Product Specification:
Vü One D v14.1
## 1D and Western Blot Analysis Module Software

Overview:

Analysis of 1D gels and Western blots with Vü One D is rapid, automated to a high level and reproducible. Highly developed algorithms accurately detect lanes and bands even on distorted gel images. Calibrate the bands using one or more Molecular Size standard lanes and derive absolute band quantitation using known quantity calibration standards in your samples.

The user has the ability to review each stage of the workflow analysis and intervene / edit if required. Combining high levels of automation with final user review allows rapid and accurate quantitative analysis.

The user then has full control of the visualisation tools and data display - outputting only those data fields that are of importance as well as the images of choice. Never has getting your results as quickly, accurately and reproducibly before - only with Vü One D.
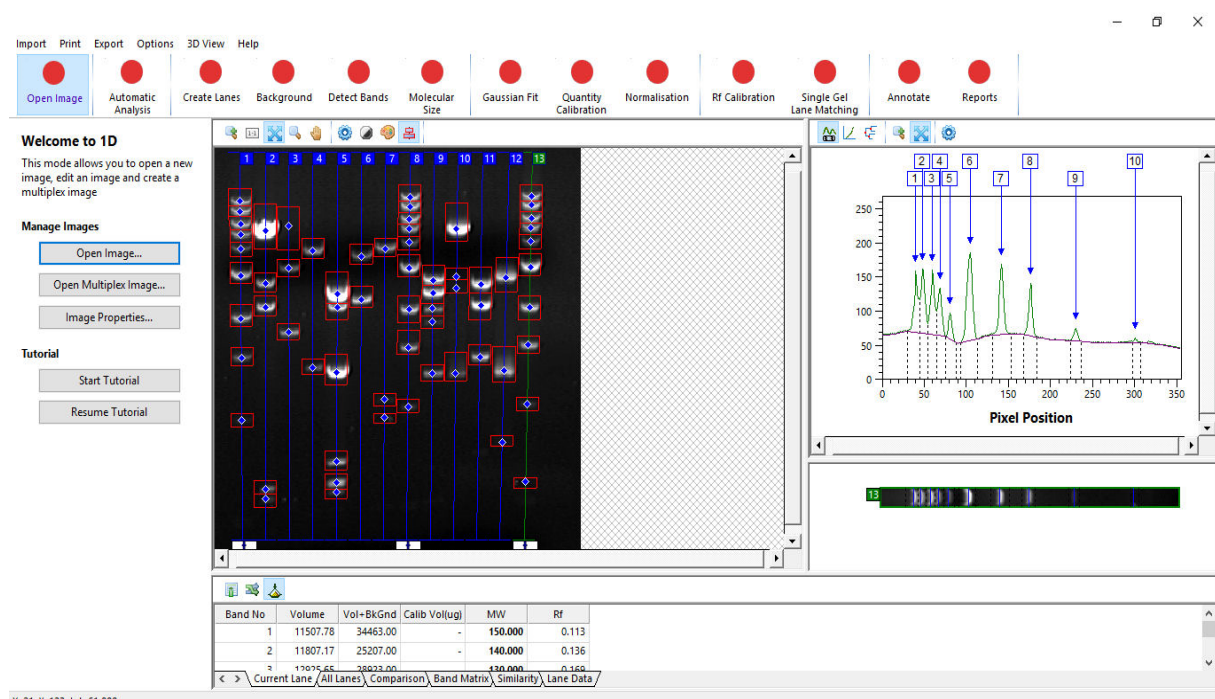
General:

- Modern interface using the latest UI help
- Built in tutorial to aid with learning the software
- Automatic PDF report generator
- Ruler options to display lane names, numbers and MWs
- Multiple copies of the program can now be run at the same time to better compare results

Image Editor:

- Advanced image editing and also allows Multiplex Image creation and alignment
- Intensity Calibration

Multiplex Analysis:

- Create multiplex gels from up to 4 channel images
- Create lanes across all channels
- Measurement results for each channel in all tables
- Propagate Molecular Size results across channels or per channel

Lane Creation:

- Automatic lane detection with multiple detection options
- 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

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
- View multiple lane profiles either stacked or overlaid
- Export lane profile information
- Edit Band Name and display on Image and in table
- Automatic Dendrogram creation
- New noise reduction option for band detection removes dust from image before detecting (uses Median filter)
- Median Profile. Option to use median instead of average calculation for the profiles. Improves band detection and measurement is not changed. This option replaces the median smoothing option for band detection.
- New Lane and Band drawing option. Can now display bands as boxes to allow better visualisation of results

Profile Deconvolution:

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

Molecular Size / pl 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

Quantity Calibration:

- Range of methods to quantify:
  - Selected bands
  - Individual lanes
  - Average of selected bands
  - Total of selected bands
- Manually assign known values to bands
- Range of calibration units
- View interpolated and extrapolated values in measurements table
- Normalisation for standard gels. Choosing a single band and normalising to it
- Normalisation for multiplex gels. Can use Housekeeping proteins/genes or Total Protein Normalisation
- Table showing total volumes for lanes and the normalisation factor for multiplex gels

Single Gel Matching:

- Rf Calibration - Improves Molecular Size Calculation and Lane Matching
- Lane Comparison within a single gel
- Match lanes together via the Image Window
- Tables showing match results and lane similarity measure
- Extra Dendrogram options to show lane clusters

Other Features:

- 3D Image viewer. Can now display the current image in a new 3D image viewer
- Clip Gallery - All image and table output can be stored in a Clip Gallery folder and viewed for export to other Windows programs