UVIBAND

Effortless 1D analysis

The complete all-inclusive 1D package

"Our UVIband delivers powerful and accurate analysis. We value its fast, consistent analysis and its effortless approach. It includes functions particularly useful for quantification of gels, blots, dot blots, microtitre plates plus colony counting."

> First in lane

UVIband software is designed for powerful and accurate analysis of 1D gels to produce molecular weight and quantitative data. In addition to that it also includes methods for analysis of gels, blots, dot blots, slot blots, arrays, microplates plus colony counting.

In designing UVIband packages we have taken a realistic, professional, friendly approach and included features that are of genuine benefit to the user.

UVIband is the most automated 1D software where saving an analysis as a template and then recalling it and applying it to a new image are possible.

Analysis in the UVIband package is performed in stages, step by step. At each analysis stage the user has the facility to check and (if necessary) edit the results of automatic analysis processes.

> Designed to be used

Pick up many imaging software packages and you start to wonder if the designers have ever performed an image analysis themselves. From the start the UVIband was designed with the user in mind. This means menus that make sense, buttons that are easy to understand and operate, and a wide range of automatic settings covering virtually every imaginable general molecular biology macro-imaging application.

Moreover, if you prefer a more hands-on approach you will love the manual controls.

The UVIband has the ability to grow with the user and has a feature list long enough to satisfy the most demanding lab user. In research laboratories, where premium accuracy, consistency, ease of use and automation are required, UVIband comes into its own.

