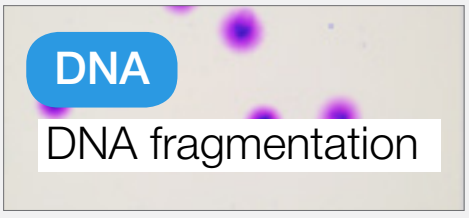
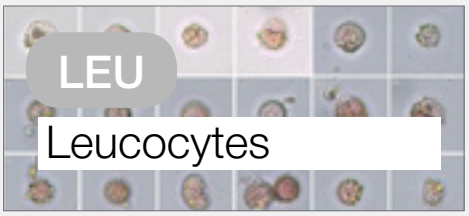
Digital Microscopy and AI
Clinical and Research applications

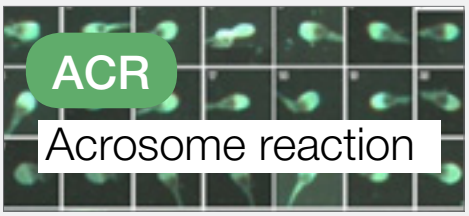
WEST MEDICA

Sperm Analysis

Automatic Systems for Sperm Analysis

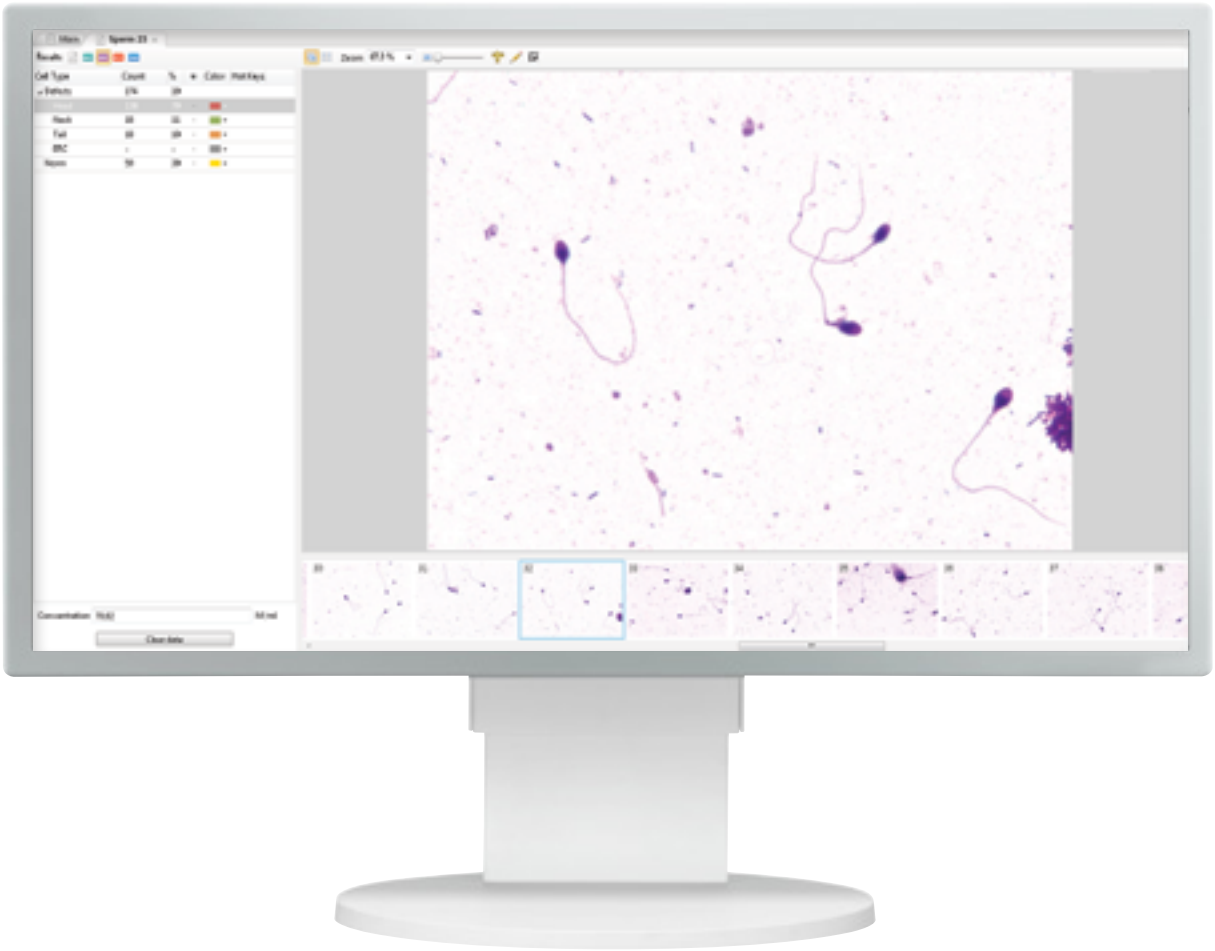






Vision Sperm

Automatic Systems for Sperm Analysis



Artificial intelligence

Artificial intelligence (AI) cumulates algorithms and technologies that allow computers to learn and solve intellectual tasks provided by humans.

AI speeds up processing and interpretation of data, and allows to efficiently perform the most comprehensive tasks, including medical image analysis.

Clinical applications

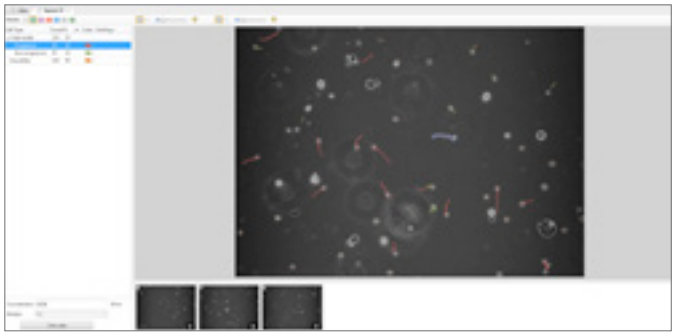
The latest developments of artificial intelligence provide a solution for the tasks connected with automation in digital microscopy.

