

OUT OF THE DARK INTO THE LIGHT **HELIOS**



**AESKUSLIDES** FDA CLEARED ON **HELIOS**

**ANA** HEp-2 • **nDNA** (Crithidia Luciliae) • **ANCA** Ethanol • **ANCA** Formalin

 **AESKU.GROUP**  
WE TAKE CARE OF YOUR HEALTH

[WWW.WHATISHELIOS.COM](http://WWW.WHATISHELIOS.COM)

# IFA STANDARDIZATION

## 1 THREE NEEDLES

The patented "Three needle system" not only reduces processing time, but standardizes well-to-well preparation yielding unmatched consistency.

## 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.

## 4 SLIDE BARCODE READER

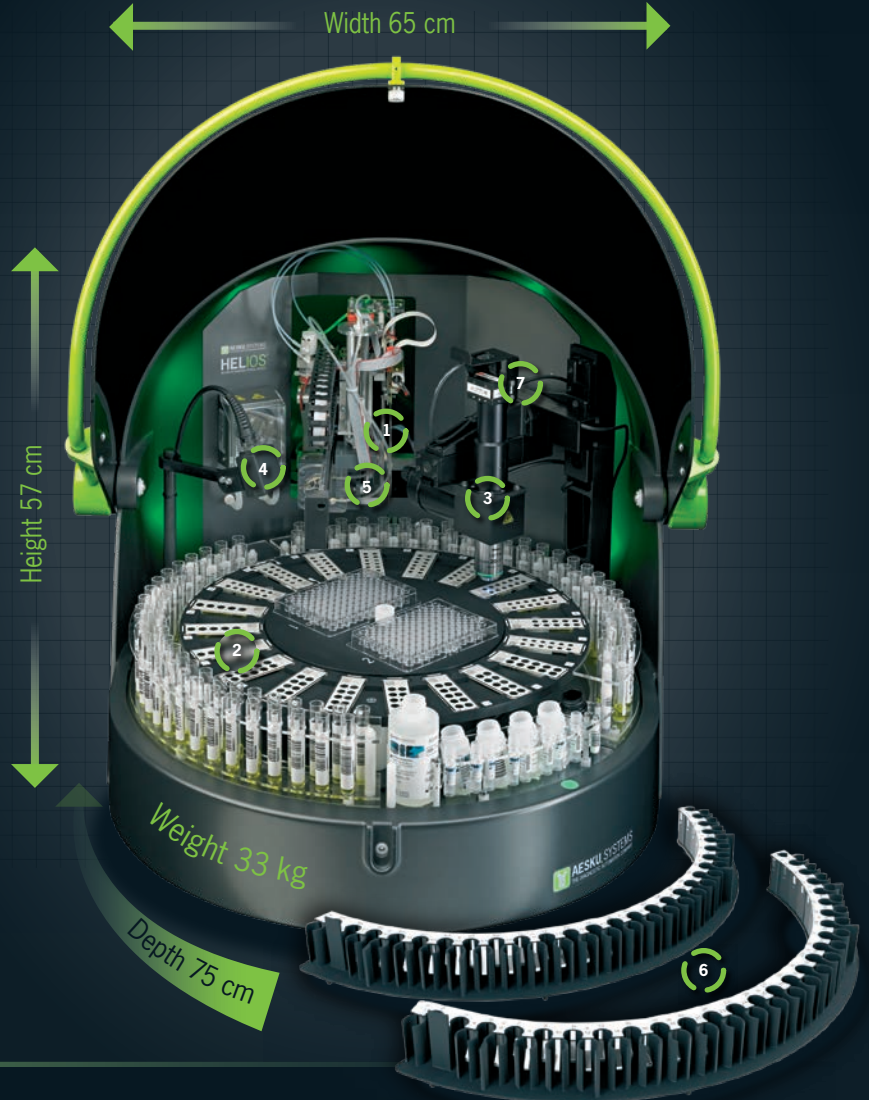
The Slide Barcode Reader provides slide traceability. **AESKUSLIDES**® are barcoded e.g. type, lot, etc. and a unique serial number, ensuring front end traceability and compliance with lab accreditation.

## 5 SAMPLE BARCODE READER

The sample barcode reader ensures sample traceability and eliminates errors and time 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.



