

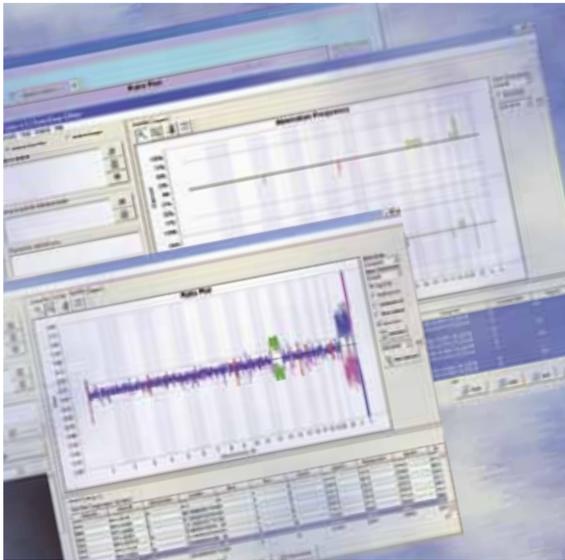
HUMAN HEALTH

ENVIRONMENTAL HEALTH

EASY-TO-USE
AND INTUITIVE
VISUALIZATION

aCGH
SOFTWARE AND SCANNING
SOLUTIONS


PerkinElmer®
For the Better



aCGH SOFTWARE AND SCANNING

New Enhanced aCGH Software and Scanning Solutions from PerkinElmer

PerkinElmer supplies a complete array comparative genomic hybridization (aCGH) solution: microarrays, labeling, hybridization and wash reagents, microarray scanner with image processing software, and aCGH data analysis software. We offer versatile data analysis solutions in order to meet the differential needs of modern aCGH applications. Our solutions range from simple, easy-to-use application software to those adding value to multi-sample comparative studies.

SpectralWare – Easy-to-use and intuitive visualization software

SpectralWare suits users appreciating basic but intuitive software that provides the necessary features for visualization of aCGH results (Fig. 1). It is an online analysis tool that takes quantitated microarray data obtained with the scanner software as input. SpectralWare performs data normalization, presents chromosomal copy number profiles, finds aberrated sites and can be used to create a simple report of the aberrations. It also has links to common public genomic databases.

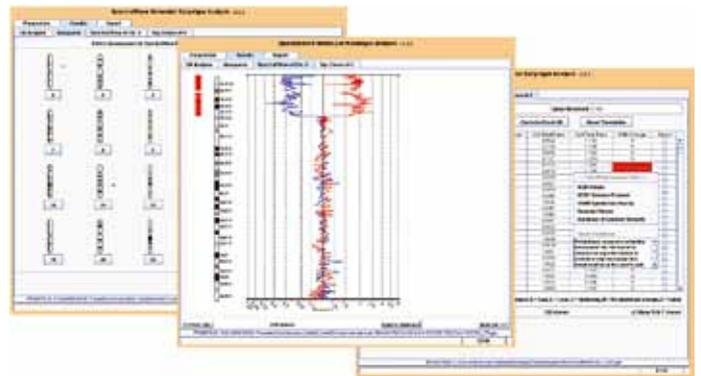


Figure 1. SpectralWare is an easy-to-use and simple aCGH data visualization tool.

