or contend with separation of components*





Obtain molecular weight, molar absorptivity and concentration based on the sample absorbance and entered base composition or sequence using the Oligo modes.

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POWERFUL APPLICATIONS SOF

QUALITATIVE APPLICATIONS

SELECTABLE WAVELENGTH METHODS — Examine up to 12 wavelengths in either absorbance or transmittance. The sample absorbance readings at each wavelength are directly converted to concentrations by simply entering the appropriate factor(s).

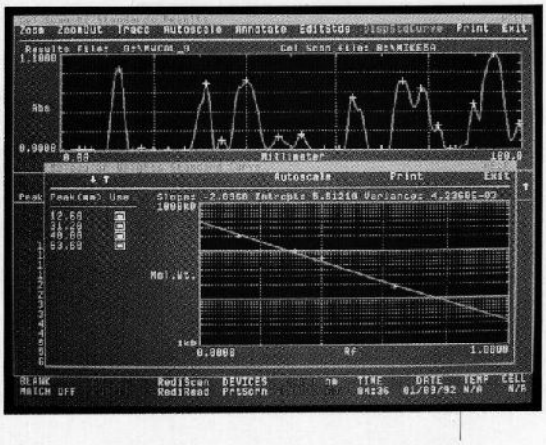
WAVELENGTH SCANNING — Scan your samples quickly and precisely at speeds of up to 2,400 nm/minute with the DU® Series 600 or obtain a scan in just 0.1 second with the DU Series 7000. View spectra on-line or recall up to 12 stored scans under multiple functions such as absorbance, transmittance, logA and 1st through 4th derivatives. Other spectral functions include:

- *Automatic peak and valley pick,*
- *Addition and subtraction,*
- *Multiplication,*
- *Spectral scatter correction,*
- *Net A_2 or net A_3 determinations,*
- *Zoom,*
- *Trace, and*
- *Annotation for customizing plotted data.*

PRIORITY MEASUREMENTS — When you need to read or scan any "priority" sample during a method, just click on RediRead™ or RediScan.™ The current method is interrupted and your samples can be analyzed.

MOLECULAR WEIGHT DETERMINATION — No need for a costly, dedicated gel scan system. For high performance gel and film scanning studies, the gel scan program automatically determines the molecular weights of samples based upon its generation of a standard curve of log molecular weight versus relative migration (R_f) distance.

MICRO T_m ANALYSIS — Determine the DNA melting point (T_m) quickly and accurately for up to six samples per run. The program allows up to three ramp rates. For the T_m calculation select one of three methods: two-point average, first derivative, or nonlinear.



Molecular weight calibration curve is automatically generated by the system from user standards. Curve may be viewed and edited before and after use.

KINETICS APPLICATIONS

TIME-BASED KINETICS — Effortlessly analyze up to 12 rate reactions simultaneously. Data is plotted or tabulated in real time and stored in memory or a file. The absorbance values used to calculate the rate are automatically corrected for any changes in blank(s) and background. An additional automatic correction can be applied to guarantee the match of all cells. The rate of the kinetic reactions is calculated using linear regression for the best-fit straight line.

ENZYME MECHANISM* —Transform data and calculate sample rates automatically by linear regression – or first order math routines. The program instantly calculates the enzyme parameters K_m, V_{max}, k_{cat}, K_i and the Hill Coefficient. With a click of the mouse, the following plots are provided on the screen or printer:

- *Michaelis-Menten*
- *Lineweaver-Burk*
- *Eadie-Hofstee*
- *Hanes-Woolf*
- *Hill Plot*
- *Inhibitor Plots*

