

# Gel-Pro<sup>®</sup> Analyzer

*version 3.1*

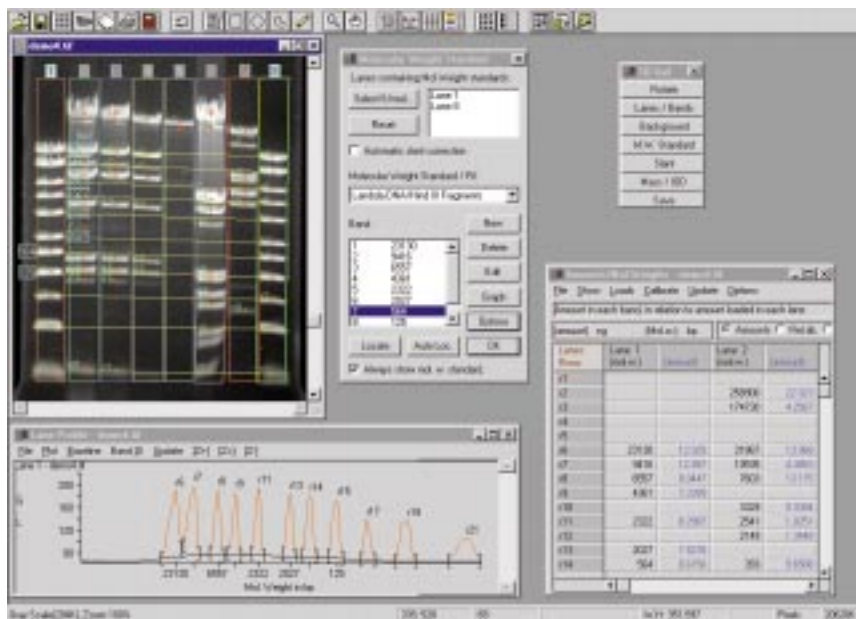
Imaging Solutions  
that are Fast, Accurate  
and Easy to Use  
from the Leader in  
Image Analysis...

 MEDIA  
CYBERNETICS<sup>®</sup>  
The Imaging Experts<sup>™</sup>

# Gel-Pro<sup>®</sup> ANALYZER

The Proven Solution™

# version 3.1



- ▶ Accumulate, average, preview, limit saturation and otherwise control image acquisition.
- ▶ Extensive file import/export capability.
- ▶ Batch conversion utility imports multiple images and translates them from other file formats.

## Organize... Document...

### ORGANIZE AND TRACK EXPERIMENTS WITH A DATABASE

- ▶ Display thumbnail (or larger) representations of multiple images simultaneously to aid your search, regardless of image format or location.
- ▶ Point and click on one or more images to select, copy, move, rename or delete image files.
- ▶ Search by experiment title, experiment type, experimenter's name, date, time, file name, comments and many other defining characteristics.
- ▶ Recall the image and associated information, such as the steps and settings required to detect bands, molecular weight and amount determination, and background correction.

## Computerize...

Gel-Pro Analyzer Software is a complete 1-D analysis package for IBM-compatible PCs. Gel-Pro acquires and analyzes data from gel documentation system cameras, scanners, or reads stored image files and operates as a stand-alone analysis tool.

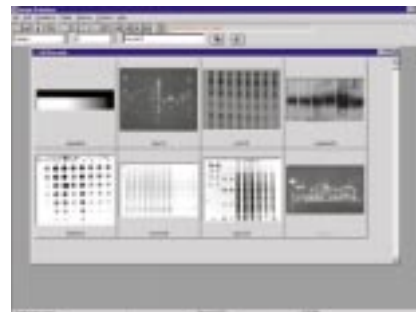
- ▶ Transfer camera images directly to your PC in digital form.
- ▶ Analyze images from Twain-compatible desktop scanners, other camera systems or digital imagers.
- ▶ Use the speed and power of a 32-bit application under Windows 95, 98 or NT operating environments.
- ▶ Customize analyses specifically for your lab with built-in macro programming and via Visual basic extensions.
- ▶ Annotate and identify input. *Improved!*