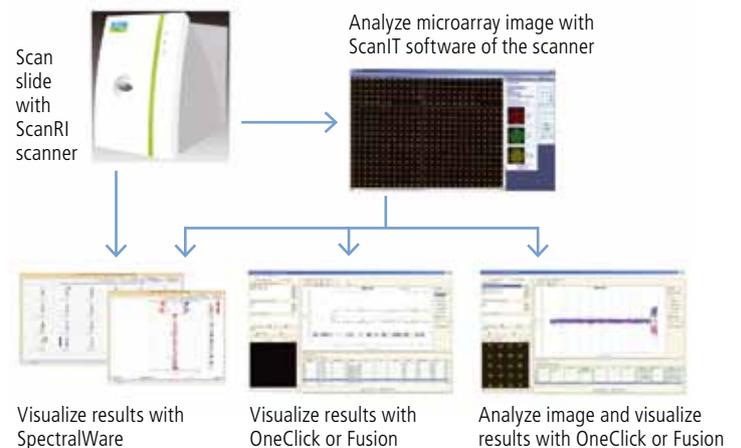


Figure 2. PerkinElmer aCGH data analysis solutions enable the same software to be used for microarray image analysis and visualization of the genomic profiles. Alternatively, ScanIT scanner software, can be used for image analysis and SpectralWare, One Click or Fusion for visualization of the genomic profiles.

PerkinElmer Editions of One Click and Fusion – Advanced aCGH data analysis software

The state-of-the-art aCGH analysis software, One Click and Fusion, are available

for users in need of advanced features. These software products are derived from the same product core by enabling additional modules. The core provides all products with functionalities including multiple aberration calling algorithms, showing biological knowledge available from the genome such as putative copy number variation (CNV) loci and including a high-class reporting tool that enables documentation of the findings in a convenient format.

The simplest of the products, One Click Visualization Only Software, enables viewing of the DNA copy number profiles and detection of the aberrated regions from files quantitated using the user's scanning system. With additional modules enabled, the software can also be used, for instance, to analyze scanned TIFF files obtained with a scanner and to reveal copy number changes common to a group of samples. When the image analysis functionality is enabled, image data quantification can be performed with the same software that is used for visualization of the genomic profiles and reporting of the DNA aberrations found (Fig. 2). One Click Software with batch mode and Fusion provide additionally a truly high-throughput solution for microarray data analysis. After uploading of the data, the user can walk away and have his or her results analyzed even from TIFF images without further human interference.



Features of the advanced software

The different One Click versions and Fusion provide users with a state-of-the-art aCGH visualization software with advanced features, showing biological knowledge available from the genome and having a high-class reporting tool. The programs have all been tailored, as analyses of single samples will need to meet different requirements than, e.g., cross-sample comparisons. The key features of the software are described below.

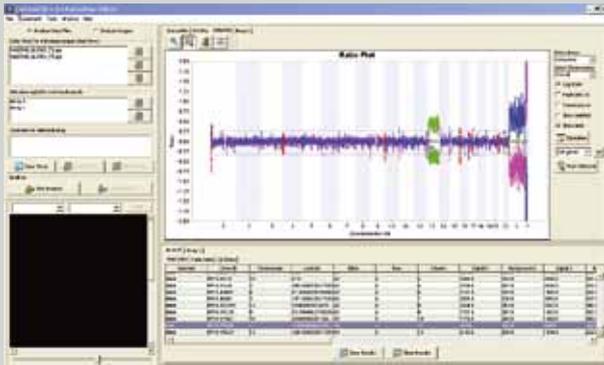


Figure 3. Ratio Plot view of One Click Visualization Only Software.

5010-0010, One Click Visualization Only Software, PerkinElmer Edition

- GPR files created with the scanning system taken as input
- Enables visualization of DNA copy number profiles from a single experiment at a time (Fig. 3)

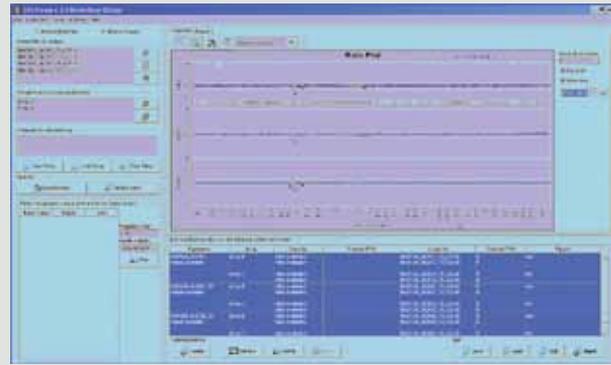


Figure 5. With Batch Mode version of One Click Software, aberration profiles from multiple samples can be visualized simultaneously.

