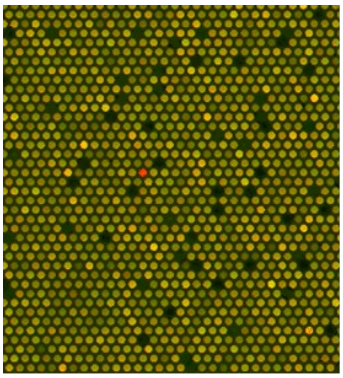
Small is beautiful

The microarray scanner InnoScan® 710 from Innopsys

In the human genetics, as it is in many other high technology fields, the rapid technological progress results in shorter product life cycles. Genetic laboratories must keep pace with these trends and must have the latest generation of equipment to stay competitive. In particular, small and medium-sized laboratories with limited budget can only make investments when products provided offer high efficiency combined with good price/performance ratio.



In the field of microarray scanners, the InnoScan® 710 from Innopsys meets exactly these requirements. This fluorescence scanner with two wavelengths (532 nm and 635 nm for Cy3 and Cy5 respectively) is the fastest system available on the market with a scan time of 3.5 minutes per chip (standard microscope slide with a 25x75 mm^2) for simultaneous detection of both fluorescent dyes at a resolution of 10 microns. The resolution of 3 microns enables the analysis of oligo- and high-density arrays, such as 2x105k or 4x180k. The short scanning time increases the throughput in the laboratory and reduces photobleaching of fluorescent dyes.

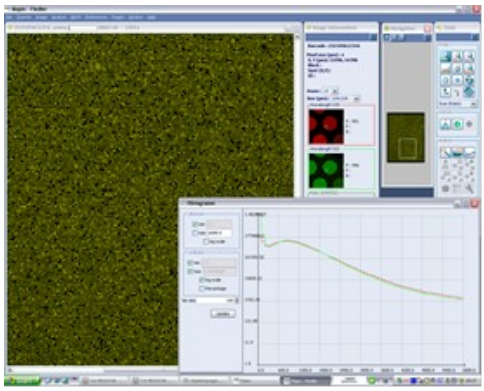
The confocal design enables fluorescence signals which are emitted above or below the detection plane to be suppressed. This ensures very high sensitivity with low signal to noise ratio. The real-time auto-focusing system provides excellent reproducibility of results because substrate deformations are thereby compensated.

The InnoScan® 710 is small, very light, and therefore mobile. The use of laser diodes significantly reduces maintenance and support costs.

The laser power can be adjusted in two steps. It can prevent photobleaching of the dyes with high intensities and extend the lifetime of the laser diode. The high laser power allows detecting weak intensities resulting in sufficiently strong fluorescence signals.

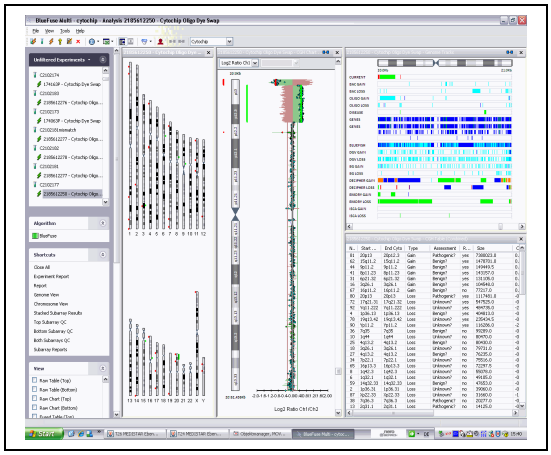
The InnoScan® 710 uses separate photomultipliers for both channels where the fluorescence gain can be controlled separately, so that the difference in dye incorporation is compensated.

The operating status of the scanner can be checked by the user in the laboratory with the help of an optional calibration chip. The intensities of the fluorescence signal red/green shift, crosstalk and linearity of the signal gain can be analysed using this chip.



According to our experience the "MAPIX" software is self-explanatory and user friendly. Updates via the Internet are free of charge for 12 months.

For a human genetics laboratory the InnoScan® 710 of Innopsys is very well suited to obtain quick and reliable results to analyze microarrays accurately. It offers an excellent price/performance ratio with very good service from the manufacturer or supplier.



Author:
Dr. rer. nat. Eveline Fiedler
Genetische Beratung und Diagnostik Dr. med. Angela Ovens-Raeder
Schönstr. 110a 81543 München
Tel.: +49 89 6250 2880
info@genetik-muenchen.de
fiedler@genetik-muenchen.de
www.genetik-muenchen.de