- ▶ Store images and annotations in a graphic database. *Improved!*
- ▶ Recognize lanes, bands and background automatically. *Improved!*
- ▶ Correct gel smiling. *Improved!*
- ▶ Determine molecular weights, size, isoelectric points with multiple standard lanes. *Improved!*
- ▶ Report data in tabular and graphic formats.
- ▶ Export data to Excel and other Windows applications automatically.
- ▶ Transfer information via Internet FTP and e-mail from within the software. *New!*
- ▶ Interpret data from regular and irregular dot blot arrays. *Improved!*

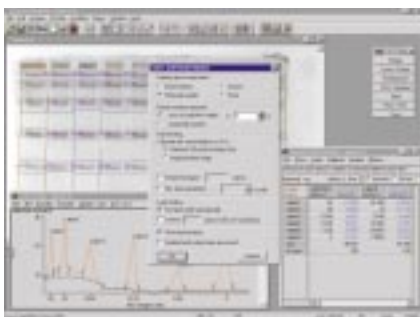
## Acquire...Archive...

### ACQUIRE AND WORK WITH A VARIETY OF IMAGE FILE TYPES

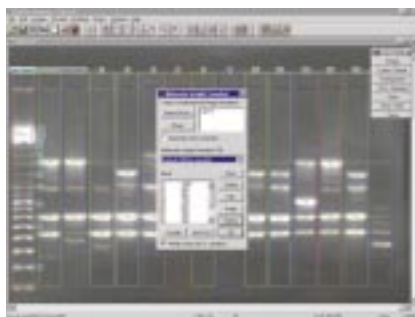
- ▶ Use any of the vast array of sophisticated camera and scanner acquisition drivers developed by Media Cybernetics.



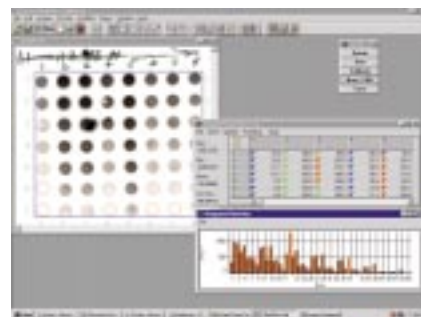
Gallery View of Experiment Database



Analysis and Documentation Options



Molecular Weight Standard Assignment



Dot Blot Table and Graph

## TOOLS FOR PRESENTATION

Document the important features of your experiment for future reference and communication to others.

Add text comments anywhere on the image in various fonts and sizes.

- ▶ Draw lines, arrows, boxes, or circles to emphasize important features. *Improved!*
- ▶ Name lanes on the image by sample, preparation or conditions — the names also appear as data table column headings. Band names appear as row headings.
- ▶ Control zoom, contrast, brightness, gamma correction, false color assignment and more.
- ▶ Automatically adjust for optimal contrast/brightness display with one button.

## Analyze...Interpret...

### LANE DEFINITION, PROFILE AND TABULAR RESULTS

Gel-Pro Analyzer Software was designed to minimize the time you spend finding lanes, bands and establishing background levels. This lets you maximize your time for experiment interpretation. The lanes and bands can be found automatically and the area in each band presented in a table — all at one stroke. You can even have a size standard in one or two lanes recognized automatically for calculation and tabulation of base pairs, molecular weight or pI. Each gel image is considered an experiment that has an associated procedure. By choosing one of the provided procedures, or one of your own creation, the appropriate menus, units and standards are automatically loaded.

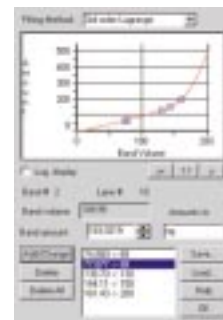
## DETERMINE MOLECULAR SIZES

- ▶ Determine molecular lengths, molecular weights or pIs quickly. Click on the lane with the standards and the software matches bands to the standard values automatically.
- ▶ Use built-in standard size lists for DNA, RNA or protein molecular weight standards.
- ▶ Create your own custom list of standards.
- ▶ Use multiple standard lanes with automatic slant adjustment. *New!*
- ▶ Arrange band information in rows of equal mobility for convenience in making inter-lane comparisons.

For convenience in making inter-lane comparisons, band information can be arranged in rows of equal mobility.

