OUT OF THE **DARK**
INTO THE **LIGHT** HEL**IOS**

# IFA STANDARDIZATION

**1 THREE NEEDLES**
The patented "Three needle system" not only speeds up the process but ensures timing per well and prevents slides drying out.

**2 IFA PROCESSING**
Based on the **HELMED®** platform, the **HELIOS®** system is capable of performing all IFA process steps automatically.

**3 BUILT-IN LED MICROSCOPE**
The integrated microscope (incorporating Nikon-based optics) is complemented by the **AESKU®** engineered motorized mount ensuring both accuracy and speed.

Width 65 cm

**4 SLIDE BARCODE READER**
The Slide Barcode Reader provides slide traceability. **AESKUSLIDES®** are barcoded e.g. type, lot, etc. and a unique serial number, ensuring front end traceability and compliance with lab accreditation.

Height 57 cm

**5 SAMPLE BARCODE READER**
The sample barcode reader ensures sample traceability and eliminates time and error spent entering long sample ID numbers.

**6 NEW MULTI-RACK***
High flexibility, accepts most tubes.

Tubes are clamped in to avoid rotation during sample barcode reading.

Weight 33 kg

Depth 75 cm

**7 IMAGE CAPTURE**
The built-in camera performs high tech autofocus algorithms storing multiple images per well.

**Improved Tissue Processing**

With this feature tissues can be processed faster, with increased quality (*only on request*).
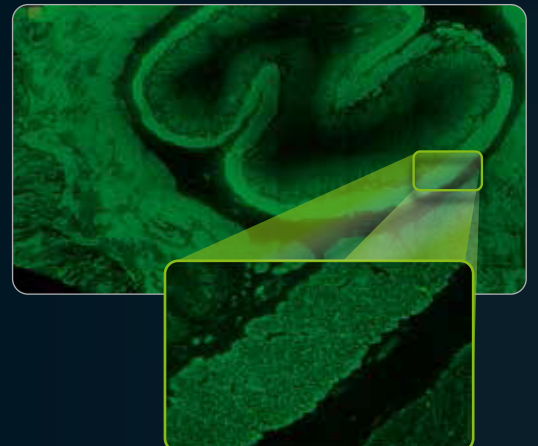
All the images included in this flyer have been performed using the revolutionary **HELIOS®** system under normal lab conditions.

**rLKS** Stitched Overview

**EMA** Stitched Overview

**rLKS** Full Screen View (Stomach)

**EMA** Full Screen View

*Accessories, not included in the **HELIOS®**, sold separately

# IFA SOFTWARE

**MODULE 1: IFA PROCESSING & IMAGE CAPTURING**
The **HEL**IOS® system is capable of performing all IFA processing and reading automatically.

**MODULE 2: IFA PROCESSING**
The **HEL**IOS® system uses the **HELMED®** IFA software, a well-established and robust software. Here you can program standard IFA test kits regardless of their manufacturer. Non **AESKU®** slides will be processed without reading.

**MODULE 3: IMAGE CAPTURING**
This module starts automatically after slide processing is complete or can be used independently from other modules.

The amount and position of images per well is user configurable for all **AESKUSLIDES®** tests, prior to reading.

A classification suggestion (+ or -) is performed for each image for **AESKUSLIDES®** ANA HEp-2 and ANCA.

**MODULE 6: LIS**
Module 6 receives orders and sends all classified results to the LIS. ASTM standard connection configuration is done via a user friendly interface.

**MODULE 5: Configuration**
Module 5 is used to define the preclassification suggestion criteria by an authorized person.

## NEW FEATURES

**Pattern Recognition Plus Add-ons***
The Pattern Recognition Add-ons give the **HEL**IOS® system the ability to autonomously provide a suggestion of the most probable IFA pattern by analysing captured IFA images: Rheumatology Pattern Plus*, Vasculitis Pattern Plus* and DNA Pattern Plus*.

**Estimated Endpoint Titer Option****
It saves time and reagents.

Estimated Endpoint Titer
1/5120

**MODULE 4: RESULT CONFIRMATION**
All IFA-analysis data can be loaded and evaluated well by well. The evaluation process is complemented by the **AESKU®** pattern library.