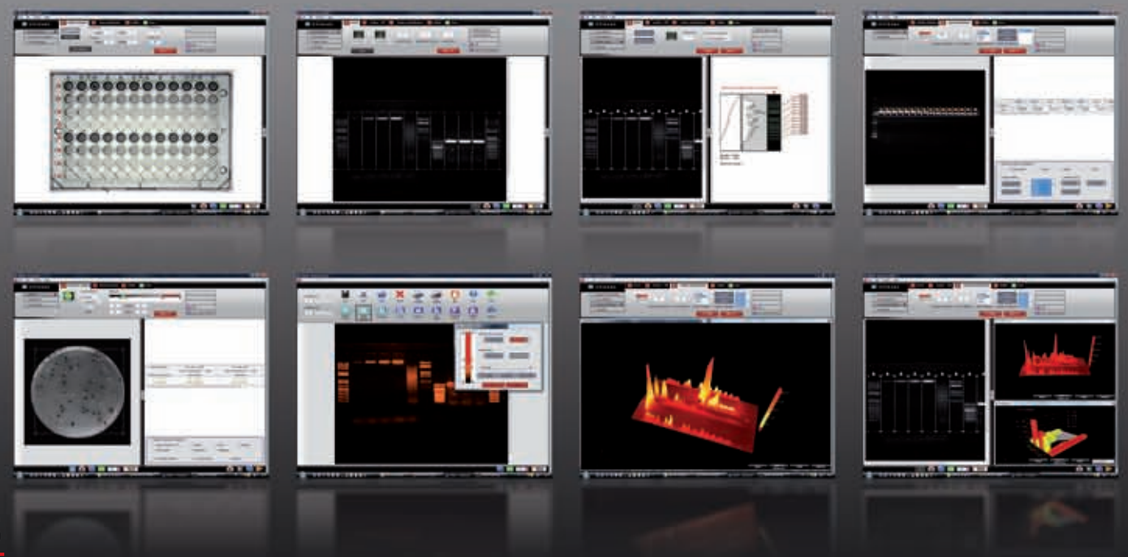
> Powerful

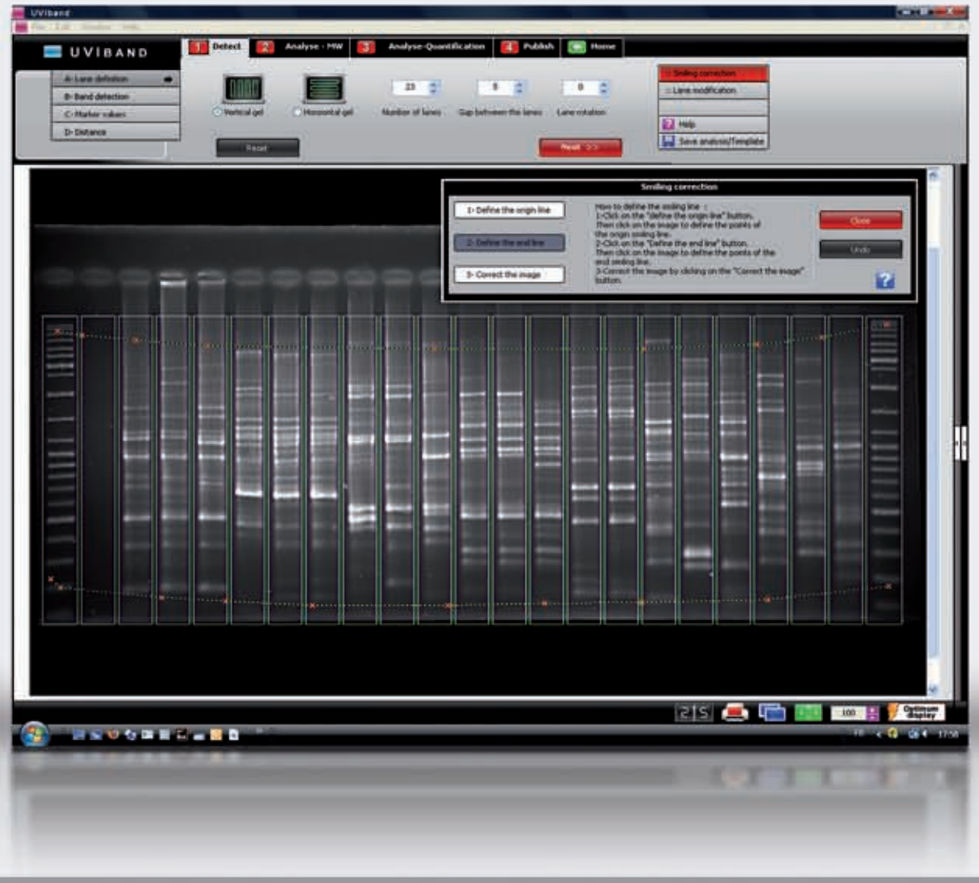
UVIband analysis software includes the option of reliable, fully automatic background subtraction with 'rolling ball' method for band quantification. It also offers optional methods for correction of gel distortions during molecular weight calculations such as smiling correction and molecular weight calibration across several channels.

> Versatile

In addition to the incredibly broad range of analysis functions available in this software there are also functions to facilitate data presentation, reports and posters. The analysis can be saved as a template so the same report can be prepared from other data.

Thus, UVIband facilitates data presentation for easy preparation of reports and posters using analysis tables and figures with the standard copy/paste approach. Software output can be simply copied/pasted to Microsoft Excel™ or Word™.





Razor sharp results

> Precise and accurate quantification

- **1D molecular weight & optical density**
  - Detect the lanes automatically
  - Add new standards and create your own standard library
  - Define a template for automatic analysis of multiple gels
  - View the lanes/area profile in 2D or 3D
  - Select one from several algorithms to generate dendrograms: UPGMA, Complete Linkage, Single Linkage, Wad, Neighbor Joining, …
  - Define a calibration curve for normalisation of one or several lanes
- **1D lanes / Free form optical density**
  - Trace any area of analysis
  - Subtract image background using one of several approaches: automatic rolling ball, local baseline, complete baseline, local valley to valley, complete valley to valley…
  - Calculates concentration automatically using your standard
- **Array optical density module**
  - Auto-trace an array / microarray grid tool for spot detection
  - Define outer and inner spot diameter prior to analysis
  - Rotate the grid vertically or horizontally
  - Calculate concentration automatically using your standard
  - Define a calibration curve for normalisation
- **Colony counting**
  - Control detection sensitivity with a simple control slider bar
  - Filter your data to include or exclude detected colonies automatically
  - Characterise the colony (volume, area, perimeter, gravity, compactness, eccentricity…)

UVIbandmap

Analysis & database

Store, sort, retrieve at a glance

"Thanks to our UVIbandmap database software we can archive our analysed results securely in user defined clusters. We can also, under a range of criteria, effortlessly retrieve results from an easily defined whole database or a specific group."

> The knowledge base

UVIbandmap is a powerful 1D analysis software complete with a database component which enables the archiving of the analysed results and cross experiment investigation of band matching patterns across a large population of samples. You can analyse the matching of lanes across different cluster groups. In such a case each individual lane can be compared to any other lane within your defined database scope. The results can be presented as a dendrogram or in a table which can then be re-ordered and ranked for convenient viewing. You can set a query for a specific band or band patterns which have been identified in a lane. Your query is controlled with different parameters including confidence interval.

> Flexible

We offer two different database software packages:

- **UVIbandmap:** includes all characteristics and functions of a UVIband plus all database features. The complete solution for 1D gel analysis!
- **UVImap:** Includes functions for routine 1D gel analysis and special database function that facilities comparison of band patterns with multiple gels.