## 7 IMAGE CAPTURE

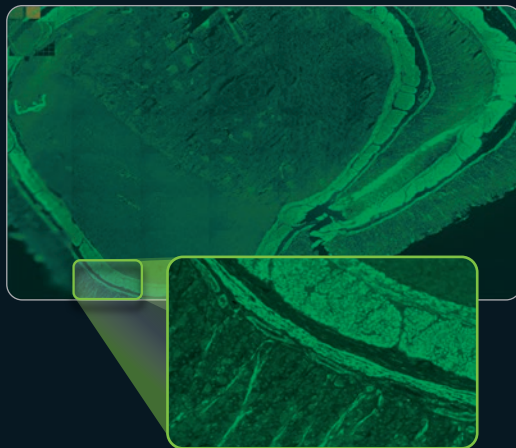
The built-in camera performs high tech auto-focus algorithms storing multiple images per well.

### Improved Tissue Processing\*

With this optional feature tissues can be processed faster, with increased quality.

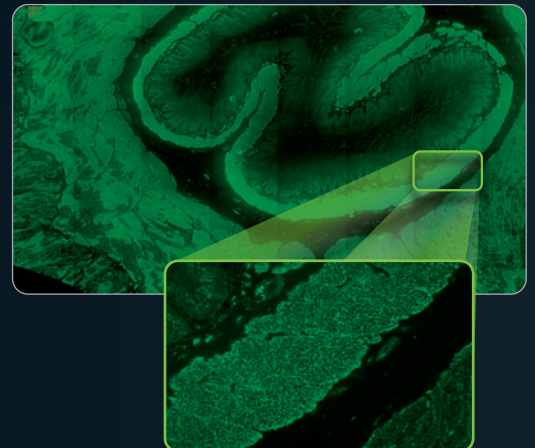
All the images included in this flyer have been performed using the revolutionary **HELIOS**® system under normal lab conditions.

rLKS Stitched Overview



rLKS Full Screen View (Stomach)

