



EVOLUTION

MORE THAN JUST BASIC SEMEN ANALYSIS



**MICROPTIC**  
AUTOMATIC DIAGNOSTIC SYSTEMS

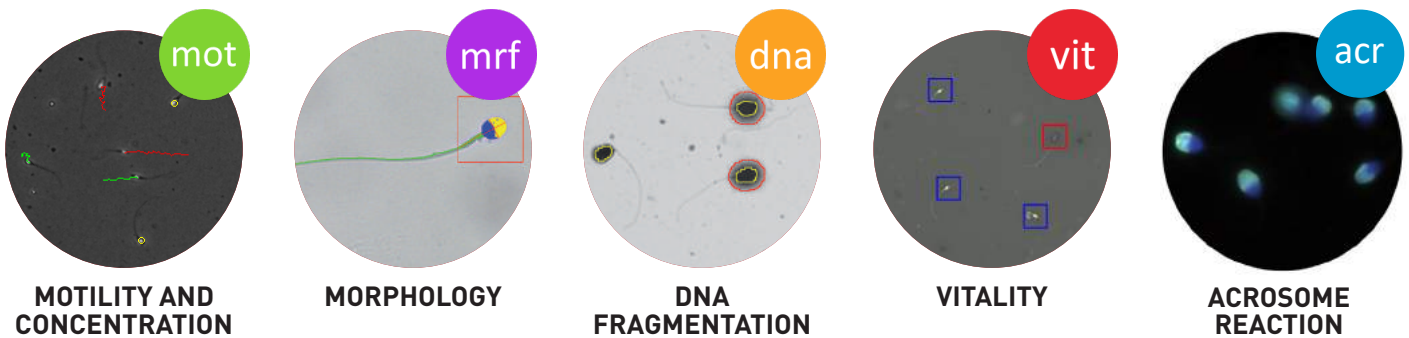
# MICROPTIC HAS SPECIALIZED IN THE ANALYSIS OF SEMEN FOR OVER 20 YEARS



Microptic are the innovators of the world's most advanced CASA (Computer Aided Semen Analysis) system. With dynamic and highly qualified staff, we continue to develop our products in collaboration with the world's leading research centres and laboratories.

# SCA<sup>®</sup>, THE MOST ADVANCED AND INTEGRATED MODULAR CASA

Automatic measuring system for the analysis of semen samples, following WHO<sup>1</sup> criteria or others.



## WHY USE A CASA SYSTEM?

### RELIABLE AND DEMONSTRABLE DIAGNOSTICS

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

### IMPROVE THE QUALITY OF YOUR LABORATORY PROCEDURES

SCA<sup>®</sup> 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 norm ISO 15189:2013 accreditation.

### STANDARDIZATION AND TRACEABILITY

The SCA<sup>®</sup> 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<sup>®</sup> provides reliable, linear and accurate results with less variability than manual methods, giving higher predictive values when diagnosing fertility problems<sup>4</sup>.

<sup>1</sup> (WHO laboratory manual for the examination and processing of human semen Fifth edition 2010)

<sup>2</sup> (Maree L., du Plessis S.S., Menkveld R., van der Horst G, Human Reproduction 2010)

<sup>3</sup> (Mukhopadhyay D, Varghese AC, Nandi P, Banerjee SK, Bhattacharyya AK. Andrologia, 2010)

<sup>4</sup> (Dearing C G, Kilburn S, Lindsay K. S., Human Fertility, 2013)

# ADAPTATION AND FLEXIBILITY



We have numerous SCA<sup>®</sup> 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 to 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<sup>®</sup> EVOLUTION: A STATE-OF-THE-ART CASA

Since its launch in 1997, the SCA<sup>®</sup> 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<sup>®</sup>** 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<sup>®</sup> 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<sup>1</sup> and portable devices.

## ACROSOME REACTION ASSAY

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

## ADVANCED ANALYSIS

SCA<sup>®</sup> 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. Designed for centres involved in research that requires a flexible and exhaustive system.

## NEW INTERFACE

Fully customizable.

