

## Product Specification:

# Phoretix™ 1D v11.3

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TotalLab Quant is also supplied with every copy of Phoretix 1D. Please see additional specification sheet

### Lane Creation

- Automatic lane detection
- Export and import of lane templates
- Manual lane detection
- Multi-tier analysis
- Move, resize and bend multi-box
- Move, resize and bend individual lanes
- Add grimaces to account for band distortion
- Delete lanes
- MADGE manual grid detection and renumbering

### Background Subtraction

- Automatic methods:
  - Rolling ball
  - Rubber band
  - Minimum profile
  - Valley to valley
  - Lane edge subtract
- Manual methods:
  - Image rectangle
  - Image stripe
  - Manual baseline

### Band Detection

- Fully automatic band detection
- Adjustable peak parameters:
  - Minimum peak
  - Noise reduction
  - % max peak of lane or gel
- Band edge detection methods:
  - Single edge
  - Automatic detection
  - Fixed width
  - % peak
- Manual editing of peak and edge detection in image and lane profile windows
- Snap to peak editing
- Automatic band measurements
- View band measurements in measurements table
- Wide range of data fields to display in measurements table
- Histograms for viewing band data
- View multiple lane profiles either stacked or overlaid
- Export lane profile information

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#### 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

- Edit Band Name and display on Image and in table
- New noise reduction option for band detection removes dust from image before detecting (uses Median filter)

## Profile Deconvolution

- Fit Gaussian curves to profile
- One Gaussian per band
- Manual adjustments of Gaussian
- FWHM (Full Width Half Max) measurement of bands

## Rf Calibration

- Add Rf lines to any part of lanes
- Assign values to Rf lines
- Adjust / bend Rf lines
- Snap to band when editing Rf line
- View calculated Rf values for any lane

## Molecular Size / pI Calibration

- Library of standards
- Add new standards
- Edit existing standards
- Automatic assignment of standard bands
- Propagation by Rf between standards
- 6 curve fitting methods
- MWs automatically displayed in measurements table
- pI standards can increase or decrease

## Band Matching

- Automatic matching to any reference lane
- Manual matching to any reference lane
- Match by lane position, Rf or MW/pI
- Automatic generation of synthetic reference lane
- Edit reference lane
- Global reference lanes
- Propagate band names via reference lane
- Semi-automatic and manual lane calling
- Call lanes from matching
- Automatic match data calculation
- Different table views for band and match data:
  - Reference lanes
  - All lanes
  - Current lane
  - Lane calls
- Single band window gives tabular and histogram data on bands matched to a selected band

## Quantity Calibration

- Range of methods to quantify:
  - Selected bands
  - Individual lanes
  - Single lane
  - Average of selected bands
  - Total of selected bands
  - Using a pre-defined standard
- Manually assign known values to bands
- Range of calibration units
- View interpolated and extrapolated values in measurements table

## **Normalisation**

- Normalise to a single band
- Normalise to a matched band
- Normalise to bands in a lane

## **Band Picking**

- Support for band picking robots including:
  - Ettan
  - ProPic
  - GelPix
  - Xcise
  - ProXCISION

## **Dendrograms**

- Dendrogram parameters control
- Choice of dendrogram algorithms:
  - Neighbor Joining
  - UPGMA

## **File Navigation**

- Files organised using tree structure for easy navigation
- Create experiments
- Reorganise experiments
- Multiple gels within an experiment
- “Save As” option for experiments
- Backup experiments
- Identify gels associated with experiments

## **Experiment Navigation**

- View experiment tree
- View lane list
- View list of MW standards
- View list of global reference lanes
- Edit & rename standards
- Drag standard onto desired lane to analyse
- Create and save automatic analysis protocols
- Run last protocol
- Lane naming

## **Intensity Calibration**

- Use optical density
- Use diffuse density
- 5 curve fitting methods
- Semi-automatic assignment
- Transfer calibration to other gels

## Additional Features

- Supports multiple image formats:
  - .tiff
  - .gel
  - .jpg
  - .bmp
  - .gif
  - .png
  - .img (Fuji format)
- Image editor tool accessible from any module for image manipulation including:
  - Crop
  - Rotate
  - Filter
  - Flip
- Storage of image properties and image edits performed using the image editor
- On-the-fly recalculation after all editing
- Invert intensity measurements facility
- Simple data transfer to Microsoft Excel, clipboard or file
- Comprehensive Help menu and tutorial files
- Context-specific help panes
- Tool tips on all features
- Adjust contrast/brightness/colour of image
- Comprehensive and customisable image annotations
- Customisable image and table display options
- User-definable colour display options
- Zoom control for image viewing
- Print preview
- Automatic PDF report generator
- Ruler options to display lane names, numbers and MWs
- Import lane profiles
  - Agilent CSV
  - MegaBACE
  - Beckman
- Analysis protocols for automatic analysis of multiple gels
- Wizard to create user-definable additional lane data fields
- Comprehensive image annotations
- Zoom control for image and profile viewing
- Lane reordering to allow flexible viewing

## Hardware and Software Requirements

Operating systems: Windows 2000, Windows XP, Windows Vista, Windows 7 and Windows 8

(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