Product Fact Sheet

Ikaros

Karyotyping system

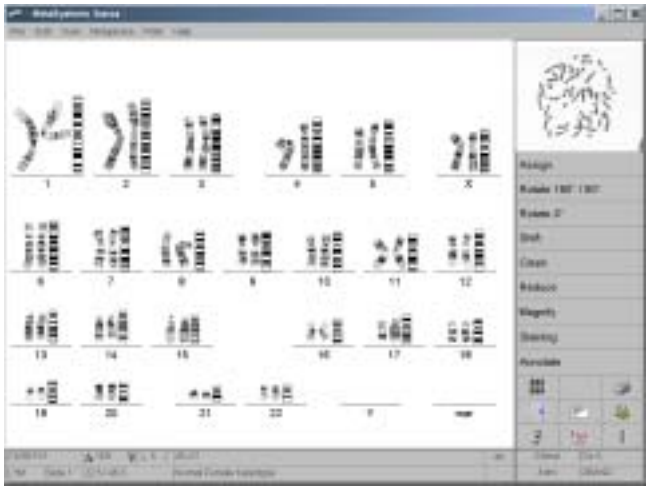
On-screen karyotyping is a commonly used method for routine diagnostics and research all over the world. The use of image capture facilities with an ingenious software package for analysis and report generation saves time and effort in an environment where these factors are imperative for quality and costs management. MetaSystems' karyotyping system Ikaros combines an intuitive graphic user interface with a variety of powerful tools to provide the flexibility needed for the analysis of even the most complex karyotypes. Designed to minimize the number of interactions, Ikaros guarantees amazingly fast results and is recognized as the fastest system of its kind. The flexible system architecture of all MetaSystems products simplifies the adaptation of Ikaros stations to your specific working conditions. Ikaros is network-ready and so can be easily extended to a multi-user installation, including dedicated workstation for capturing, analysis, review or database maintenance.

General

- Easy to use and easy to learn; basic handling skills acquired in minutes
- Optimized for fast analysis (typically less than 3 minutes per metaphase)
- Unique safety concept: original image and processing steps are stored, enabling unlimited verification and correction of any step
- Comprehensive patient and lab data management and interface to external patient databases
- Handles G-, R-. C- and Q-banding as well as polyploid cells in brightfield, phase contrast, and epi-fluorescence
- Statistical evaluations and customizable report forms
- TIFF, BMP and JPG image exchange with standard graphic applications
- Loss less compressed storage of all components of each metaphase in one file (multiple fields, karyotype, annotations, data sheet information etc.)
- Integrated archiving utility with disk volume management
- Interfaces to any standard microscope
- Full workflow automation with integrated macro language

Image acquisition and chromosome separation

- Focussing aid with automatic best-focus acquisition (motorized microscopes only)
- Automatic contrast adjustment
- Full support of multiple capture fields
- Automatic chromosome counting with interactive correction
- Adjustable banding enhancement, filter power is set in real time with the mouse
- Automatic or interactive chromosome separation with auto-zoom
- Fast automatic or semi-automatic chromosome dislapping with auto-zoom



- Chromosome contour lines displayed in color, updated continuously during separation
- Line-up display for immediate identification and separation of touching/overlapping chromosomes
- Extensive annotation functions with full access to all system fonts and colors

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- Advanced chromosome classification in unsegmented metaphase by semi-automatic chromosome annotation
- Karyotype creation from interactively pre-classified metaphase

Karyotyping

- Automatic and interactive chromosome classification and karyotype generation
- Easy shifting, flipping and mirroring of chromosomes
- User trainable automatic chromosome classifiers
- Automatic highlighting of corresponding chromosome in metaphase during karyotyping, supports multiple capture fields
- Chromosome rescaling
- Automatic or interactive chromosome straightening
- Single or multiple chromosome contrast modification
- Automatic karyotype format optimization in horizontal and vertical direction
- Fast interactive chromosome alignment and karyotype editing functions
- Ideograms with band numbers at ISCN banding resolutions (G-, R-banding)
- Possibility to colorize and rearrange ideograms for the documentation of chromosomal aberrations
- Automatic generation of composite karyotype for easy case comparison
- Extensive karyotype annotation
- Choice of karyotype templates for many different species
- Supports automatic karyotyping and ideograms for various species
- Integrated WYSIWYG karyotype form editor

Patient database

- Integrated, customizable patient management system
- Searchable fields and fast group definitions allow fast navigation and data retrieval
- Flexible automatic data im- and export and data exchange with external patient management systems
- Powerful report generator with full access to all patient data

Configuration and extensions

- Flexible and economic network extension, comprising full karyotyping stations, capture stations, and analysis stations
- Seamless integration with the automatic metaphase finder Metafer MSearch for transmitted light and fluorescence scanning
- Program configuration management allows user specific and staining specific configurations and a global configuration in networked systems

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