SCA

EVOLUTION

MORE THAN JUST BASIC SEMEN ANALYSIS

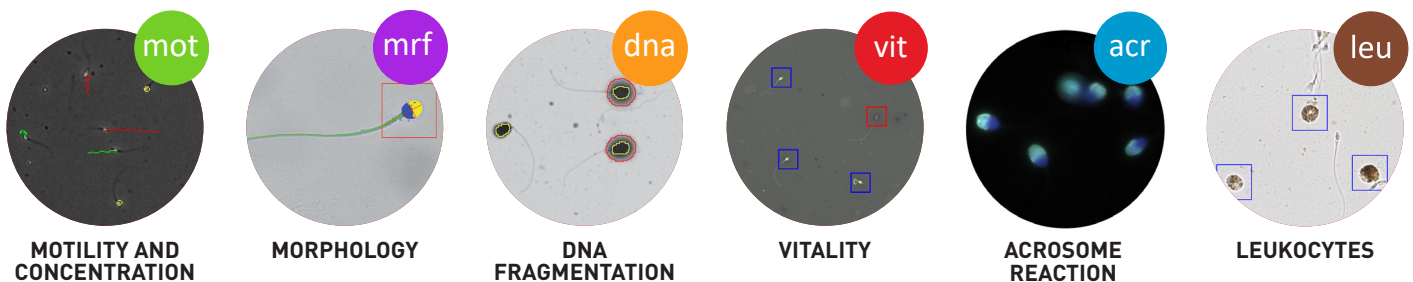## MICROPTIC
A HAMILTON THORNE COMPANY

WE HAVE SPECIALISED IN SEMEN ANALYSIS FOR OVER 30 YEARS

Microptic, a Hamilton Thorne company, is the innovator of the world's most advanced CASA (Computer Aided Semen Analysis) system. With dynamic and highly qualified staff, the company continues to develop its products in collaboration with the world's leading research centres and laboratories.

SCA®, THE MOST ADVANCED AND INTEGRATED MODULAR CASA

Automatic measuring system for the analysis of semen samples, following WHO[1] criteria or others.

MOTILITY AND CONCENTRATION   **MORPHOLOGY**   **DNA FRAGMENTATION**   **VITALITY**   **ACROSOME REACTION**   **LEUKOCYTES**

WHY USE A CASA SYSTEM?

RELIABLE AND DEMONSTRABLE DIAGNOSTICS

Many scientific papers have revealed the homogeneous results obtained with CASA[2], in contrast to the often unreliable outcome from conventional analysis[3].

IMPROVE THE QUALITY OF YOUR LABORATORY PROCEDURES

SCA® will assist in the implementation of the objective analysis and quality controls in your laboratory, in addition it produces all of the information needed for the norms ISO 15189:2013 and ISO 23162:2021 accreditations.

STANDARDIZATION AND TRACEABILITY

The SCA® greatly improves the ability of the laboratory to compete through the consistency of the analysis by recording image sequences and results. Measurement errors due to human factors are minimized in the analysis of human sperm.

WIDELY VALIDATED

Various studies have shown that the SCA® provides reliable, linear and accurate results with less variability than manual methods, giving higher predictive values when diagnosing fertility problems[4].

[1] (WHO laboratory manual for the examination and processing of human semen Sixth edition 2021)
[2] (Maree L., du Plessis S.S.,. Menkveld R,. van der Horst G, Human Reproduction 2010)
[3] (Mukhopadhyay D, Varghese AC, Nandi P, Banerjee SK, Bhattacharyya AK. Andrologia, 2010)
[4] (Dearing C G, Kilburn S, Lindsay K. S., Human Fertility, 2013)

ADAPTATION AND FLEXIBILITY

We have numerous SCA® editions with optional modules to help you to find the optimum configuration for your laboratory.

THE MOST COMPLETE CASA SYSTEM

SCA® EDITIONS

Several editions with options adapted to give users a choice that will suite their needs:

Human
Full version, with all the features included for human andrology and IVF labs, sperm banks, fertility clinics, hospitals, etc.