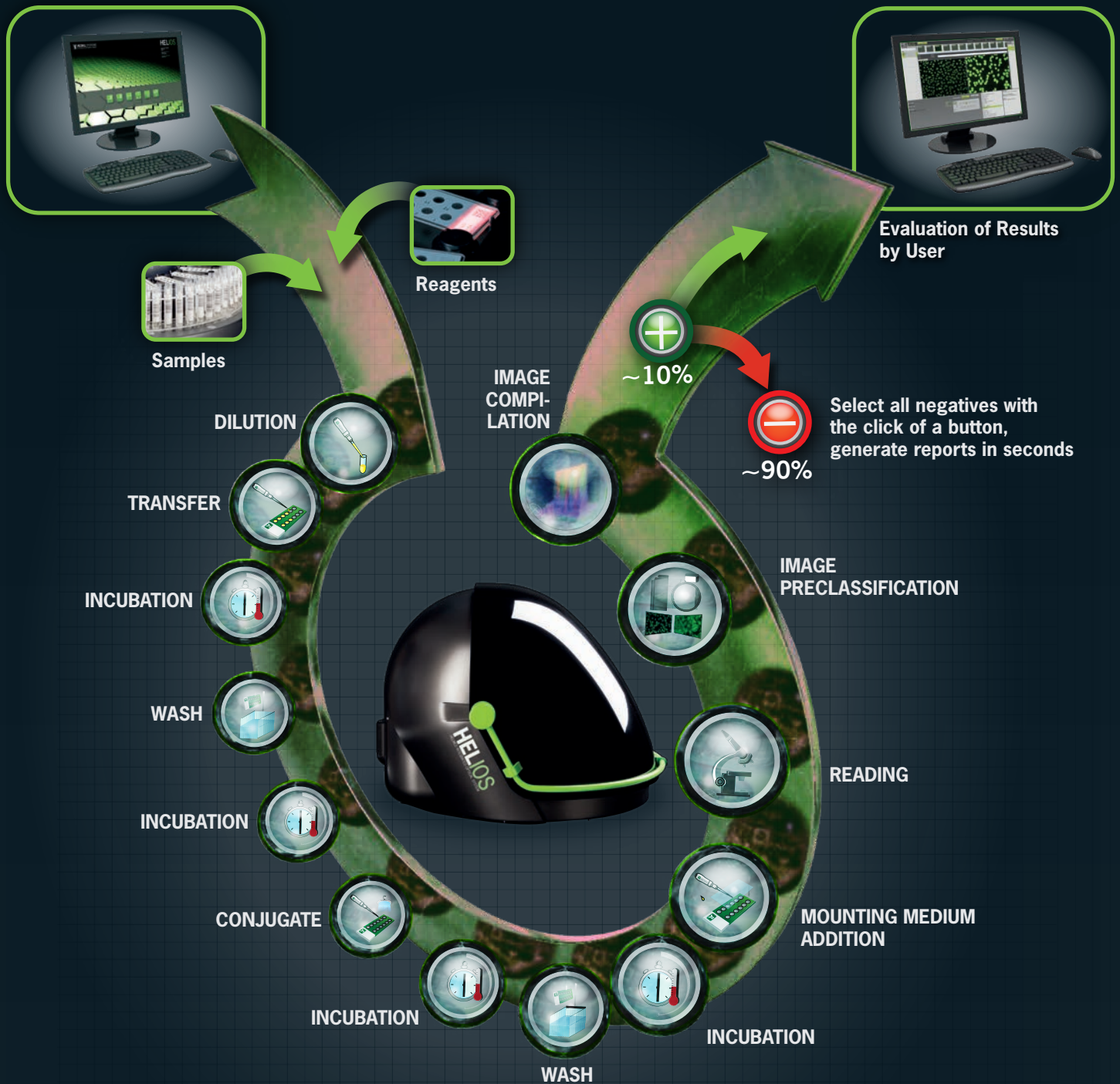
EMA Stitched Overview



EMA Full Screen View

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

# AUTOMATED PROCESSING AND READING



- FULL TRACEABILITY THANKS TO BARCODED SLIDES
- NO DARKROOM NEEDED
- SLIDE PROCESSING AND READING ALL ON THE SAME PLATFORM
- DIGITAL RESULTS ARCHIVE
- POWERFUL INTEGRATED IMAGE PRE-CLASSIFICATION TOOL

- STANDARDIZATION OF IFA
- HOMOGENEOUS WORKING PROTOCOL
- RESOURCE OPTIMIZATION
- INCREASED THROUGHPUT
- SAVES BOTH TIME AND MONEY
- SIMPLE IMPLEMENTATION IN LAB ROUTINE

# IFA SOFTWARE



## MODULE 1: IFA PROCESSING & IMAGE CAPTURING

The **HELIOS**® system is capable of performing all IFA processing and reading automatically.



## MODULE 2: IFA PROCESSING

The **HELIOS**® system uses the robust and widely adopted **HELMED**® IFA software, which is compatible with most IFA test kits, regardless of their manufacturer. However, 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.

Well imaging positions and image number is user configurable for all **AESKUSLIDES**® tests, prior to reading.

A Pre-Classification suggestion (+ or -) is performed for each image for **AESKUSLIDES**® ANA HEp2, ANCA and nDNA (via activated DNA Pattern Plus\*).



## MODULE 6: LIS

The LIS Module 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.



## 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 "Sample overview" option shows all results related to a single sample. This is useful when multiple substrates are used for one sample.

The **HELIOS**® displays all pre-classified negative results, helping to save reporting time by automatically releasing negative results with the push of a button.

### Titration

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

## NEW FEATURES

### Pattern Recognition Plus Add-ons\*

Pattern Recognition Add-ons give the **HELIOS**® system the ability to autonomously suggest the most probable IFA pattern by analysing captured IFA images: Rheumatology Pattern Plus\*, Vasculitis Pattern Plus\* and DNA Pattern Plus\*.

### Estimated Endpoint Titer Option\*\*

Digitally estimates an endpoint titer, saving saves time and reagents.



Estimated Endpoint Titer  
1/5120

\*Accessories, not included in the **HELIOS**®, sold separately (3-month trial version included)

\*\*Preinstalled option, activation only on customer request, activation key sold separately (3-month trial version included)

# HELIOS FEATURES

PRODUCT	REF. NO	Description
HELIOS® AUTOMATED IFA SYSTEM	REF. IOS-1000	<p>Automated IFA System and Reader (Software/PC/Monitor included)</p> <ul style="list-style-type: none"> <li>• Up to 190 samples, up to 20 slides, up to 4 different assays per run.</li> <li>• Sample dilutions are prepared on a MTP, hence no pre-dilution tubes required.</li> <li>• Transfers from the MTP to the slides.</li> <li>• Individual well time management ensures consistent incubation times.</li> <li>• Well by well washing avoids cross contamination compared to washing by flooding.</li> <li>• Automatic mounting medium addition is possible only with our specially formulated <b>AESKUSLIDES®</b> mounting medium.</li> <li>• No need for coverslips or slide transfer, reading will start automatically.</li> <li>• Large pattern image library included.</li> <li>• Pre-classification suggestion. User confirms results and selects follow up tests.</li> <li>• Show all negatives function, for fast negative classification.</li> <li>• Show all results for same sample ID within the same run in one screen.</li> </ul>