5010-0030, One Click Software with Batch Mode, PerkinElmer Edition

- Takes GPR and TIFF files created with the scanning system as input
- Enables performing of all microarray data analyses including image analysis with one software
- Enables analysis of data from several samples at the same time without human interference
- Enables visualization of aberration profiles from several samples simultaneously (Fig. 5)



Figure 4. By clicking a data point in One Click Complete Software the user is able to see how the respective spot appears in the microarray image.

5010-0020, One Click Complete Software, PerkinElmer Edition

- Takes GPR and TIFF files created with the scanning system as input
- Enables performing of all microarray data analyses including image analysis with one software
- Enables seeing what the spots giving rise to peculiar ratios look like (Fig. 4)
- Enables visualization of DNA copy number profiles from a single experiment at a time
- Image analysis needs to be done with different software (i.e. scanner software)

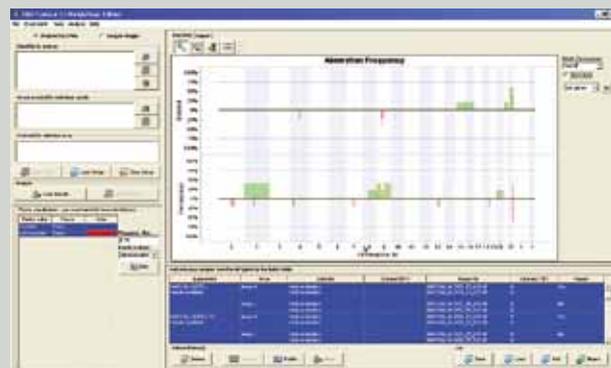


Figure 6. With Fusion, identification of DNA aberrations occurring preferentially in a user-defined category of samples in comparison to a reference group is also enabled.

5008-0010, Fusion Software, PerkinElmer Edition

- Takes GPR and TIFF files created with the scanning system as input
- Enables performing of all microarray data analyses including image analysis with one software
- Enables analysis of data from several samples at the same time without human interference
- Enables visualization of aberration profiles from several samples simultaneously
- Enables detection of aberrations shared by a group of samples automatically (Fig. 6)

ScanRI is one of the fastest microarray scanners on the market

enabling the obtaining of images in less than four minutes when scanned at 10 μm resolution. It provides simultaneous 2-color image acquisition with scanning resolution from 3 to 40 μm .

Combined with its small size, low background noise and high sensitivity, ScanRI provides an attractive solution for array users.

Features of the ScanRI scanning system

- Weight 15.5 kg
- Dimensions 278 x 457 x 369 mm³
- Laser excitation wavelengths of 532 nm (Cy3) and 635 nm (Cy5)
- Simultaneous 2-color scanning
- Scanning resolution from 3 to 40 μm
- Low background noise and high sensitivity
- Uniform scanning across the microarray slide
- Automatic spot recognition

The scanner is supplied with ScanIT™ image analysis software yet a PC needs to be ordered separately.



ORDERING INFORMATION

Product	Product Name
Software*	
5007-1010	SpectralWare® Analysis Software
5010-0010	One Click Visualization Only Software, PerkinElmer Edition
5010-0020	One Click Complete Software, PerkinElmer Edition
5010-0030	One Click Software with Batch Mode, PerkinElmer Edition
5008-0010	Fusion Software, PerkinElmer Edition
Scanner*	
1013-0010	ScanRIT™ scanner
1013-0020	ScanRIT™ PC

* The software and scanner products are for Research Use Only. Not for use in diagnostic procedures.

For the better

At PerkinElmer, we're working to improve the health and safety of people and their environment. From safer water to cleaner air to healthier babies, our solutions touch every part of your life.

For information on availability of PerkinElmer diagnostic products please contact your local representative.

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For a complete listing of our global offices, visit www.perkinelmer.com/ContactUs

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