Research
Full version to analyse human and animal sperm focused on research centres.

ADDITIONAL MODULES

Enable to complete your SCA® CASA system:

SCA® dataShare
It enables the internal SCA® database sharing and a bidirectional connection with any LIS system.

SCA® Stage Controller
Fully automation using motorized stage.

SCA® Manual counter
Manual counter of any biological sample.

COMPLEMENTARY SYSTEMS

Unitary systems that permit to capture, view or edit SCA® files:

SCA® Capture
Image capture software to use in connection with a main SCA® station.
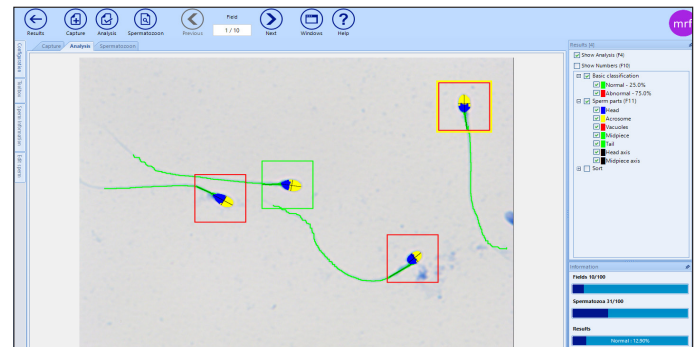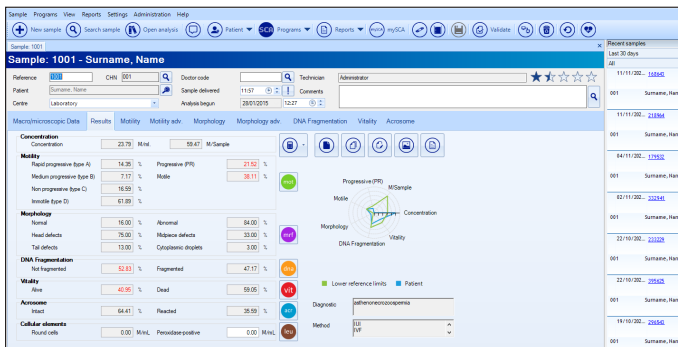
SCA® Editor
Software that allows the opening of SCA® sessions enabling to edit or reanalyze.

SCA® Viewer
Free software that allows to display SCA® analysis in any computer.

SCA® EVOLUTION:
A STATE-OF-THE-ART CASA

Since its launch in 1997, the SCA® sperm analyser has been in continuous development, improving with each version the detection and analysis algorithms. Combined with the latest state-of-the-art technology,
SCA® becomes the ultimate CASA research tool.

VITALITY IN BRIGHTFIELD

We developed BrightVit, a new kit to stain in one step to assess quickly the vitality in brightfield (possible to see the HOS). SCA® Vitality can automatically analyse in brightfield or fluorescence.

SPERM FUNCTIONAL TEST

Automatic analysis of hyperactive and mucus penetration, information about sperms capacity to fertilize the egg.

DIAGNOSTIC AND TREATMENT

Automatically provides a diagnosis and recommends the best assisted reproduction treatment to follow.

CUSTOMIZABLE DYNAMIC TABLES

Enable the operator to amalgamate any of the database results into subgroups and create customised statistics.

ADAPTED TO THE NEW TECHNOLOGIES

Working with touch screens, multi-screens, leap motion[1] and portable devices.

LEUKOCYTES

Automatic detection of peroxidase positive cells in semen.

ACROSOME REACTION ASSAY

Automatic analysis of intact and acrosome reacted sperm with FluoAcro kit.

ADVANCED ANALYSIS

SCA® offers several innovations in automatic analysis such as: an intelligent filter for sperm detection; fluorescence analysis for sperm concentration, motility and DNA fragmentation; very low concentration samples analysis; and vacuoles and tails detection in morphology.