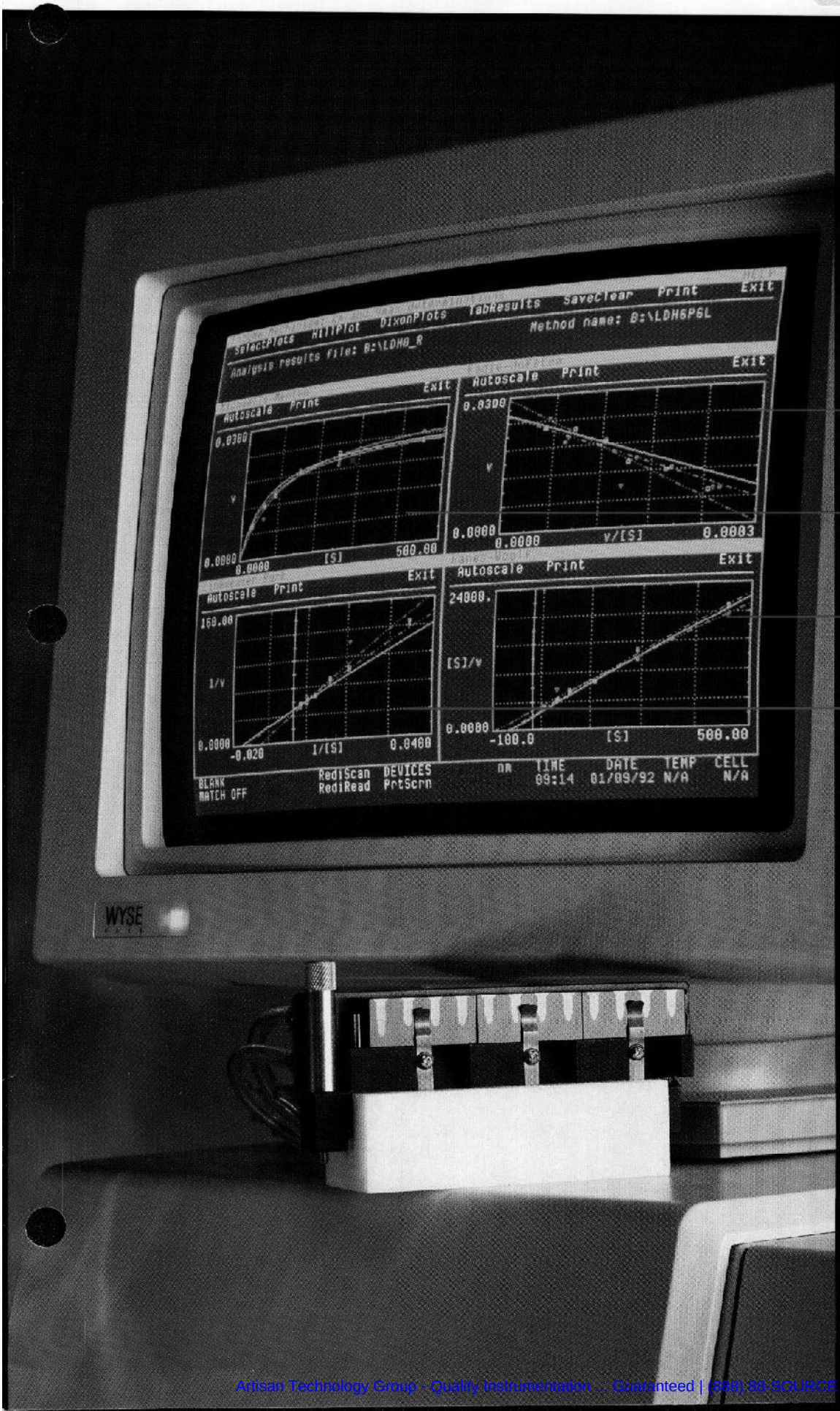
ENZYME ACTIVITY* —This application is ideal for those users who have large numbers of samples and desire to automatically determine the enzyme activity of each using the two-point method.

MULTIWAVELENGTH KINETICS* —This DU Series 7000 program collects full scans for each time point to allow recalculation at different wavelengths. The resulting data may be transferred to the Enzyme Mechanism program for further analysis.

* *These applications are available with the Kinetics Plus program for the DU Series 7000.*

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Eadie-Hofstee Plot.

Michaelis-Menten Plot.

Hanes-Woolf Plot.

Lineweaver-Burk Plot.

Easily identify and confirm competitive, uncompetitive, or non-competitive mechanisms with simultaneous plots.

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TOTAL SYSTEM SUPPORT

Responsive to Your Needs

For over 60 years Beckman has responded to your laboratory instrumentation needs. The DU® Series 600 and 7000 spectrophotometer systems continue this tradition of outstanding support.

The Beckman commitment includes everything you need — expandable systems with innovative sampling accessories and supplies, powerful software, applications and technical support, plus responsive, expert service.

THE BECKMAN Plus SCIENCE SUPPORT SOLUTIONS



The DU Data Capture/Network Software automatically transfers files to a local PC or a network drive without user intervention.

APPLICATIONS PROGRAMMABILITY

Both the DU 650 and 7500 are user-programmable. Simple to use window and menu-based step programming helps you to create methods to meet your specific application requirements.

With the DU 650 and 7500 spectrophotometers, step programs can be modified as needed and run with any other DU Series 600 or 7000 systems.

DATA HANDLING

Enter data using the soft keypad or use the optional keyboard for entry of upper and lower case alphanumeric information. In addition, a bar code reader is available for quick and reliable positive sample identification.

Methods and data can be stored in memory or on the External Storage Device (3.5-inch diskettes) for later recall. The File Utility Mode allows the conversion of data files to ASCII or Lotus 1-2-3 formats.

To automatically archive data on a local PC or a network drive, use the DU Data Capture/Network software. File conversion to ASCII and/or Lotus 1-2-3 formats are performed on the fly.

The systems support Epson and compatible dot-matrix printers, HP DeskJet Series printers, and a number of HP LaserJet printers as well as X-Y plotters with HP-GL language.

COMPLIANCE AND VALIDATION

We make it easy to assure quality results and to help satisfy the needs of regulatory agencies. The DU Series i Package provides comprehensive compliance tools such as:

- *Certificate of Compliance*
- *Installation Qualification (IQ)*
- *Automated Performance Validation*
- *Certification and Training of Operator*
- *Software Validation Documentation*

Ask for Bulletin BR-7944A which details these features and more.

SYSTEM SUPPORT

We provide responsive service, customer training and applications support from a team of knowledgeable and dedicated professionals.

- *Installation by trained service engineers*
- *Comprehensive on-site training*
- *Training manual*
- *Applications support from Beckman scientists*
- *Prompt field service to minimize downtime*

TECHNICAL INFORMATION

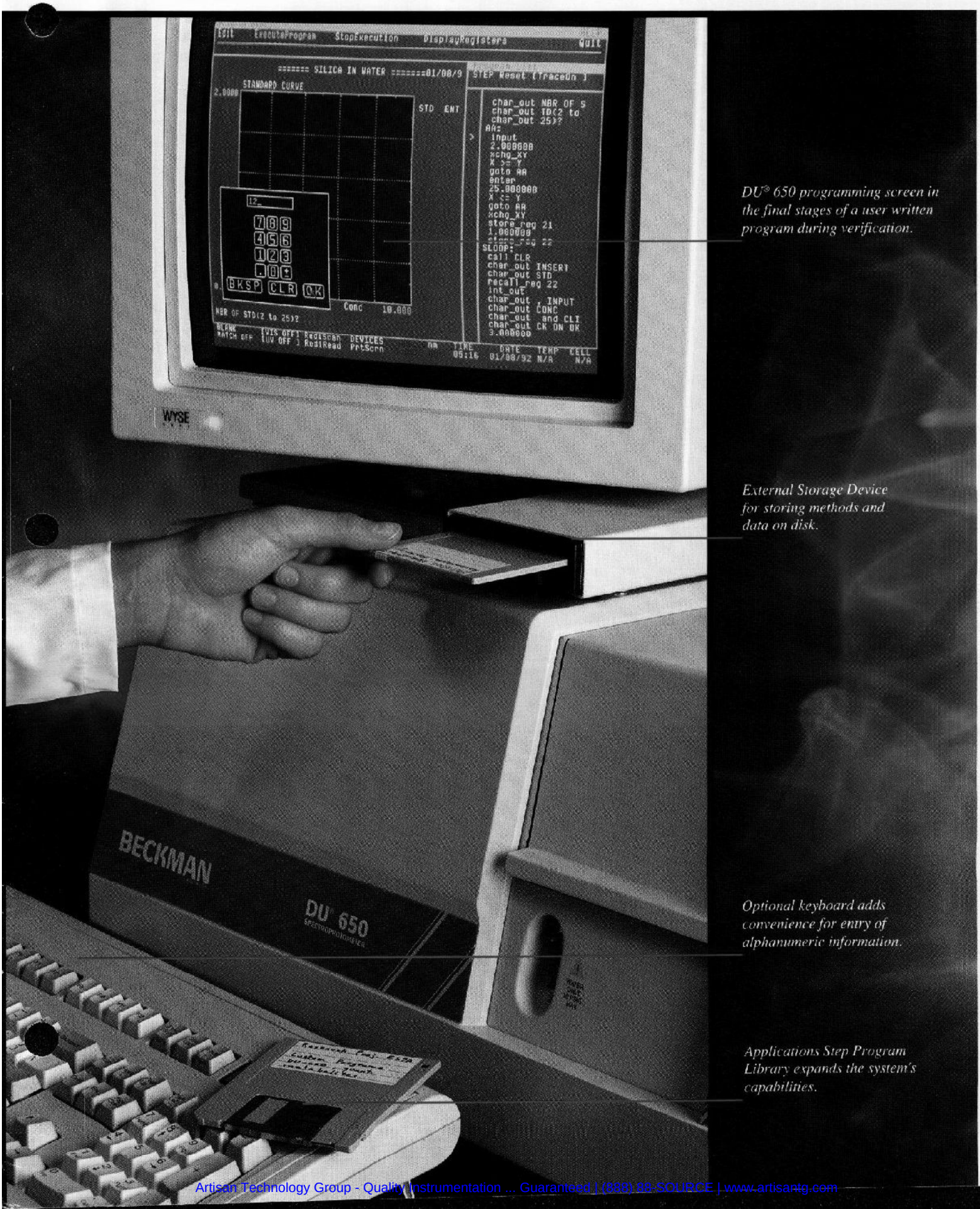
To help you choose the right options and accessories, please request the *DU Series 600 and 7000 Applications & Configurations Guide (BR-8174A).* This Guide details various applications, recommends accessories and describes the software and reporting capabilities.