Our technologies speed up the diagnostic process, reduce analysis time and lower subjectivity of the results received.

They improve the efficiency of laboratory routine operation, bringing microscopy analyses in line with state-of-the-art standards.

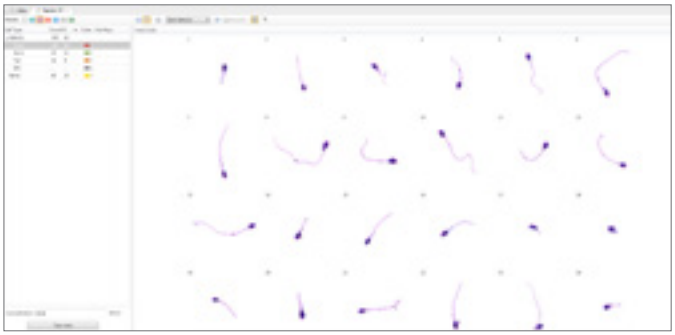
Analysis of sperm parameters according to WHO requirements

MOT Motility / Concentration



Motility analysis and sperm concentration assessment. Motility is determined by computing the sperm cells moving path in the field of view during a set time period. Concentration is determined by calculating the total number of spermatozoa taking into account the specimen's thickness and dilution.

MRF Morphology

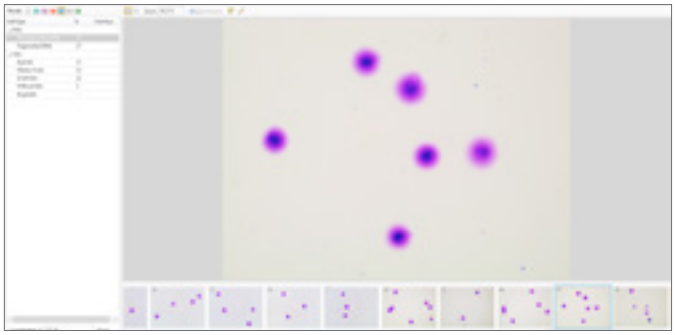


Morphology analysis of sperm, identification and pre-classification. Sperm cells are classified as "normal" and "abnormal".
Types of defects:
— Head;
— Neck;
— Tail;
— ERC.

