# IASLab™

Image Analysis System Laboratory

IASLab is an advanced software product for objective, automated evaluation of image quality. Bundled with the PIAS®-II, Scanner IAS® and other QEA image quality analysis tools, IASLab is also available as a standalone software package. IASLab offers a comprehensive toolkit for measuring dots, lines, large areas, NPS, and many other salient image quality features. The software can be used in interactive mode to analyze a particular image element or in automated mode for sequential or repetitive analyses. Automated scan results are stored in an Access database for convenient analysis and reporting.

Easy PQ measurements from 1 to 1,000,000

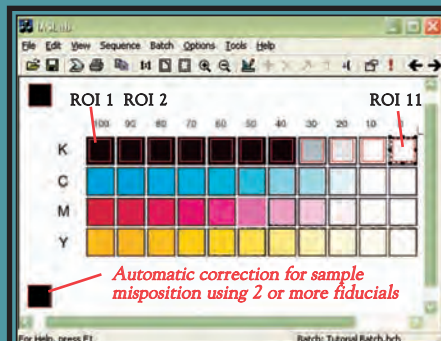**1** Have a few quick measurements to make? Use **Interactive Mode**

2) Click on the desired analysis tool button
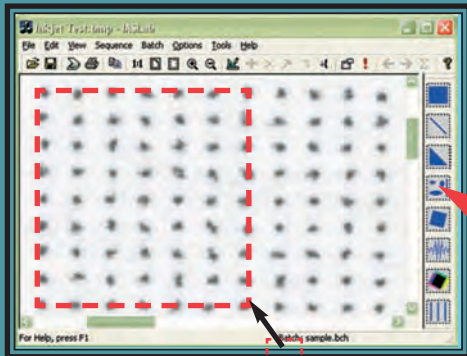
1) Drag an ROI (region of interest)
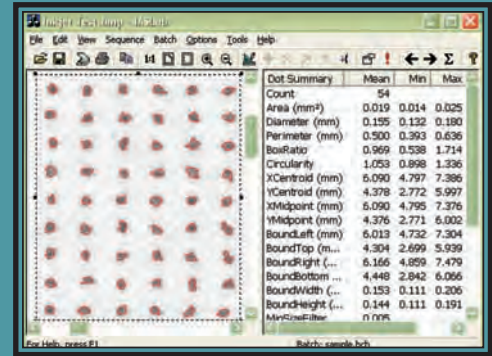
3) View instantaneous results on screen

>1,000,000 Have a lot of measurements to make? Use **Automated Mode**

Automatic correction for sample misposition using 2 or more fiducials

1) Load the documents into a scanner with ADF

2) Run an automated sequence that measures as many ROIs as you want
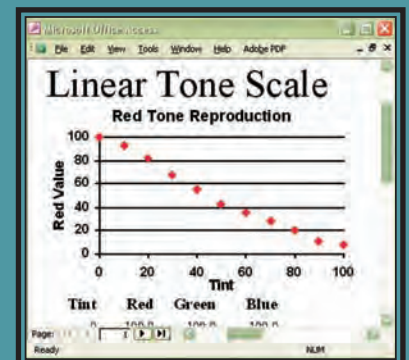
3) Report results from Access or export to Excel or other software

THE TOOLS

Basic

Dot Tool
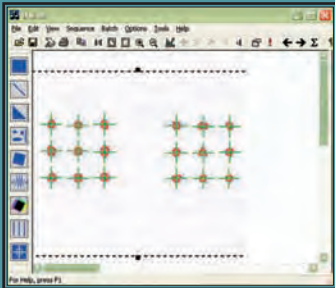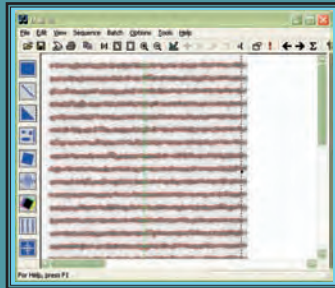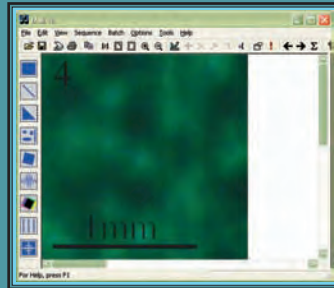Diameter, position, shape...

Line Tool
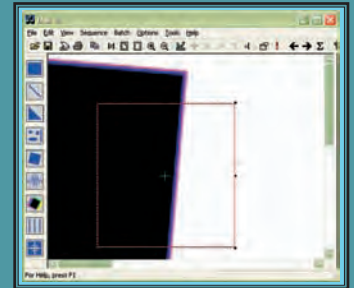Width, raggedness, spacing...
ISO13660

Area Tool
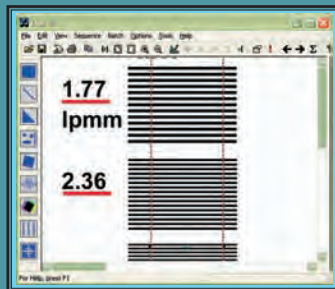Density, mottle, graininess...
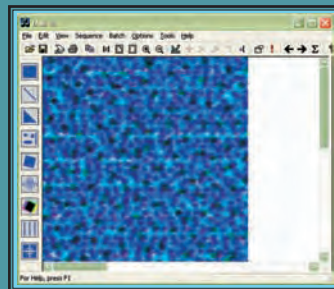ISO13660

Color Registration
Alignment of colors...

Advanced

OCR Tool
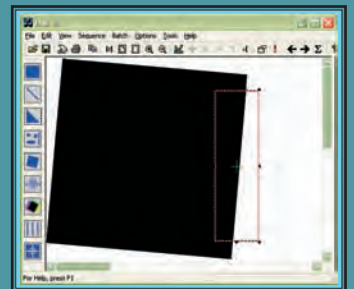Can be used for sample ID...

NPS Tool
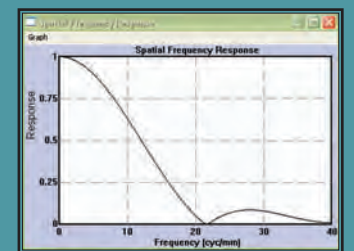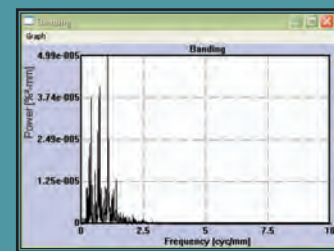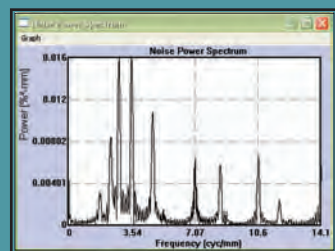Noise power spectrum...

Banding Tool
Including VTF analysis...

SFR Tool
Spatial frequency response...

WHY DO PQ MEASUREMENTS?

PQ measurements are essential during development, manufacturing, and marketing of printing systems. These measurements determine whether the printer and components are working as expected.

Examples
1) An inkjet head manufacturer measures a pattern of dots and lines to see if the print head is working properly.
2) An inkjet ink or media manufacturer measures blocks of colors and colored lines to check for mottle and bleed.
3) A laser printer manufacturer measures patterns of lines to check laser scanner and paper feeder performance.