HELIOS® RACK REFERENCE	75 x 12	75 x 13	75 x 13	75 x 13	100 x 12	100 x 12	100 x 13
Sample rack 1 REF. NO	20160014	20160146	20160018	20160020	20160122	20160016	20160022
Sample rack 2 REF. NO	20160015	20160147	20160019	20160021	20160123	20160017	20160023
Total Samples (rack 1 + 2)	106	100	106	190	106	190	106

NEW FEATURES	REF. NO	Description
Estimated Endpoint Titer Option	REF. IOS-2002	<ul style="list-style-type: none"> <li>• Saves time and reagents</li> <li>• Easier to find the target dilution – less dilution steps needed.</li> <li>• 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 immunofluorescence images. After the first screening run, a titration of positive samples is strongly recommended.</li> <li>• The <b>HELIOS EPT Plus</b> offers the possibility to estimate an endpoint titer for wells that were preclassified as positive in a previous screening mode run.</li> <li>• Supported by this endpoint titer estimation, the next dilution steps can easily be selected during the user classification process.</li> </ul>
Multi-Rack A1 (1-53) Multi-Rack A2 (54-106)	20160209 20160210	<ul style="list-style-type: none"> <li>• High flexibility, accepts most tubes</li> <li>• Tube diameters ranging from 11-13 mm   lengths from 55-100 mm</li> <li>• Multi-Rack sample tube capacity: 106</li> <li>• The design of the rack and the clamping of the sample tubes increases overall stability</li> <li>• Position numbers are clearly printed and easy to read</li> <li>• The tubes are clamped in the holders to avoid rotation during the reading process of the sample barcodes</li> </ul>
PATTERN RECOGNITION Rheumatology Pattern Plus	REF. IOS-2101	This add-on is able to recognize the following ANA HEp-2 IFA patterns: Speckled   Homogenous   Nucleolar   Centromere   Cytoplasmic   Nuclear membrane   Nuclear dots
PATTERN RECOGNITION Vasculitis Pattern Plus	REF. IOS-2102	This add-on is able to recognize the following ANCA IFA pattern: P-ANCA   C-ANCA
PATTERN RECOGNITION DNA Pattern Plus	REF. IOS-2103	This add-on is able to discriminate positive/negative nDNA samples.

# SUITABLE REAGENTS

Simplify your autoimmunity sample screening routine with **AESKUSLIDES®**. The Immunofluorescence (IFA) product line from **AESKU.DIAGNOSTICS** is designed to fit in with lab automation needs.



- The **AESKUSLIDES®** product line comprises a complete panel of cell and tissue based slides and kits for the detection of major autoantibodies.
- All parameters from this product line are pre-programmed and validated for use in **HELIOS®** IFA system.
- The major patterns found on the **AESKUSLIDES®** are collected in the **HELIOS®** system device software image library.
- Easy handling: ready to use reagents and controls with vials that fit directly in the **HELIOS®** racks.

- Full traceability: every slide is labeled with product barcode and individual number.
- Especially formulated mounting medium allows its use in the **HELIOS®** IFA system.
- Strong hydrophobic teflon mask coating of the slides avoids cross contamination and requires minimal conjugate volumes.

## AESKUSLIDES®

available kit configurations

Antibody

Substrate

ANA

HEp-2

nDNA

Crithidia luciliae

ANCA

Granulocytes

Ethanol

Formalin

AMA/ASMA/APCA\* Triple tissue LKS

Mouse (Separated)

Rat (Separated)

Rat (Wrapped)

EMA\*

Primate Oesophagus

Conjugate

IgG

IgA

Slides

5 well

6 well

10 well

12 well

Kits

50 tests

60 tests

100 tests

120 tests

600 tests

Recommended Screening Dilution

1:5

1:10

1:20

1:40

1:80

Antibody	Substrate	IgG	IgA	5 well	6 well	10 well	12 well	50 tests	60 tests	100 tests	120 tests	600 tests	1:5	1:10	1:20	1:40	1:80
ANA	HEp-2	●					●				●	●				●	●
nDNA	Crithidia luciliae	●				●				●				●			
ANCA	Granulocytes	●		●		●			●		●				●		
		●		●		●			●		●				●		
AMA/ASMA/APCA*	Triple tissue LKS	●		●		●		●		●					●		
		●		●		●		●		●					●		
		●		●		●		●		●					●		
EMA*	Primate Oesophagus	●	●	●		●		●		●		●					

\* Currently not available in the USA.

\*\* US recommendation only

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