

TL120

Advanced Gel Analysis Software
Nonlinear Dynamics, UK

The TL120 version in the TotalLab range is an advanced image analysis solution which offers an extensive range of features for the in-depth analysis of 1D electrophoresis gels and performing band pattern matching studies.

OFFERS A FLEXIBLE AND INTUITIVE WORKFLOW

The steps you follow to analyse your 1D gel are logically ordered, making the analysis process straightforward but still offering complete flexibility. The TL120 software also provides a facility to setup analysis protocols which can be applied to your experiments allowing batch processing of images under the same conditions, ensuring a uniform analysis approach.

CONTAINS HIGHLY-SOPHISTICATED ALGORITHMS TO COPE WITH THE MOST DEMANDING ANALYSIS

To accurately analyse your 1D gel, the lanes you loaded on your gel and the resultant bands must be accurately detected by the TL120 software. There is a choice of algorithms for fully automatic and highly accurate lane creation which have been optimised to cope with images that are badly distorted. Band material is precisely detected which is vital for subsequent quantitation.

ENABLES RF CALIBRATION WHICH DRIVES HIGHLY ACCURATE MOLECULAR WEIGHT DETERMINATION

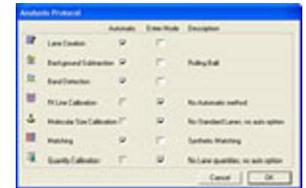
Rf lines are used in 1D analysis to account for any distortions and variations in your gel that may have occurred during one of the experimental stages. TL120 contains an Rf calibration facility that allows you to position lines and adjust Rf values. When Rf lines are positioned consistently across the gels in an experiment, inter-gel comparisons can be made.

This calibration can be subsequently used to drive accurate molecular weight calibration and eventual lane relationship studies.

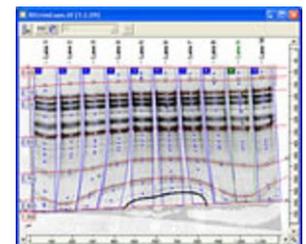
PROVIDES AN EXTENSIVE RANGE OF TOOLS FOR ACCURATE QUANTITATION AND NORMALISATION

The TL120 software has a wide range of tools for quantitation and normalisation to cater for all your experimental requirements.

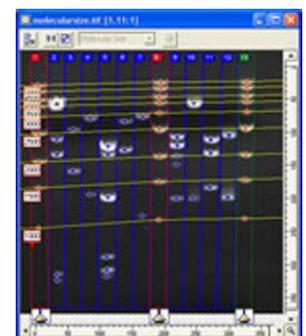
First you must subtract the background material which is automatically and precisely calculated by TL120. There is a choice of quantity calibration options including the facility to create multiple curves per gel, useful for a dilution series, and a range of tools for normalisation of band material. Additional features which facilitate highly accurate quantitation include the option to perform profile deconvolution on merged / poorly resolved bands, and tools to account for band "grimacing".



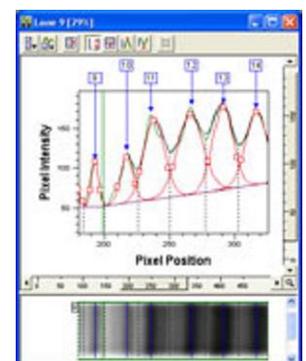
Analysis protocols enable consistent processing of multiple gels



An extensive range of optimisation tools allow you to fine tune your analysis



Calibration of a 1D gel using multiple molecular marker lanes



Profile deconvolution can be used to aid quantitation on merged bands

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PERFORMS PRECISE BAND PATTERN MATCHING

The highly flexible matching facility matches bands across your 1D gel within tolerances you define using Rf values, molecular weight calibration or lane position. You can nominate a lane on your gel to match to, or match to an artificial reference lane, generated by the software, which contains all the bands present within the gel. The results can be viewed as a dendrogram which allows the identification of band patterns on a single gel.

CONTAINS ADVANCED VISUALISATION AND REPORTING TOOLS

The TL120 software provides a range of views of your gel data to assist with the analysis. These include a dendrogram view, a choice of table options to view band matching results and a histogram view to illustrate lane data. The 1D image window and lane profile views can also be completely customised to suit your analysis requirements.

Detailed reports are generated with a single click and can be tailored to present results for an individual lane or complete gel. Reports to show quantity calibration and molecular weight data are also available.

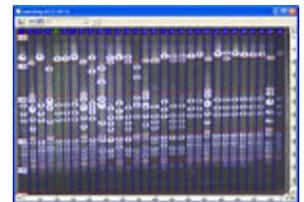
AND WHEN YOUR ANALYSIS IS COMPLETE...

If you wish to perform subsequent mass spec analysis and use a robot cutter, TL120 can coordinate and control precise picking for a wide range of instruments.

Finally, your analysed experiment can be sent to the TL120 DM database component for further data mining and in-depth lane relationship studies.
TL120 - additional modules

ALSO INCLUDED WITH THE TL120 SOFTWARE ARE MODULES FOR:

- * Array, dot / slot blot analysis
- * Colony counting
- * A toolbox for general image analysis



a) Rf calibration
accounts for distortions across
the gel



b) Matching of bands across
the gel using Rf calibration