We invite you to contact QEA's application engineers to discuss your PQ measurement needs.
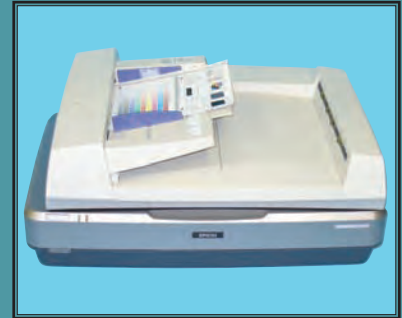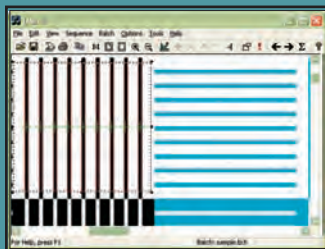
THE PROCESS
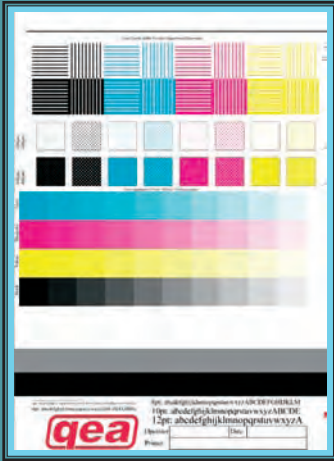
1) Select an appropriate test target for the problem of interest

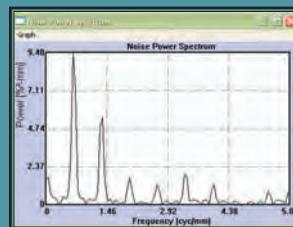2) Print the target using the printer, cartridge, ink, and / or media to be analyzed

3) Digitize the printed sample using a scanner or digital microscope

4) Analyze automatically in IASLab

5) Review results on screen and...

6) in Access for further data analysis and report generation

System Specifications**

Description
- Advanced software product for objective, automated evaluation of image quality

Image Sources
- TWAIN-compliant scanner (for scanner-based option)
- DirectX-compliant camera (for camera-based option)
- Stored file (BMP, JPEG, PDF (option), and many more)
- QEA's IAS®-1000 automated PQ measurement system
- QEA's PIAS®-II portable PQ measurement system

Analysis Tools
- Dot and halftone
- Line and edge quality analysis
- Area attribute measurement
- Noise Power Spectrum (NPS)
- Banding analysis
- Spatial Frequency Response (SFR)
- Color registration
- Colorant coverage (option)
- OCR, Optical Character Recognition (option)
- Plug-in SDK for new tools and functions (option)

Operating Modes
- Interactive mode: interactively analyzes a single ROI (region of interest).
- Sequence (automated) mode: automatically analyzes multiple ROIs using a pre-defined sequence. The software's Design Mode allows easy creation of sequences for any test target.
- Batch (automated) mode: analyzes a batch of images in automated mode. Analyses can be performed on saved image files or on images captured by an input device (such as a scanner or camera) under software control. Analysis results are displayed instantly. Data is entered in an Access database and can be exported to Excel or other applications.

Reporting
- Comprehensive results appear instantaneously
- Summary results are user-customizable
- Automated mode sends data to an Access database or text file; output data is user-selectable
- Data tables can be copied from IASLab or Access to Excel or other applications

- Graphical overlays are generated for contour boundaries
- Graphs are generated for many analyses – banding, SFR, NPS, etc.
- Images can be saved, with or without graphical overlays

Applicable Standards
- ISO-13660 PQ standard for line and area results
- ISO-12233 for SFR analysis

Productivity Tools
- Automated document feeder (ADF) support
- Double-sided print support (contact QEA for models)
- Automatic adjustment for sample misposition
- OCR for automatic reading of sample labels (option)

Other Tools
- Image and data copying
- Saving and printing images, summary data, or detailed data
- Image manipulation – zoom in and out, flip and rotate
- Color channel selection for display
- Results selection
- Font size selection

Documentation
- User's Guide supplied on CD
- Tutorial supplied on CD
- Sample test target supplied on CD

Computer Configuration
- High-performance PC
- RAM: 8 GB or more
- Available USB port
- Microsoft Windows® 7 to 10, 64-bit
- Microsoft Excel® and Access® 2007 or higher
- Scanner-based option: TWAIN-compliant high quality scanner (ADF optional)
- Camera-based option: DirectX-compliant digital camera or similar output device

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