

Multi-layered gel analysis-for high throughput screening

Introduction

Multi-layers within gels are often used in research for applications that require high throughput screening such as, fingerprinting and genotyping. High-throughput screening enables sample electrophoresis to be maximised. In the past, analysis has had to be carried out by manipulating a grid around each layer and then repeating for each well layer, which can be quite laborious and time consuming.

In some cases researchers also like to capture images of several gels/blots at the same time so they appear on one image. With traditional analysis packages, each gel has had to be treated as an individual despite them all appearing on one image.

With GeneTools Software, full analysis is now possible on all layers/gels/blots at the SAME TIME. This is unique to GeneTools and saves researchers enormous amounts of time.

Image analysis

Open image in GeneTools software and from the "Sample Properties" box adjust the 'Number of columns' and 'Number of rows' if required, the default settings are 1.



Figure 1- Selecting number areas of interest from the sample properties window

The appropriate number of red boxes on the image window should now be present. The red boxes can be dragged to fit using the drag points around the individual gels/blots/layers on the image.

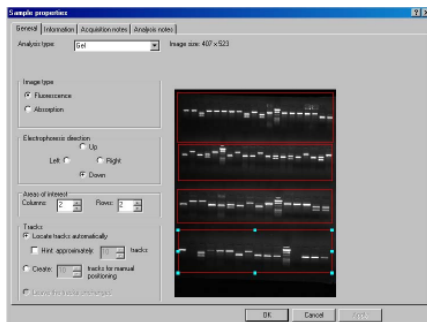


Figure 2- Sample properties window

The analyzed gel image complete with automatically located tracks will now appear.

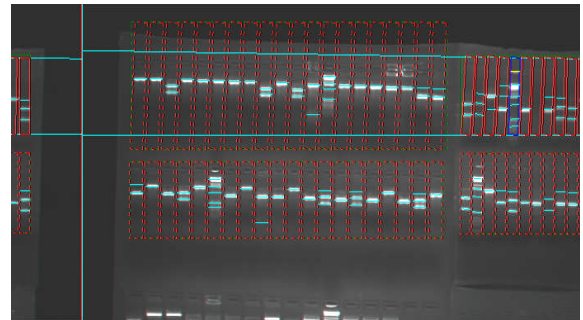


Figure 3- Analyzed multi-layered gel

The GeneTools software is designed so that when the user clicks on each gel/layer it can be analyzed as if it was a single gel. Each layer within the gel or each individual gel can be assigned its own molecular weight markers or a quantity standard for each set of tracks or used for other sets within the image.

To assign quantity standards select "Quantity calibration parameters" then choose to either use the calibrate or the static function. The static function enables another track set to be used as standard.

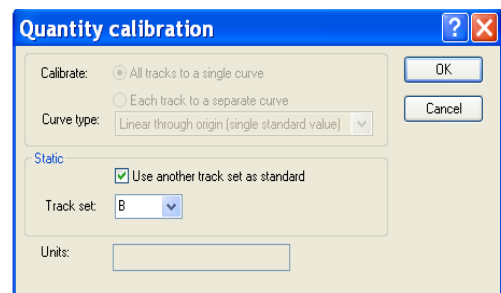


Figure 4- Quantity calibration settings

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