Visit the Beckman web site at http://www.beckman.com or contact your local representative and ask for the most current technical publications.

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DU® 650 programming screen in the final stages of a user written program during verification.

External Storage Device for storing methods and data on disk.

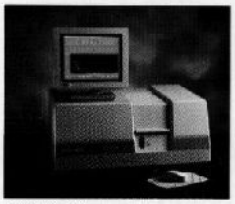
Optional keyboard adds convenience for entry of alphanumeric information.

Applications Step Program Library expands the system's capabilities.

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DU Series 600 and 7000 Specifications


DU 640


DU 650


DU 7400


DU 7500

Performance Specifications

	DU® Series 600	DU Series 7000
Wavelength Range	190 to 1100 nm	190 to 800 nm
Wavelength Setability	0.1 nm increments	1.0 nm increments
Wavelength Accuracy	± 0.2 nm (at D_2 peak 656.1 nm)	± 1.25 nm (at D_2 peak 656.1 nm)
Wavelength Repeatability	± 0.1 nm (at D_2 peak 656.1 nm)	± 0.05 nm (at D_2 peak 656.1 nm)
Spectral Bandwidth	≤ 1.8 nm	2 nm
Photometric Readout	- 0.300 to 3.000 A or 0.0 to 200.0 %T	- 0.300 to 3.000 A or 0.0 to 200.0 %T
Photometric Accuracy	± 0.005 A (at 1 A with NIST 930D solid filter at 546 nm)	± 0.005 A (at 1 A with NIST 930D solid filter at 546 nm)
RMS Noise	< 0.0002 A RMS (0A, average readings at 500 nm)	< 0.0002 A RMS (0A, average readings at 340 nm)
Stray Light	< 0.05% T (using NaI at 220 nm per ASTM E387-84)	< 0.1% T (using NaI at 220 nm per ASTM E387-84)
Stability	< 0.003 A/hr (at 340 nm after 1 hr warmup)	< 0.002 A/hr (at 340 nm after 1 hr warmup)
RMS Baseline Flatness	± 0.001 A (from 220 to 800 nm, at 0A)	± 0.001 A (from 220 to 800 nm, at 0A)
Scanning Speeds	120, 240, 600, 1200, 2400 nm/minute	0.1 second (full scan)
Data Collection Rate	20 samplings/second	20 samplings/second
CRT	VGA	VGA

Physical and Environmental Specifications

	DU Series 600	DU Series 7000
Width	69 cm (27 in)	79 cm (31 in)
Height	61 cm (24 in)	56 cm (22 in)
Depth	53 cm (21 in)	50 cm (20 in)
Weight	37 kg (81 lbs)	44 kg (97 lbs)
Line Voltage	100/120V ± 10% or 220/240V ± 10%	100/120V ± 10% or 220/240V ± 10%
Frequency	50/60 Hz	50/60 Hz
Power	200 watts typical	200 watts typical
Temperature Operating Range	+15°C to 40°C (59°F to 104°F)	+15°C to 40°C (59°F to 104°F)
Humidity	< 85% maximum relative humidity, not to exceed 32.5°C WBT	< 85% maximum relative humidity, not to exceed 32.5°C WBT

THE BECKMAN Plus SCIENCE SUPPORT SOLUTIONS

BECKMAN

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Gold-standard solutions

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We buy equipment

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