> UVIbandmap software includes:

Database management

- Complete integration of the molecular weight analysis and the database functions for easy gel and lanes archiving and queries
- Organise the database using Windows Explorer within a tree-like structure with username and password to manage access to your data
- Export & import selected parts of the library for inter-laboratory collaboration

Matching / Dendrogram

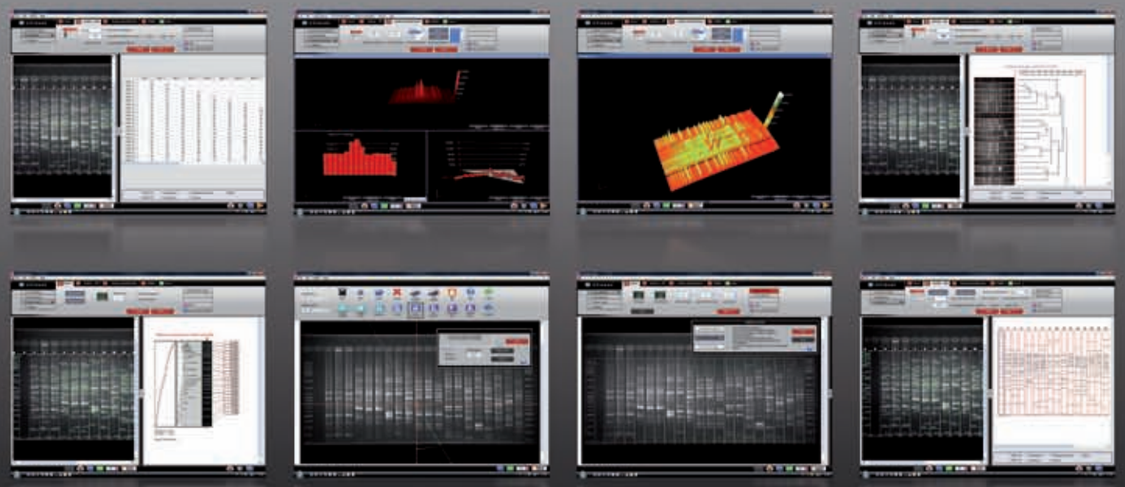
- Match band data patterns across large groups of lanes or individual pairs or groups of lanes with matching tolerance coefficient
- Select one of several similarity coefficients including Dice and Jaccard
- Select one from several algorithms to generate dendrograms: UPGMA, Complete Linkage, Single Linkage, Wad, Neighbor Joining, …

Identification of a lane from a database

- Perform queries on the whole database or any selected cluster to retrieve lanes according to several possible criteria

Multiprobe analysis

- Extract lanes from a specific database and select the lanes to be compared within a confidence interval



UVI1D SOFTWARE

Intuitive acquisition and analysis

Auto is our motto

"Our UVI software is so elegant! We love it for its ease of use, its appealing interface and its long list of features that convert images into useful, publishable data! It includes image acquisition, enhancement and analysis functions for gels, blots and colonies."

> A realm of possibility

The free UVI1D software facilitates instinctive image acquisition, simple optimisation of images and rapid analysis. The UVI-1D software is offered with all our UVItec imaging systems and perfectly complements our state of the art hardware.

> Your gel ON live!

Our live preview mode ensures quick and easy sample positioning and fine focus.

> Your kids could do it!

Start with a predefined set-up then optimise it for your particular technique. Name it, save it and then recall it for the next time. The attractive interface of the software features large colour-coded buttons and self-evident icon designs to minimise the users' learning curve.

> Getting the word out…

Highlight important features with text and symbols. UVI-1D helps you to annotate and illustrate your image.

> Auto is our motto

Follow the path. Image acquisition is protocol-driven. Acquisition parameters can be saved in configuration files for future use and are automatically saved with each image in a secure GLP file. Autofocus and auto-exposure are considered a must.

> Create vibrant images

Enhance your image with the extensive and readily available set of tools such as multiple colour channels, cropping and image additions.

> Need to quantify or measure?

Just add a calibration marker for reference or measure the volumes to determine the quantity with our simple 1-2-3 approach.

> UVI 1D software includes:

Molecular weight and volume calculation

- Detect the lanes and affect a standard to calculate their molecular weight automatically
- Define a threshold and calculate the band's volume

Rf (IEF)

- Calculate the pH or the RF values
- Define the origin & the end as well as the standard for measurement

Colony counting

- Control the detection sensitivity with a simple control slider bar
- Display the colony number directly on the image
- Characterise the colony (volume, area, perimeter, gravity, compactness, eccentricity…)