<sup>1</sup>www.leapmotion.com

# OUR OBJECTIVE: WARRANTY AND TRUST IN THE DIAGNOSTICS

**SCA EVOLUTION**

Reference: 1001  
Date: 20/12/2011  
Doctor: Dr. Johan Malkovic  
Code Patient: 001  
Patient: Surname, First Name

Collection date: 20/12/2011 08:31  
Volume (ml): 2.50 (Ref: > 2.5 ml)  
Temperature (°C): 37  
Collection difficulties: No  
Liquefaction: 60min (Ref: > 60min)  
Viscosity: Normal  
Appearance: Normal  
Collection method: Laboratory  
pH: 7.50 (Ref: > 7.2)  
Abstinence days: 3 (Ref: 2-5)  
Complete Sample: Complete  
Aggregation: Normal  
Agglutination: 1A  
Cellular elements: Normal

Diagnosis: Asthenozoospermia

Concentration (20/12/2011 9:32:00)  
28,04 M/ml (Ref: > 15 M/ml)  
70,11 M/Ejac (Ref: > 39 M/Ejac)  
2,50 ml (Ref: > 1.5 ml)  
Dilution 1:0

WHOS	Total	%	Conc/Ejac (M)	Ref
Progressive (PR) (A+B)		23,77	16,67	(> 32%)
Non-progressive (NP) (C)	52	19,62	13,76	
Immotile (IM) (D)	150	56,60	39,68	

Mobile (A+B+C)	Total	%	Conc/Ejac (M)	Ref
	115	43,40	30,42	(> 40%)

Velocity	Total	%	Conc/Ejac (M)
Rapid	57	21,51	15,08
Medium	32	12,08	8,47
Slow	26	9,81	6,88
Immotile (IM)	150	56,60	39,68

WHO4	Total	%	Conc/Ejac (M)	Ref
Rapid progressive (type A)	39	14,72	10,32	(> 25%)
Medium Progressive (type B)	24	9,06	6,35	
Non progressive (type C)	52	19,62	13,76	
Immotile (type D)	150	56,60	39,68	

Reference: 1001 Code Patient: 001 Patient: Surname, First Name Date: 20/12/2011

**Motility & Concentration**

WHOS: 23,77% (Progressive PR), 19,62% (Non-progressive NP), 56,60% (Immotile IM)

Velocity: 21,51% (Rapid), 12,08% (Medium), 9,81% (Slow), 56,60% (Immotile IM)

WHO4: 14,72% (Rapid progressive type A), 9,06% (Medium Prog type B), 19,62% (Non progressive type C), 56,60% (Immotile type D)

Concentration: 28,04 M/ml, 70,11 M/Ejac, 2,50 ml, Dilution 1:0

Measure of progression velocity: [Microscopy image]

**Morphology**

Morphology: 30,00% Normal, 70,00% Abnormal

Basic classification: 30,00% Normal, 69,72% Head defects, 29,00% Midpiece defects, 19,00% Tail defects, 0,00% Cytoplasmic droplets

[Microscopy images of sperm morphology]

## 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](http://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 concentration	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 fluorecence
SCA® Acrosome reaction	Analysis of intact and acrosome reacted under fluorecence
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
<b>COMPUTER</b>	Desktop or laptop: Operating system Windows 10 (32 or 64 bits); Processor: Intel Core i5 or superior; RAM: 4 GB or superior; USB 3.0 port							
<b>CAMERA</b>	Basler Ace acA1300-200uc							
<b>MICROSCOPE</b>	Nikon, Olympus, Zeiss or Leica; Trinocular C-mount 1x; Turret condenser and centering telescope							
<b>OBSERVATION METHOD</b>	Positive phase contrast	Fluorescence	Brightfield	Brightfield	Fluorescence	Brightfield	Fluorescence	Fluorescence
<b>OBJECTIVE</b>	10x Ph+		60x / 100x oil	10x		20x		40x Plan Fluor
<b>FILTERS</b>	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)
<b>DISPOSABLES, KITS, STAININGS</b>	Disposable counting chambers or Makler		Sperm Stain, SpermBlue, Diff-Quik, Prestained slides GoldCyto-SB, Papanicolau, Shorr	Chromatin dispersion test kits (SCD)	BrightVit	FluoVit	FluoAcro	
	-	FluoCount						



DISTRIBUTOR:



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