SCA
EVOLUTION

MORE THAN JUST BASIC SEMEN ANALYSIS

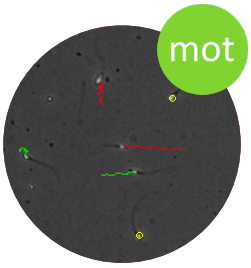
MICROPTIC
AUTOMATIC DIAGNOSTIC SYSTEMS

MICROPTIC HAS SPECIALISED IN SEMEN ANALYSIS FOR OVER 20 YEARS

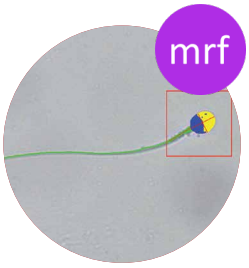
Microptic are the innovators of the world's most advanced CASA (Computer Aided Semen Analysis) system. With dynamic and highly qualified staff, we continue to develop our products in collaboration with the world's leading research centres and laboratories.

SCA®, THE MOST ADVANCED AND INTEGRATED MODULAR CASA

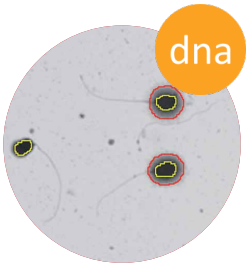
Automatic measuring system for the analysis of semen samples, following WHO[1] criteria or others.



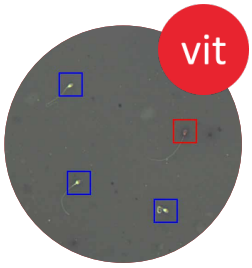
MOTILITY AND CONCENTRATION



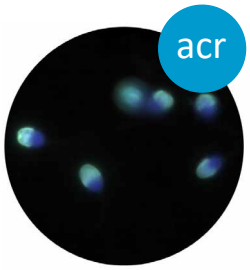
MORPHOLOGY



DNA FRAGMENTATION



VITALITY



ACROSOME REACTION

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 norm ISO 15189:2013 accreditation.

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 Fifth edition 2010)
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 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:

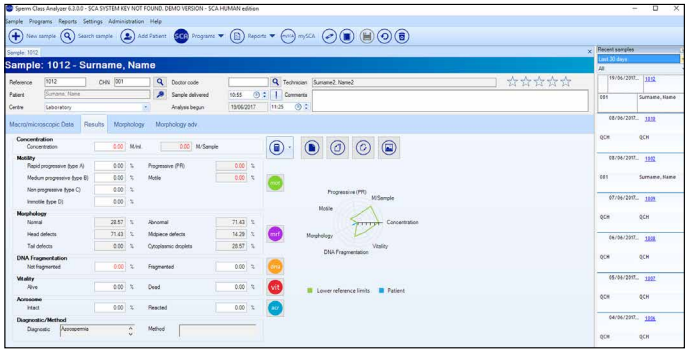
SCA® Capture
Image capture software to use in connection with a main SCA® station.

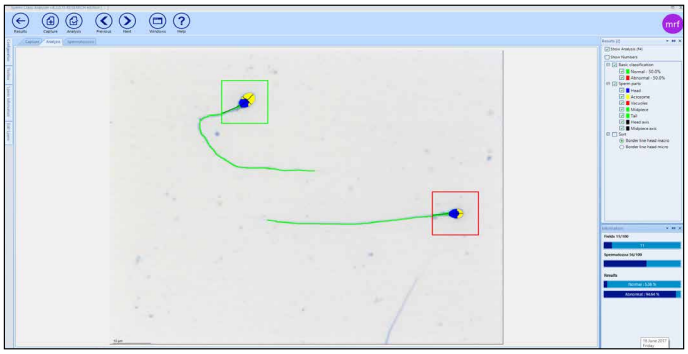
SCA® Editor
Software that allows the opening of SCA® sessions enabling to edit or reanalyze.

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

SCA® 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.

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

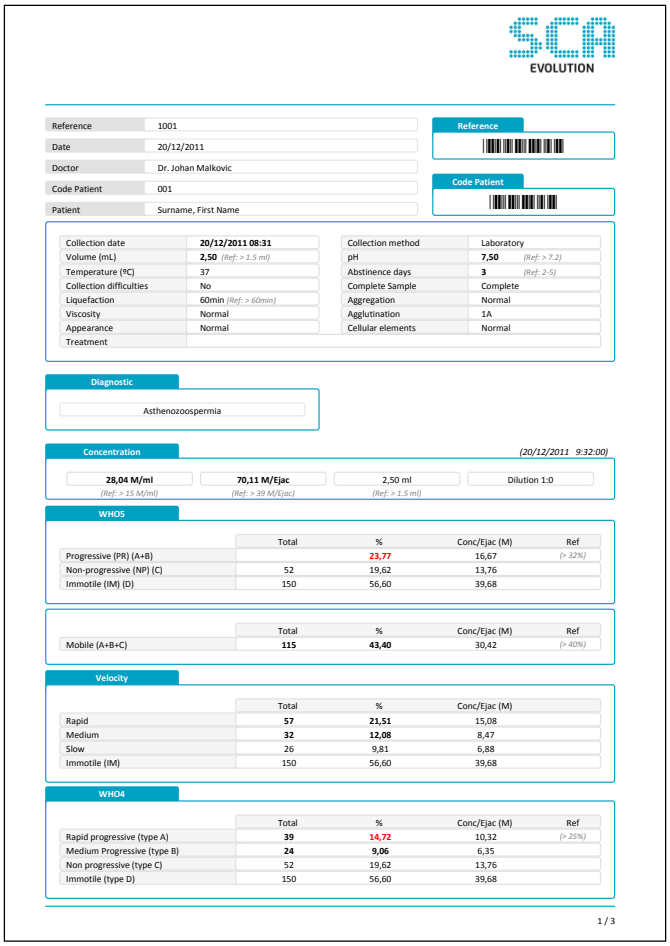
Analysis of several species, export images, videos and measurement data. Designed for centres involved in research that requires a flexible and exhaustive system.