## HANDLE THOSE PROBLEM GELS

- ▶ Use curved lane tracking, slant adjustment, and smile correction across the width of the gel. *Improved!*
- ▶ Background settings can be individualized for each lane.
- ▶ Simple click and drag operations adjust band integration areas.
- ▶ Field correction deals with uneven illumination and assures that band intensities can be compared accurately across the full width of a gel.



Amount Calibration Curve

## Quantitate...

### QUANTITATE IN RELATIVE OR ABSOLUTE AMOUNTS

- ▶ Automatically calculate the mass in each band in the lane.
- ▶ Select as a standard a single lane, a single band or an internal standard band across all lanes.
- ▶ Use multiple standard bands (even from multiple lanes) in your gel to construct a calibration curve.
- ▶ Select Lagrange or polynomial curves up to third order for data fitting.
- ▶ Calibrate absorbance reproducibly with optical density step tablets.

### DOT/BLOT ANALYSIS

Slot and dot blots, within a regular array or positioned individually, can be analyzed quantitatively with the same powerful routines.

- ▶ Find spots automatically. *New!*
- ▶ Create a quantitative calibration curve.
- ▶ Display data in two tabular or graphical formats. *New!*
- ▶ Evaluate statistical data.

- ▶ Group cells into blocks with a template with automatic averaging and analysis within the blocks. *New!*
- ▶ Show results quickly with color-coded flags. *New!*

## Automate...

### AUTOMATE ROUTINE ANALYSIS SO YOU CAN CONCENTRATE ON MOLECULAR BIOLOGY

Do all of the following automatically in a single step!

- ▶ Find lanes (even curved lanes). *Improved!*
- ▶ Find bands. *Improved!*
- ▶ Remove background.
- ▶ Calculate band areas.
- ▶ Produce a band information table.
- ▶ Generate reports of the information, including graphics and tables. *New!*

Built-in macro programming is as simple as recording keystrokes for later automatic execution. Or go to a deeper level for sophisticated custom solutions tailored for your lab's specific requirements. Use the macro programming language, link to other applications automatically (such as Excel), or build Visual basic extensions.



*Information Display, Output & Export (including DDE)*

### TAKE ADVANTAGE OF THE WINDOWS ENVIRONMENT

Gel-Pro Analyzer Software takes full advantage of the Windows operating environment.

- ▶ Choose the printer(s) to meet your needs — from full color to 256 gray level Postscript.
- ▶ Copy and paste both text and images. You can create composite gel images from multiple sources and analyze the lanes and bands as a single experiment.
- ▶ Information in tables and lane profile graphs can be copied to the clipboard and pasted into other Windows applications for reporting and publication.
- ▶ Use Dynamic Data Exchange (DDE) to transfer your data quickly into Excel spreadsheets.

This convenient feature allows you to use Excel's capabilities for analysis, database and graphing for special analysis and reporting requirements.

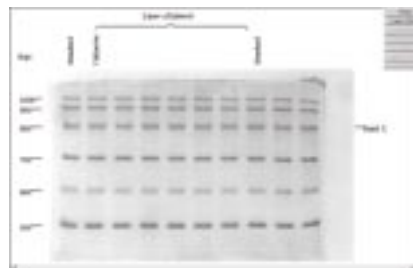
## Report... Publish...

All graphic and data presentation tables may be printed or exported to other applications. A flexible data table reports the results in the units you choose — Rf, molecular weight, mass amount, integrated optical area or peak height.

The Report Generator is a mini-desktop publishing utility that lets the user build templates and create custom reports with all images and data analysis automatically embedded. *New!*



*Custom Macro Publication Report*



*Automatic Publication Quality Reports*

**MEDIA  
CYBERNETICS®**  
The Imaging Experts™

8484 Georgia Avenue  
Silver Spring, MD 20910 USA

*North America*

+1.301.495.3305; Fax +1.301.495.5964

*Europe*

+31.715.730.639; Fax +31.715.730.640

*Asia Pacific*

+65.245.4965; Fax +65.245.4967

*Latin America*

+55.11.49.906.386 (Telephone & Fax)

email: [info@mediacy.com](mailto:info@mediacy.com)

<http://www.mediacy.com>

©1999 Media Cybernetics. All trademarks and registered trademarks are property of their respective owners.

**Image-Pro®**  
**PLUS**  
The Proven Solution™