COMPUTER-ASSISTED ANALYZER OF IMAGES FOR RESEARCH OF HUMAN SPERMATAZOA

Analyzer components

The analyzer components are listed below: a microscope, a camera, a computer and software.

The complex "ARGUS-CASA" provides for as follows:

- Automation of analysis provides for objective and displayable results;
- Reduction of temporary costs;
- Multitasking is use of several methods of research on one device;
- Storage and systematization of the results of analysis;
- Quality control and employee training.

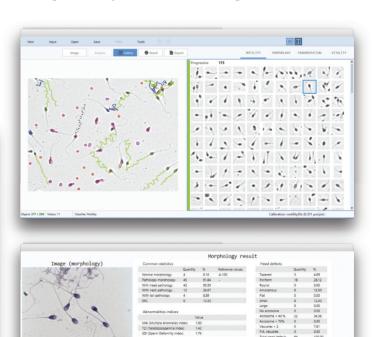
Motility. Assessment of concentration and parameters of movement

- Work with counting chambers (Makler, Leja);
- Calculation of concentration of spermatozoids and round cells (in millions/ml);
- Classification and calculation of percentage ratio of spermatozoids with differential mobility
 In accordance with the recommendation of the WHO
- A possibility of adjustment of the user's classifier
- Automated control of sufficiency of the assembly of data, comparison of the results with the reference values in accordance with the recommendations of the World Health Organization.



Assessment of morphological parameters of spermatozoids in the stained smears

- Automated determination of defects of the head and the neck on the basis of the morphological parameters and the classification of Kruger;
- Calculation of the percentage ratio of spermatozoids which belong to the "Norm" and "Pathology" classes; the percentage ratio of the head and neck defects;
- Automatic calculation of multiple anomalies indices (MAI, TZI, SDI);
- Automated control of sufficiency of the data assembly;
- A possibility of manual indication of spermatozoid defects (tails, ECR), as well as other cells (leucocytes, epithelial, segregated tails and heads);
- Demonstrable representation of all analyzed spermatozoids as a gallery;
- Possibility of work with the motorized positioner for fast setting and analysis of a series of images.

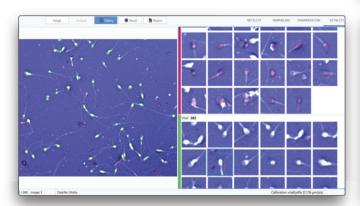




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Vitality analisys

- Vitality assessment of the amount of spermatozoids on the image and classification into the "live" and "dead";
- Representation of all analyzed spermatozoids as a gallery;
- Calculation of the percentage ratio of the "live" and "dead" cells.
- Intuitive interface for managing the analysis methodic.



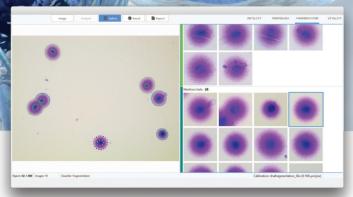
DNA fragmentation analysis with the help of the "HaloSperm" method

Determination of the quantitative indicator of the human spermatozoids with the fragmented DNA in order to receive additional information on the degree of the men's fertility.

- Automated selection on the captured images of spermatozoids with differentiated degrees of DNA fragmentation:
- Automated classification on the basis of the degree of fragmentation into 5 classes: without fragmentation of DNA (with a high and medium "halo"), with the fragmented DNA (with a low "halo" and without "halo") and degenerated (no "halo", and the cell is of an unusual shape and poorly colored;
- Calculation of the percentage ratio of spermatozoids of differentiated degrees of DNA fragmentation.

Documentary representation of results

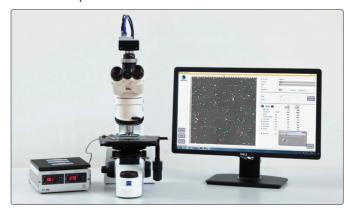
• Making and saving of user's report forms for printing with the help of a virtual constructor.



		Amount	%	Reference values	Diagram
Fragmented DN	IA	10	19.23		
Non-fragmente		42	80.77	> 15	
Distribution					
	Amoun	t %	Refere	nce values	
Big halo	14	26.92	-		
Medium halo	28	53.85			
Small halo	5	9.62	-		
Without halo	5	9.62	-		
Degraded	0	0.00			
					Fragm
					Non-fr

Supply and support

- Selecting of components depending on the equipment available at the client's premises;
- Mounting and installation at the location of the client's;
- Consulting services on the work with software;
- Guarantee and post-guarantee support;
- Technical and information support;
- Discounts on purchase of several versions or older version update.



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