

Product Specification:

Phoretix™ Array v10

Grid Definition

- Fully automatic grid detection
- Automatic detection of interleaved grids
- Standard grid types supplied
- Sigma Genosys grid types & gene lists
- Wizard for creation of new grid formats
- Edit existing grid types
- Import & export of grid types
- Support for multi-part grids, e.g. Clontech
- Define sub-grids
- Define spot parameters
- Area of interest option
- Manual placement of grids
- Resize grids
- Adjust for skewed images
- Detect different grid formats on a single image
- Automatically improve spot alignment
- Zoom function with resizable scroll bars
- Adjust contrast/brightness/colour scheme of image
- Advanced parameters to aid spot alignment
- Delete selected grid
- Edit detected grid

Dual Channel Analysis

- Option of single or dual channel (cy3/cy5) analysis
- Grid detection and measurement performed automatically in both channels
- Normalise / calibrate measurements in each channel
- Select which channel to view in Image window
- View measurements for:
 - Current channel
 - Ratio of channels' measurements
 - Difference of channels' measurements
- Colour-code ratio measurements according to expression change
- View ratio and difference measurements for replicate groups

Spot Editing

- Align spots in a detected grid
- Reposition spots
- Resize spots
- Make changes to:
 - Individual spots
 - Groups of spots
 - An entire grid

Background Subtraction

- Parameter-based methods:
 - Spot edge average (mean or median)
 - Spot edge plus

TotalLab Limited

info@totalab.com | www.totalab.com

TotalLab Ltd

Keel House | Garth Heads | Newcastle upon Tyne | NE1 2JE | UK
tel: +44 (0)191 255 8899

- Local minima
- Define negative control spots
- Use image rectangle
- Set image intensity
- Fully automatic methods:
 - Spot surface minimum
 - None

Spot Measurement

- Volumes automatically calculated following grid detection
- Data displayed in measurements table
- Range of measurement table views:
 - Current grid
 - Selected spots
 - All spots
 - Replicate views
- Dynamic updating of tables
- Select fields to display
- Replicate measurements with coefficient of variance
- Spot annotation
- Show/hide spot numbers
- Synchronise table tab selection with spot selection in image window
- Control annotation display options
- Select which spots act as negative controls
- Select which spots should be excluded from analysis
- Advanced parameters for display options

Quantity Calibration

- Choice of quantity units
- 4 curve fitting algorithms available
- Calibrate using replicates
- Add selected spots to calibration curve
- View calibration curve
- Force calibration curve through 0
- View calculated spot quantities in measurements table
- Assign all or just selected spots quantity values
- Create additional calibration curves
- De-calibrate spots

Normalisation

- Choice of quantity units
- Normalise to single, group or all of spots
- Normalise to spot group mean, median or collective volume

Presence/Absence Flagging

- Automatic flagging based on estimate of threshold or selected spots in image
- Manual setting of threshold
- Comprehensive image annotations
- View results in measurements table

Replicate Spots

- Label spots
- Automatically identified and sorted by common name
- Display group average measurements
- Define replication pattern
- Multi-level undo/redo
- Links to online Genbank database

Scatter plot

- Enables in-channel and cross-channel comparisons
- Filtering of selected spots
- Plot of individual or grouped replicate samples
- Logarithmic or linear axes
- Independent axis formatting
- Colour-coded expression results
- Full zooming and scrolling

Data Import

- Directly import spot labels from other Windows applications
- Automatic identification of replicate groups

File Navigation

- View all files and directories using tree structure for easy navigation
- Create / open / close experiments
- Recently used files available from menu

Intensity Calibration

- Map image pixel values to known optical densities
- View calibration curve
- 5 curve-fitting algorithms

Additional Features

Analyse all types of macro / micro -arrays, microtitre plates, dot and slot blots

Supports wide range of image formats (.tif, .tiff, .gel and .img files, 8-16 bit greyscale images of any size)

- Unable to manipulate original spot data
- Save analysis templates for batch processing
- Invert image intensity facility
- Adjust image brightness/contrast /colour scheme
- Customise display options
- Zoom control
- Printing options
- Flexible order of analysis
- Access analysis options and common commands through main tool bar
- Tutorial images to get you started
- Tool tips on all features
- Comprehensive Help menu
- Context menus for productivity
- Cues and warning dialogs
- Status bar to display additional information
- Shortcut keys
- Annotate array images using free floating or spot anchored text

Hardware and Software Requirements

Operating systems: Windows 2000, Windows XP, Windows Vista and Windows 7

(Please note: you require Administrator privileges for installation. To use the software you do not need Administrator privileges).

Processor: 1.4 GHz

Memory: Minimum 256Mb, recommended 512Mb

Free hard disk space: Recommended 5Gb

- Minimum and recommended specifications are important in order to provide good software performance and reduce installation and operational issues.
- A general rule to note is that with running any software the more RAM a system has the better
- For optimal performance in higher end products or where users may be pushing systems to the limit use the “recommended” specifications