The option "Sample overview" allows showing all results related to one sample. This is useful when multiple substrates are used for one sample.

The **HEL**IOS® presents all preclassified negative results helping to save time by automatically creating the report with a push of a button.

**Titration**
From the result confirmation module, the user can select the following dilutions that need to be performed for the End point titer determination.

*Accessories, not included in the **HEL**IOS®, sold separately     **preinstalled option, activation only on customer request, activation key sold separately

# HELIOS FEATURES

| PRODUCT | REF. NO | Description |
|---|---|---|
| HELIOS® AUTOMATED IFA SYSTEM | REF. IOS-1000 | Automated IFA System and Reader (Software/PC/Monitor included)<br>• Up to 190 samples, up to 20 slides, up to 4 different assays per run.<br>• Sample dilutions are prepared on a MTP, hence no pre-dilution tubes required.<br>• Transfers from the MTP to the slides.<br>• Individual well time management ensures consistent incubation times.<br>• Washing by cycles avoids cross contamination compared to washing by flooding.<br>• Automatic mounting medium addition is possible only with our specially formulated *AESKUSLIDES®* mounting medium.<br>• No need for coverslips or transfer slides, reading will start automatically.<br>• Large pattern image library included.<br>• Pre-classification suggestion. User confirms results and selects follow up tests.<br>• Show all negatives function, for fast negative classification.<br>• Show all results for same sample ID within the same run in one screen. |

| HELIOS® RACK REFERENCE | 75 x 12 | 75 x 13 | 75 x 13 | 100 x 12 | 100 x 12 | 100 x 13 |
|---|---|---|---|---|---|---|
| Sample rack 1 REF. NO | 20160014 | 20160018 | 20160020 | 20160122 | 20160016 | 20160022 |
| Sample rack 2 REF. NO | 20160015 | 20160019 | 20160021 | 20160123 | 20160017 | 20160023 |
| Total Samples (rack 1 + 2) | 106 | 106 | 190 | 106 | 190 | 106 |

| NEW FEATURES | REF. NO | Description |
|---|---|---|
| Estimated Endpoint Titer Option | REF. IOS-2002 | • Saves time and reagents<br>• Easier to find the target dilution – less dilution steps needed.<br>• The endpoint titer is defined as the highest dilution in which staining intensity is still detectable. It is an important indicator for the classification of immunoflourescence images. After the first screening run, a titration of positive samples is strongly recommended.<br>• The **HELIOS EPT Plus** offers the possibility to estimate an endpoint titer for wells that were preclassified as positive in a previous screening mode run.<br>• Supported by this endpoint titer estimation, the next dilution steps can easily be selected during the user classification process. |
| Multi-Rack A1 (1-53)<br>Multi-Rack A2 (54-106) | 20160209<br>20160210 | • High flexibility, accepts most tubes<br>• Tube diameters ranging from 11-13 mm \| lengths from 55-100 mm<br>• Multi-Rack sample tube capacity: 106<br>• The design of the rack and the clamping of the sample tubes increases the overall stability<br>• Position numbers are clearly printed and easy to read<br>• The tubes are clamped in the holders to avoid rotation during the reading process of the sample barcodes |
| PATTERN RECOGNITION<br>Rheumatology Pattern Plus | REF. IOS-2101 | This add-on is able to recognize the following ANA HEp-2 IFA patterns:<br>Speckled \| Homogenous \| Nucleolar \| Centromere \| Cytoplasmic \| Nuclear membrane \| Nuclear dots |
| PATTERN RECOGNITION<br>Vasculitis Pattern Plus* | REF. IOS-2102 | This add-on is able to recognize the following ANCA IFA pattern:<br>P-ANCA \| C-ANCA \| A-ANCA (X-ANCA) |
| PATTERN RECOGNITION<br>DNA Pattern Plus* | REF. IOS-2103 | This add-on is able to discriminate positive/negative nDNA samples. |

*Currently not available in the USA.