

Product Specification:

Phoretix™ 1D Pro v12

A powerful means of comparing lane information from the Phoretix 1D analysis software. Phoretix 1D analysis software is supplied with 1D Pro.

Overview

- Intuitive user interface
- Stores 1000's of lanes in each database

Database Management

- Add gel lanes to a database
- Organised using tree structure for easy navigation
- Facility to create multiple databases
- Graphical and pictorial representation of lane profile
- Tables of band data as created Phoretix 1D with selectable fields
- Add extra information fields to the lanes in these formats
 - Text
 - Numeric
 - Date
- Edit lane names and fields in interactive table
- Invert lane images

Set Management

- Create arbitrary sets of lanes from the database
- Filter/Search database lanes on fields to create sets quickly and includes searches for
 - Exact match
 - Greater than
 - Less than
 - Between values
 - Contains text
- Combine Sets using Boolean operation
 - In any set
 - In all sets
 - Only in one set
- Use sets when matching/clustering instead of entire database

Composite Lanes

- Create composite lanes by combining the band patterns of sample lanes
- Use matching algorithm to create composite band pattern
- Set number of sample lanes the band needs to appear in

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Matching

- Match band data patterns across large groups of lanes
- Automatic generation of "Super Set" of bands to compare against
- Manually adjust matching tolerance
- Set minimum and maximum Rf limits
- Match against all database or lane sets
- View matched images of individual pairs of lanes
- Visually show all matched lanes against band "Super Set"
- Add Temporary bands to lanes to improve match results
- Switch off bands when matching if lanes are inconsistent
- Band matrix table showing band matches of all lanes against "Super set" of bands
- Lane similarity table showing how similar lanes are based on Similarity Coefficient
- Choice of 7 similarity coefficients for table display:
 - Dice (band sharing)
 - Jaccard (band sharing)
 - Jeffrey's X (band sharing)
 - Ochiai (band sharing)
 - Band difference (band sharing)
 - Pearson Correlation (profile comparison)
 - Cosine Coefficient (profile comparison)

Clustering and Dendrograms

- Create dendrograms from matching data or profile comparisons
- Create dendrograms for entire database or lane sets
- Choice of algorithms to generate dendrograms:
 - UPGMA
 - Complete Linkage
 - Single Linkage
 - Ward
 - WPGMA
- Choice of 7 similarity coefficients for dendrogram creation:
 - Dice (band sharing)
 - Jaccard (band sharing)
 - Jeffrey's X (band sharing)
 - Ochiai (band sharing)
 - Band difference (band sharing)
 - Pearson Correlation (profile comparison)
 - Cosine Coefficient (profile comparison)
- User-controllable dendrogram display options
 - Zoom dendrogram
 - Switch Lanes on or off
 - Switch bands on or off
 - Switch cluster nodes on or off
 - Cophenetic Correlation on clusters
- Lane similarity table showing how similar lanes are based on Similarity Coefficient
- Adjustable cutoff line to create lane clusters
- Cluster group table showing which lanes are in each cluster
- Dendrogram similarity table showing how similar lanes are based on the current Dendrogram

Library

- Lanes of interest can be copied to libraries for use with strain identification
- Facility to create multiple libraries
- Create sets for library databases
- Create composite lanes for library databases
- Select, add, delete lanes from library
- Pairwise match entire database or lane sets against current library
- Manually adjust matching tolerance
- Set minimum and maximum Rf limits
- Lane similarity table showing how similar lanes are based on Similarity Coefficient
- Ranking table displaying best library lane match to each unknown lane
- Choice of 7 similarity coefficients for table display:
 - Dice (band sharing)
 - Jaccard (band sharing)
 - Jeffrey's X (band sharing)
 - Ochiai (band sharing)
 - Band difference (band sharing)
 - Pearson Correlation (profile comparison)
 - Cosine Coefficient (profile comparison)

Additional Features

- Simple data transfer to Microsoft Excel, clipboard or file
- Comprehensive context sensitive help and tutorial files
- Tool tips on all features
- Customisable image and table display options

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 1Gb, recommended 2Gb

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