VIT Vitality

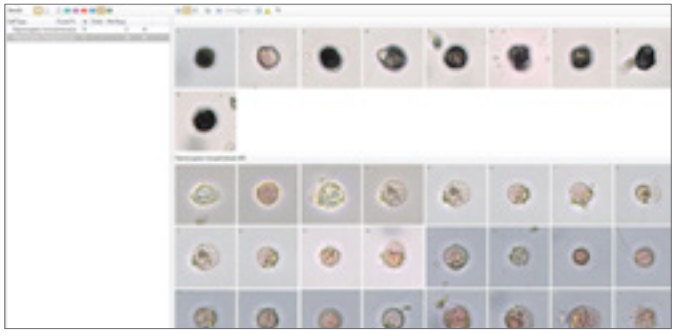
Pre-classification of sperm vitality, calculation of live-dead ratio.

DNA DNA fragmentation



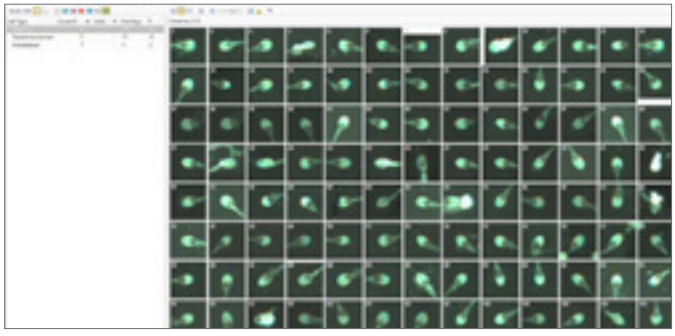
Pre-classification by DNA fragmentation degree. Calculation of the ratio of fragmented spermatozoa to relatively healthy ones.

LEU Leucocytes



Counting leucocytes in sperm

ACR Acrosome reaction

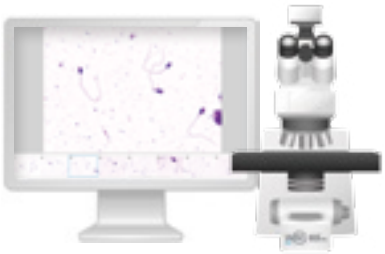


Acrosome reaction test.
Only for systems with one slide.

Specifications

Vision Basic
Cell Imaging Analyzer

Vision Assist
Cell Imaging Analyzer



Vision Pro
Cell Imaging Analyzer

Application module: **Vision Sperm**	Application module: **Vision Sperm**	Application module: **Vision Sperm**
Working modes: manual	Working modes: queue (only 4 slides version)	Working modes: queue, random access
Manual scanning	Automatic scanning	Automatic scanning
1 slide	1 or 4 slides	8 slides
Manual slide handling	Manual slide handling	2 cassettes with slides
Manual oil dispensing	Manual oil dispensing	Built-in barcode reader (optional)
Manual slide identification	Manual slide identification	Automatic oil dispenser (optional)
Microscope	Scanning Microscope	Scanning Microscope
Monitor	Monitor	Monitor
Personal computer	Personal computer	Personal computer
Optical system: 10x, 20x, 40x, 100x Oil	Optical system: 10x, 20x, 40x, 100x Oil	Optical system: 10x, 20x, 40x, 100x Oil
Bright fields, phase contrast	Bright fields, phase contrast	Bright fields, phase contrast
Köehler, LED	Köehler, LED	Köehler, LED
Bidirectional LIS, LIS2-A2 (ASTM), HL7, Ethernet	Bidirectional LIS, LIS2-A2 (ASTM), HL7, Ethernet	Bidirectional LIS, LIS2-A2 (ASTM), HL7, Ethernet

Art. N.: 64030.04	Art. N.: 71150.04 (1 slide) Art. N.: 71450.04 (4 slides)	Art. N.: 72852.04 (8 slides)

Product only for research. We reserve the right to change specification without notice.

WEST MEDICA

Manufacturer:
West Medica Produktions- und Handels-GmbH
Brown-Boveri-Straße 6, B17-1, 2351 Wiener Neudorf, Austria
tel.: +43 (0) 2236 892465, fax: +43 (0) 2236 892464
vienna@westmedica.com, www.westmedica.com

For distributor

Rev 1.0_10.2019 EN