



Imaging and Analysis Software

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Imaging and Analysis Software Overview

See Also

Imaging systems:
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Bio-Plex Manager
software:
page 302.
Microplate Manager
software: page 331.

Bio-Rad offers stand-alone software across a range of laboratory needs for image acquisition, image and data analysis, and data management. Software for 1-D and 2-D image analysis includes advanced tools to obtain the best image data possible. Built-in quick guides and software wizards enable you to optimize images and generate printed copies quickly and easily. Advanced software tools for pattern recognition and trend analysis utilize image and other data for optimal results. Image acquisition software runs in a Windows or Macintosh environment and has easy-to-use graphical interfaces with standard dropdown menus, toolbars, and keyboard commands. File formats and menu commands are shared across programs, allowing easy switching between applications.

For information on instrument specific software, refer to the appropriate instrument section of this catalog.

For More Information

Web: bio-rad.com/imageanalysisSW

Request or download bulletin: 6126

Software Application Guide

	Gel Analysis	
	Image Lab™, page 293	PDQuest™, page 294
Image acquisition	•	—
Automated analysis	•	•
Automated imaging and analysis	•	—
1-D gel analysis	•	—
Dot/slot blot analysis	•	—
2-D gel analysis	—	•
Image stacking*	—	•
Integrated gel excision (spot cutting)	—	•
U.S. FDA 21 CFR Part 11 compliance tools	•	•

* Image stacking is available in PDQuest Advanced software only.

Gel Imaging and Analysis Software System Minimum Requirements

Component	Image Lab 5.2	PDQuest
Operating system	Windows 7 (32- and 64-bit)/Windows 8 (64-bit), Mac OS X 10.9 Note: GS-900 is not compatible with Mac	Win XP Pro SP3 Win 7 (32-bit) Mac OS X 10.4, 10.5
Processor	Intel Core i3 or equivalent	Intel 2.0 GHz; Pentium 4, dual core or better (Windows) Power PC (Mac)
Hard disk space	60 GB	Minimum >20 GB; recommend ≥100 GB
System memory (RAM)	4 GB	Minimum 1 GB; recommend ≥2 GB
Screen resolution	1280 x 1024 or higher; 128 MB video RAM	1280 x 1024 or higher; 128 MB video RAM
USB port	1 free USB 2.0 port	1 free USB 2.0 port

Gel Analysis Software

Image Lab™ Software

Image Lab image acquisition and analysis software runs the Gel Doc™ EZ, Gel Doc XR+, ChemiDoc™ XRS+, ChemiDoc Touch, and ChemiDoc MP imaging systems as well as the GS-900™ calibrated densitometer. After the sample is loaded, an automated wizard helps capture an optimized gel or blot image, analyzes the gel or blot, and produces a comprehensive report in seconds. Image Lab software includes tutorials and requires no previous imaging experience to produce optimum gel and blot images. U.S. FDA 21 CFR Part 11 compliance is available with Image Lab Security Edition software.

Automated Workflow

- Executes preprogrammed and user-created protocols to perform from image capture, analysis, and printed reports with a single click of the mouse
- Simplifies and optimizes imaging and analysis to save time
- Ensures that workflows are reproducible

System Optimization at Setup

- Selects the optimum detection conditions for the sample stain, label, or light-emitting reaction
- Uses proprietary algorithms to calibrate the system for automatic focus at any zoom level and automatic correction of imaging artifacts
- Performs flat fielding corrections specifically and consistently for every application
- Generates accurate data and publication-quality images

Automated or Manual Data Analysis

- Automatically performs all the image analysis steps; can be user-modified for more precise band detection, control of background level, and lane selection
- Results table is instantly updated when experimental parameters are changed
- Offers optional manual image analysis adjustments by the user in every step



Data analysis and reporting.

- Displays MW (or base pair) values and presents a quantitative comparison to evaluate sample purity and identify sample components for all bands and lanes

Customized Data Tables, Reports, and Visuals

- Generates a customized data table with all sample information organized lane by lane and band by band each time a data analysis is performed or modified
- Copies any part of a data table to popular document processing applications such as Adobe Acrobat, Microsoft Word, or Microsoft Excel
- Saves reports within customized protocols designed by the user
- Provides multiple tools for displaying, viewing, and annotating images. Provides various file formats for exporting images for publications and presentations.