AUTOMATION

With a motorized stage, the analysis process is fully automatic enabling the examination of 4 slides, without user intervention.

RESEARCH EDITION

Analysis of several species, export images, videos and measurement data. For centres involved in research that requires a flexible and exhaustive system.

[1]www.leapmotion.com

OUR OBJECTIVE:
WARRANTY AND TRUST IN THE DIAGNOSTICS

CUSTOMIZED REPORTS SERVICE
More than 40 different reports, including Levy-Jennings report for quality control.

ANALYSIS RESULTS ON-LINE
Patients can have access to their results and analysis videos on: www.semenanalysis.net

mySCA
Virtual site for customers with unlimited space to upload sessions, reports and videos. Also permits users to access webinars, tutorials and on-line teaching courses as well as perform an External Quality Control (EQA).

TRAINING IN YOUR LABORATORY
Installation, training and accreditation by specialist.

IMAGES AND GRAPHICS
The user can select the graphics /images that will appear in the printed report.

RESULTS VALIDATION
A specialist can validate all the assessments, automatically send the results to the central database (e.g.: HL7), and print the custom reports.

LABORATORY INFORMATION SYSTEM (LIS) CONNECTIVITY
SCA® is ready to connect with existing databases.

SUPPORT
Technical advice and service, giving the latest program version.

SCA® MODULES AND SYSTEMS:

MAIN MODULES	
SCA® Motility and concetration	Analysis of the motility, concentration and kinematic parameters
SCA® Morphology	Analysis of the morphology and morphometry in stained sperm samples
SCA® DNA Fragmentation	Analysis of the DNA fragmentation with the chromatine dispersion test
SCA® Vitality	Analysis of the vitality under brightfield or fluorescence
SCA® Acrosome reaction	Analysis of intact and acrosome reacted under fluorescence
SCA® Leukocytes	Analysis of human peroxidase-positive leukocytes
SCA® Sample Management	Management of the database and reports generator
ADDITIONAL MODULES	
SCA® DataShare	It enables the internal SCA® database sharing and the connection with any LIS system
SCA® Stage Controller	Fully automation using motorized stage
SCA® Manual Counter	Manual counter of any biological sample
COMPLEMENTARY SYSTEMS (To be used in combination with a main analysis system)	
SCA® Capture	Unitary module for image capture
SCA® Editor	Module for analysis modification
SCA® Viewer	Free software for image visualization

MINIMUM REQUIREMENTS:

	SCA® Motility and Concentration		SCA® Morphology	SCA® DNA Fragmentation		SCA® Vitality		SCA® Acrosome reaction	SCA® Leukocytes
COMPUTER	Desktop or laptop: Operating system Windows 10/11 (64 bits); Processor: Intel Core i5 or superior; RAM: 4 GB or superior; USB 3.0 port								
CAMERA	Basler Ace acA1300-200uc								
MICROSCOPE	Nikon, Olympus, Zeiss or Leica; Trinocular C-mount 1x; Turret condenser and centering telescope								
OBSERVATION METHOD	Positive phase contrast	Fluorescence	Brightfield	Brightfield	Fluorescence	Brightfield	Fluorescence	Fluorescence	Brightfield
OBJECTIVE	10x Ph+		60x / 100x oil	10x		20x		40x Plan Fluor	40x
FILTERS	Green	Long bandpass (EX 330-380; EM 420; DM 400)	Blue	Green	Bandpass (EX 510-560; EM 590; DM 565)	-	Long bandpass (EX 330-380; EM 420; DM 440)	Dual band (EX 387/480; EM 433/530; DM 403/502)	-
DISPOSABLES, KITS, STAININGS	Disposable counting chambers or Makler		Sperm Stain, SpermBlue, Diff-Quik, Morphology slides SCA, Papanicolau, Shorr	Chromatin dispersion test kits (SCD)		Vitality slides SCA	FluoVit	FluoAcro	Leukocytes slides SCA
	-	FluoCount							

CE IVD SFDA

DISTRIBUTOR: