



C A S A

Computer
Assisted Semen Analysis



SPERMOLYZER



Computer Assisted Semen Analysis utilizes latest technology of machine vision and image processing techniques for the clinical assessment of sperm Motility, Morphology, Vitality, DNA fragmentation, Acrosome reaction And leukocytes.

Based on the sperm test standards of the WHO 6th Criteria (2021) , the system can analyze the characteristics of the sperm comprehensively and generates accurate parameters to show sperms quality . the whole procedure is fast and provides several and important information that are vital to current scientific basis for the male reproductive ability.



what is new ?

MiraLab introduces the all new and innovative Spermolyzer microscope. Creative head with built-in digital camera & temperature controller.



Unique Microscope

SPERMOLYZER

Spermolyzer is the world's most advanced, reliable and cost effective CASA. Fast, accurate and objective results for sperm analysis can be obtained for different Pathology and Andrology laboratories.

- * All in one solution.
- * Reliable, accurate, homogeneous and objective results.
- * Powerful yet flexible.
- * Fast, easy and intuitive user interface.



Main Modules:

- * Count and Motility
- * Morphology
- * Vitality
- * DNA Fragmentation
- * Acrosome Reaction Test
- * Leukocytes

- * Follows WHO 6th edition strict criteria.
- * Automatic comment generating according to the results.
- * Creative constant-temperature operation desk
- * Unique on screen virtual grid function
- * Robust database with incremental backup and restore.
- * Generating of historical report.
- * Stats for researchers and institutions.
- * Option for making a soft copy of the patient reports along with motility tracks and images.
- * Very easy and only one-time calibration.
- * Customized reports with custom colors
- * Multi user system with different level of privileges.
- * Multilingual interface (English, French, Italian, Russian, Chinese...etc)



NO COST OF MOTILITY MODULE

Spermolyzer Metal Slide is a reusable single chamber to analyse Sperm Concentration and Quantitative assessment of Sperm Motility.



Main Modules:

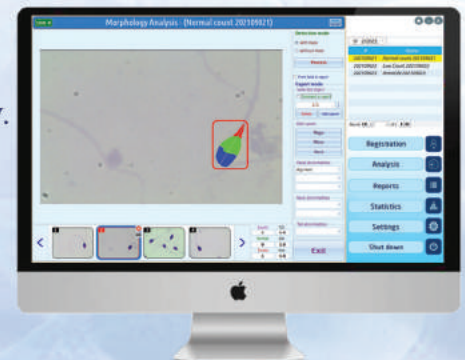
Motility

- * Motility for different velocities and kinematic parameters (VCL, VSL, VAP, MAD, ALH, BCF, LIN, WOB, STR).
- * Ability to delete non sperm detected objects.
- * Compatible with reusable and disposable slides.
- * Smart analysis for detecting irregular movement of sperms.
- * Multi selection/deselection of objects for accurate results.
- * Automatic threshold detection to easily catch all sperms in a given track.



Morphology

- * Auto detection of head and neck defects
- * Morphological and morphometric parameters.
- * Auto calculation of the important TZI, SDI and MAI indices.
- * Ability to add, delete and edit sperm vertices easily and interactively.
- * Showing all sperm properties (shape and size).
- * Option to print up to 4 images in report along with images of defect/normal sperms.



Vitality

- * Easy and cost effective staining.
- * Using bright field microscope.
- * Fast analysis with the ability to add, delete and edit any object detected.
- * Option to print two track images in report.

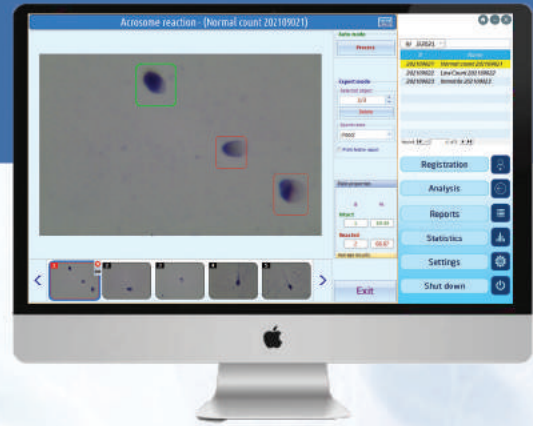


DNA Fragmentation

- * Using the SCD (Sperm Chromatin Dispersion) method.
- * Fast analysis with the ability to add, delete and edit any object detected.
- * Classification of sperms according to halo size.
- * Calculation of the important DFI parameter.
- * Option to print two track images in report.

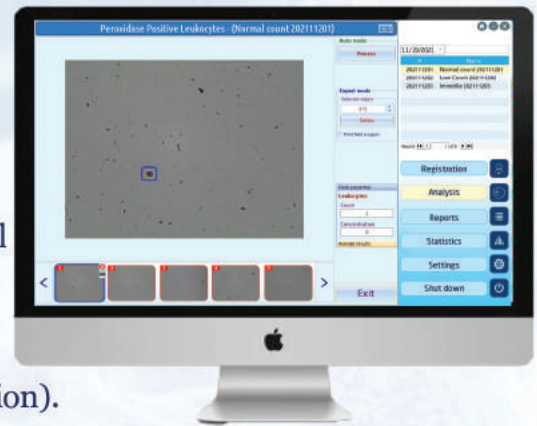


Acrosome reaction



- *It's the most important process in fertilization.
- *Acrosome reaction occurs when sperm are binding with the zona pellucide.
- *Spermolyzer automatically provides the percentage of acrosome intact and acrosome reacted spermatage.
- *The test result can provide the evidences in diagnosis of male infertility and help in choice of the methods of ART
- * Using bright field microscope.

Leukocytes



- *Leukocytes can weaken the sperm and damage its genetic material
- *Leukocytes can release substances called reactive oxygen species, which can negatively impact sperm.
- *Leukocytes can increase DNA damage of sperm (DNA fragmentation).
- * Leukocytes can cause sperm clumping and affect the motility of sperm
- *Automatic detection of peroxidase positive cells in semen.
- *Analysis is performed in brightfield.
- *Cells are detected automatically by the presence of the enzyme peroxidase in cells.

Other features of spermolyzer software :

- *Automatic interpretation and generating of appropriate according to the patient results.
- *Generating of custom reports like Urine , stool , CBC and Bone marrow with any captured images using the system digital camera and microscope .
- *Burn soft-copy of patients reports along with free track of live spermatozoa .

SFT

sperm function test

- PH
- Viscosity
- Vitality
- Leukocytes
- Morphology
- DNA Fragmentation
- Antisperm Antibody (IgG & IgA)
- Nuclear Protein Assay
- α - Glucosidase
- Fructose
- Zinc
- Acorsome Reaction



Miralab Andrology

Andrology lab workFlow will be far easy and practical with the help of the specifically developed instruments and accessories for all sperm function tests with regards to their functional and ergonomic needs.

The instruments are developed with the in-vivo temperature environment of natural processes in mind where ever needed giving systematic approach and quality results.



Warmer for semen specimen :

Semen specimen warmer is temperature control system which is ergonomically designed to give ease of work and specimen handing . the system has heater & sensor programmed to attain & maintain 37°C . it has very high accuracy with $\pm 0.20C$

Warmer for DNA fragmentation test :

DNA fragmentation test Warmer is a dual temperature control system, designed to expose the agarose tubes at 70°C or at 37°C in separate blocks of instrument. the two blocks for two different temperatures can be used simultaneously

you can thereby cut off the hassle included in conventional method and do the work in ease in just one instrument Also, its ergonomics allows user to handle each tube without disturbing other.



Spermolyzer (smart CASA System)

Sperm Dynamic Test
Sperm Morphology Test
DNA Fragmentation Test
Sperm Vitality Test
Acrosome Reaction Test
Leukocytes Test

Sperm Function test Kits

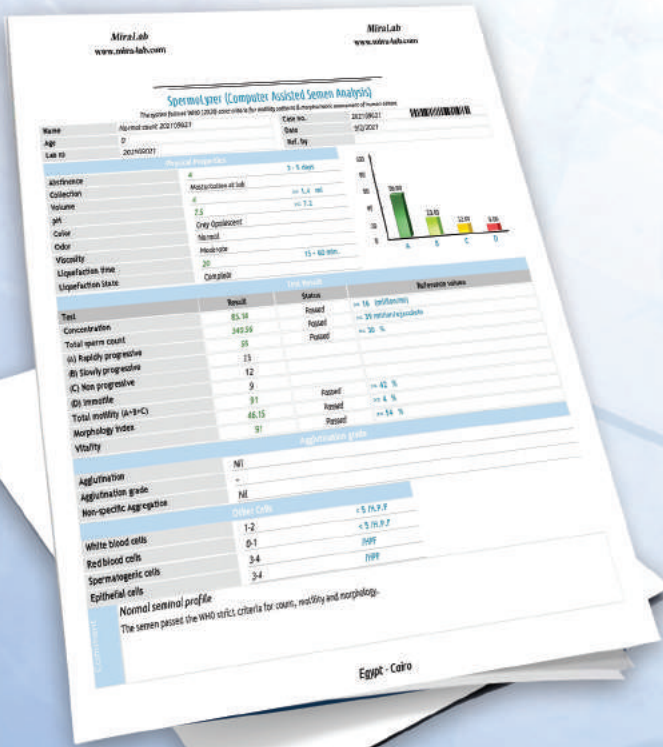
Andrology Solution Kits

Antisperm Antibody Kit
Nuclear Protein Assessment Kit
Leukocytes Confirmation Kit
 α - Glycosidase Kit

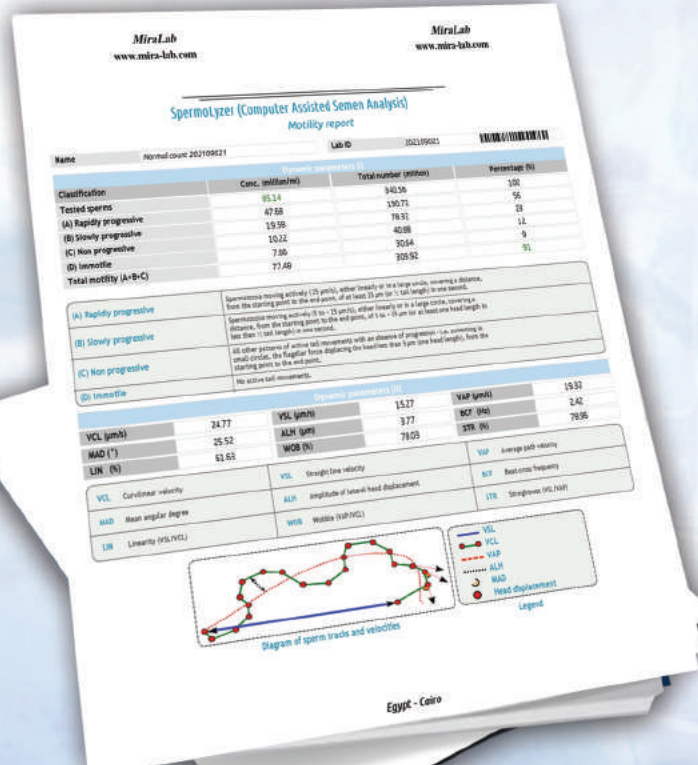
Sperm Fructose Kit
Sperm HOS Reagent Kit
Viscosity Reagent Kit
Sperm pH Strips
Sperm Zink kit

REPORTS

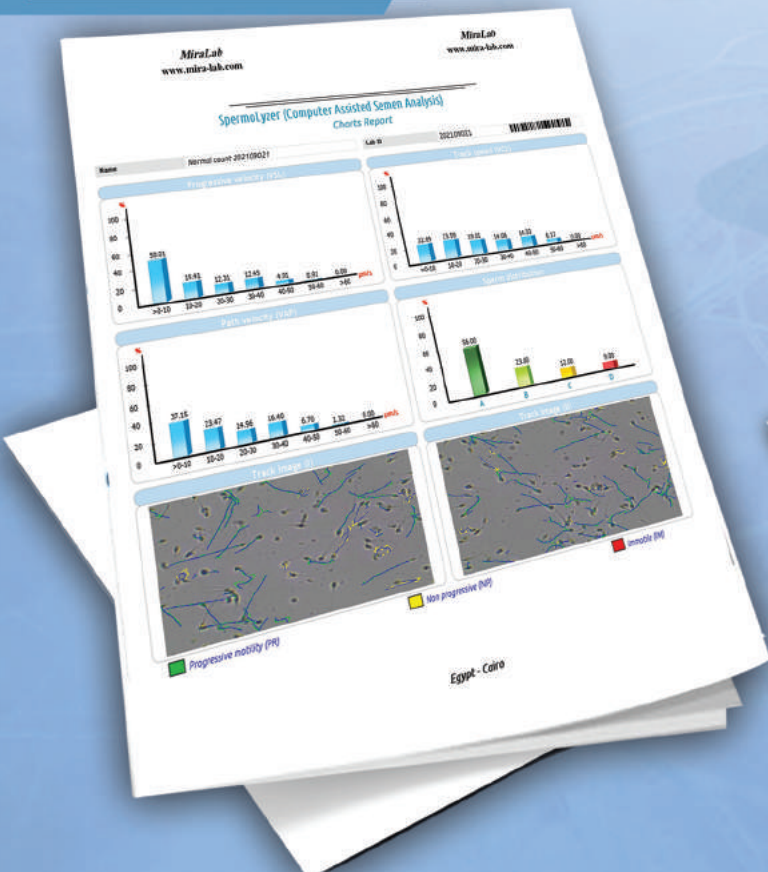
Final Report



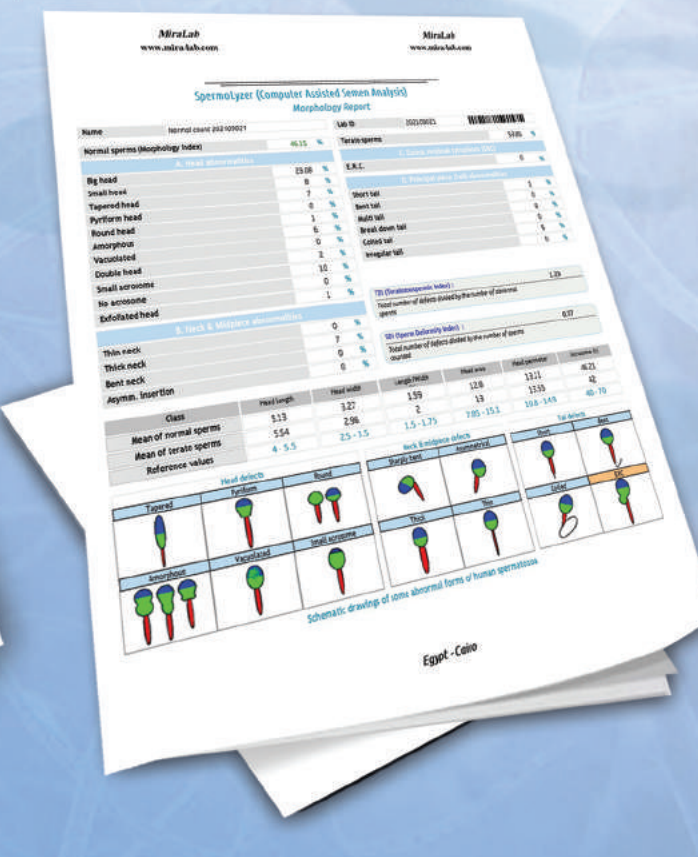
Motility Report



Charts Report

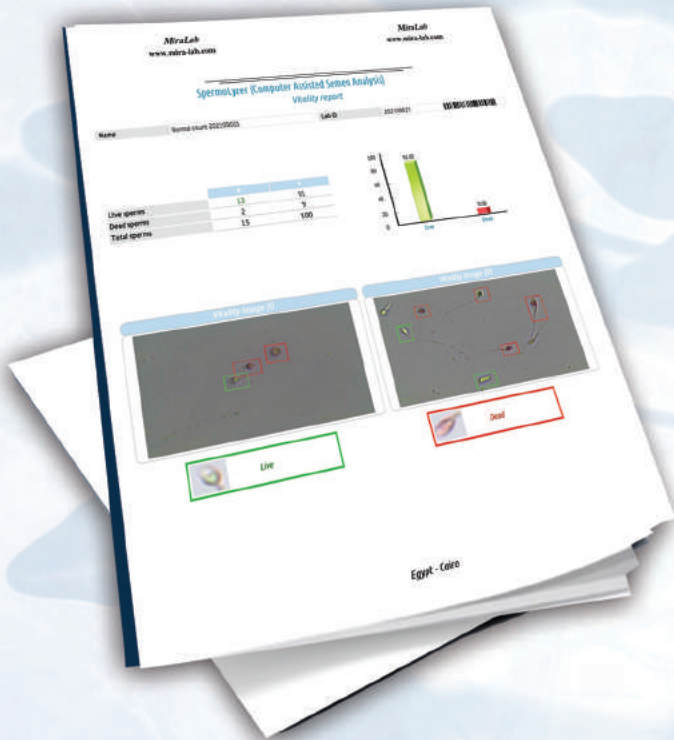


Morphology Report

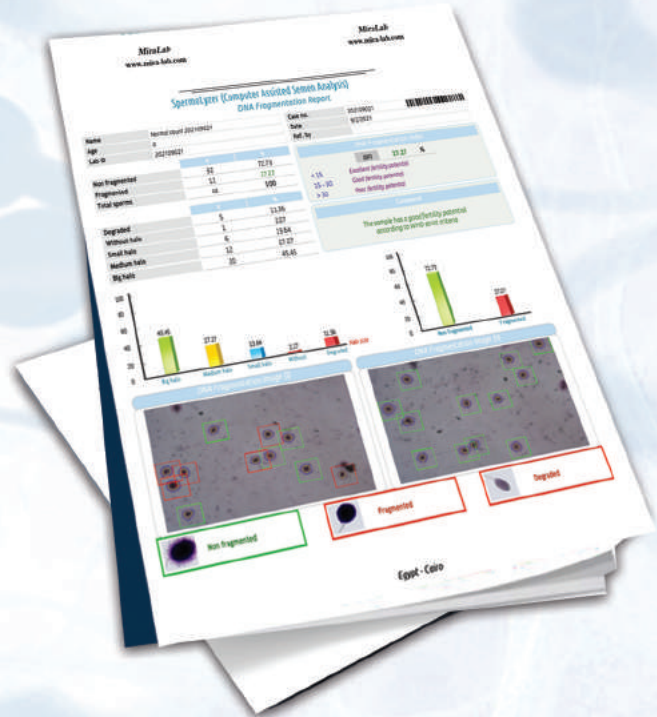


REPORTS

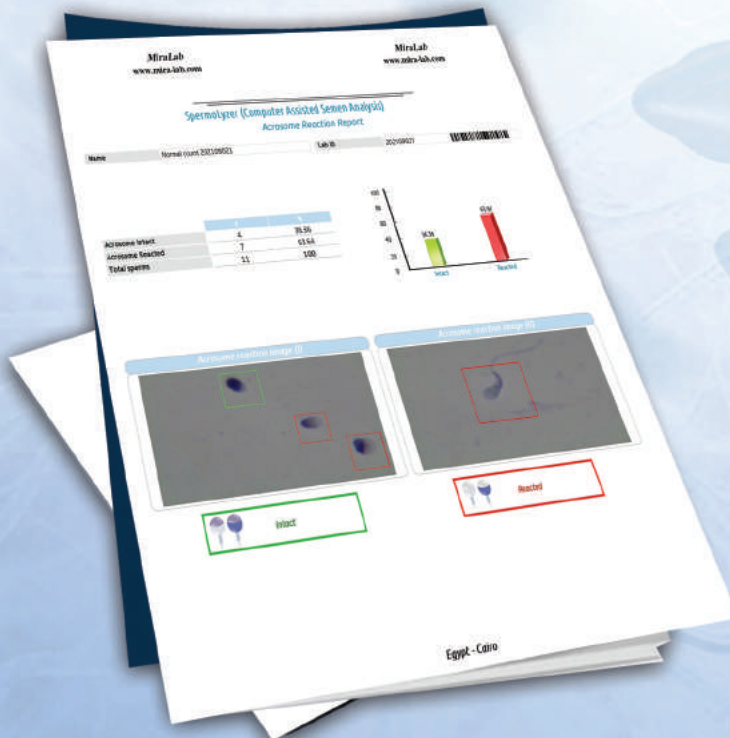
Vitality Report



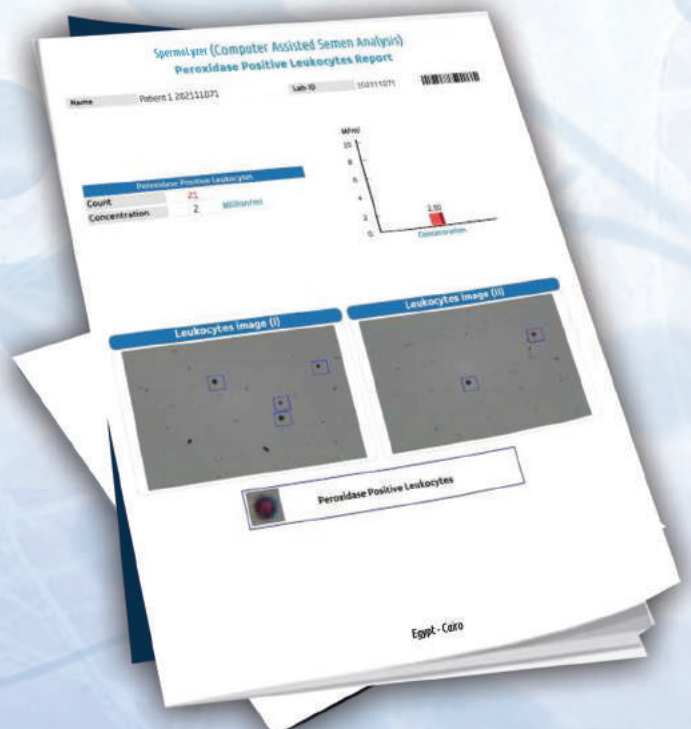
DNA Fragmentation Report



Acrosome reaction Report



Leukocytes Report



www.mira-lab.com

Egypt & Middle East Head office
Building No.6105/6 Quds St,
Mokattam, Cairo, Egypt.

Tel: +202 28462134 +20 1150222203
Fax: +202 28462135

Alexandria Branch Office
Al Baneh Tower 4, Azhar Alsaraya Towers
Fawzy Moazz Square, Smouha, Alex, Egypt.

Tel: +203 4260557 +20 1159887705
Fax: +203 4260558