For More Information

Web: bio-rad.com/imagelabsoftware

Ordering Information

Catalog #	Description
1709690	Image Lab Software , compatible with PC or Mac, for automated image capture, optimization, and 1-D gel or blot analysis, for use with Gel Doc EZ, Gel Doc XR+, ChemiDoc XRS+, ChemiDoc Touch, ChemiDoc MP, and GS-900 systems
1709691	Image Lab Software , Security Edition for 21 CFR Part 11 compliance, 1 license
1709692	Image Lab Software , Security Edition for 21 CFR Part 11 compliance, 5 licenses
1709693	Image Lab Software , Security Edition for 21 CFR Part 11 compliance, 10 licenses

See Also

2-D electrophoresis:
page 202.

PROTEAN i12 IEF
system:
page 202.

Second-dimension
electrophoresis
systems:
pages 151, 202.

2-D buffers and
reagents:
page 208.

PDQuest™ 2-D Analysis Software, Version 8.0

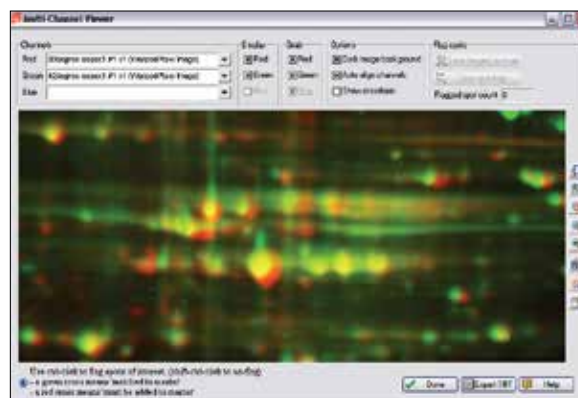
PDQuest software offers comprehensive and flexible 2-D gel analysis. Choose PDQuest Basic software for simple 2-D gel analysis or PDQuest Advanced software for comprehensive functionality used in 2-D gel-based expression proteomics studies. Whether you choose the basic or advanced version, the sophisticated analysis tools reveal subtle differences among 2-D gels. Powerful auto-matching algorithms quickly and accurately match gels with little or no manual intervention.

Ease of Use

- User-friendly, application-directed user interface
- Quick guides and wizards simplify the workflow through the major applications of the software, from image acquisition to output of analyzed data and spot cutting
- Onscreen, context-sensitive help
- Right-click menus for quick access to common commands
- True multiplatform files for PC and Mac
- TIFF file import; TIFF and JPEG file export

Image Optimization and Visualization

- Adjustment of brightness, contrast, and image filtering
- Full incremental image rotation
- Color palette for realistic color representation
- Multichannel merging of up to 3 images in independent color channels — allows convenient viewing of merged data
- Viewing function for 3-D modeling of any user-defined area of the gel (gel analysis software)
- Compatible with Win 7 32-bit and Win XP Pro SP3 operating systems



Experiment wizards and image warping enable easy identification of differentially expressed proteins from 2-D gels.

Advanced Data Analysis

- Wide variety of statistical tools
- Comparative analysis
- Biological relationship models
- Comprehensive reports

Automation

- Repeatable analysis for samples of similar types
- Recallable templates
- Batch processing of multiple experiments

Information Repository

- Flexible annotation features
- Any type of characterizing data can be linked to each spot on a master gel image
- Easy to view and share information associated with identified proteins

Data Security

- Compliance with U.S. FDA 21 CFR Part 11 regulations
- Options for network licenses

For More Information

Web: bio-rad.com/pdquest
Request or download bulletin: 3121

Ordering Information

Catalog #	Description
1709630	PDQuest Advanced 2-D Analysis Software
1709631	PDQuest Advanced 1-User Network License
1709632	PDQuest Advanced 2-User Network License
1709633	PDQuest Advanced 3-User Network License
1709635	PDQuest Advanced 5-User Network License
1709636	PDQuest Advanced 10-User Network License
1709640	PDQuest Basic to Advanced Software Version Upgrade
1709645	PDQuest Advanced CFR Module
1709620	PDQuest Basic 2-D Analysis Software
1709660	PDQuest Basic Software Version Upgrade, 7.x-8.0
1709670	PDQuest Advanced Software Version Upgrade, 7.x-8.0

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