NEW INTERFACE

Fully customizable.

[1] 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

Reference

Code Patient

Collection date	**20/12/2011 08:31**	Collection method	Laboratory
Volume (mL)	**2,50** *(Ref: > 1.5 ml)*	pH	**7,50** *(Ref: > 7.2)*
Temperature (ºC)	37	Abstinence days	**3** *(Ref: 2-5)*
Collection difficulties	No	Complete Sample	Complete
Liquefaction	60min *(Ref: > 60min)*	Aggregation	Normal
Viscosity	Normal	Agglutination	1A
Appearance	Normal	Cellular elements	Normal
Treatment			

Diagnostic

Asthenozoospermia

Concentration *(20/12/2011 9:32:00)*

28,04 M/ml	70,11 M/Ejac	2,50 ml	Dilution 1:0
(Ref: > 15 M/ml)	*(Ref: > 39 M/Ejac)*	*(Ref: > 1.5 ml)*	

WHO5

	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	

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

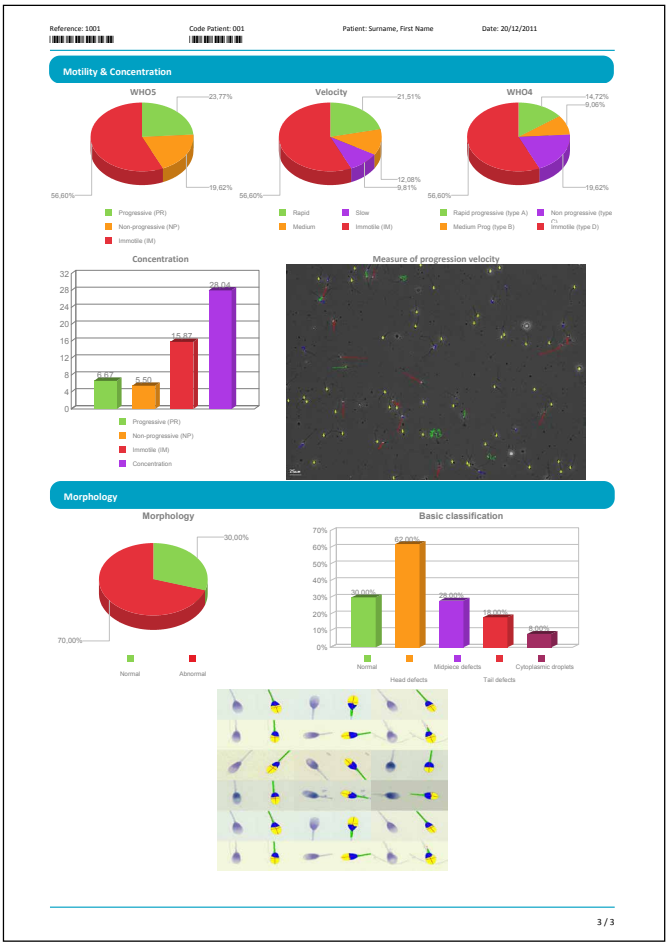
Velocity

	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	

1 / 3



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

Motility & Concentration

WHO5 Velocity WHO4

Progressive (PR) Non-progressive (NP) Immotile (IM) Rapid Medium Slow Immotile (IM) Rapid progressive (type A) Medium Prog (type B) Non progressive (type C) Immotile (type D)

Concentration

Measure of progression velocity

Morphology

Morphology

Normal Abnormal

Basic classification

Normal Head defects Midpiece defects Tail defects Cytoplasmic droplets

3 / 3

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® 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**
COMPUTER	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							
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
OBJECTIVE	10x Ph+		60x / 100x oil	10x		20x		40x Plan Fluor
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, Prestained slides GoldCyto-SB, Papanicolau, Shorr	Chromatin dispersion test kits (SCD)		BrightVit	FluoVit	FluoAcro
	-	FluoCount						

DISTRIBUTOR:

MICROPTIC
AUTOMATIC DIAGNOSTIC SYSTEMS

Av. Josep Tarradellas, 8, 1º 6ª · 08029 · Barcelona (Spain) · T. +34 93 419 29 10 · F. +34 93 419 94 26
www.micropticsl.com · micropticsl@micropticsl.com

SCA-HUM-EN-1909