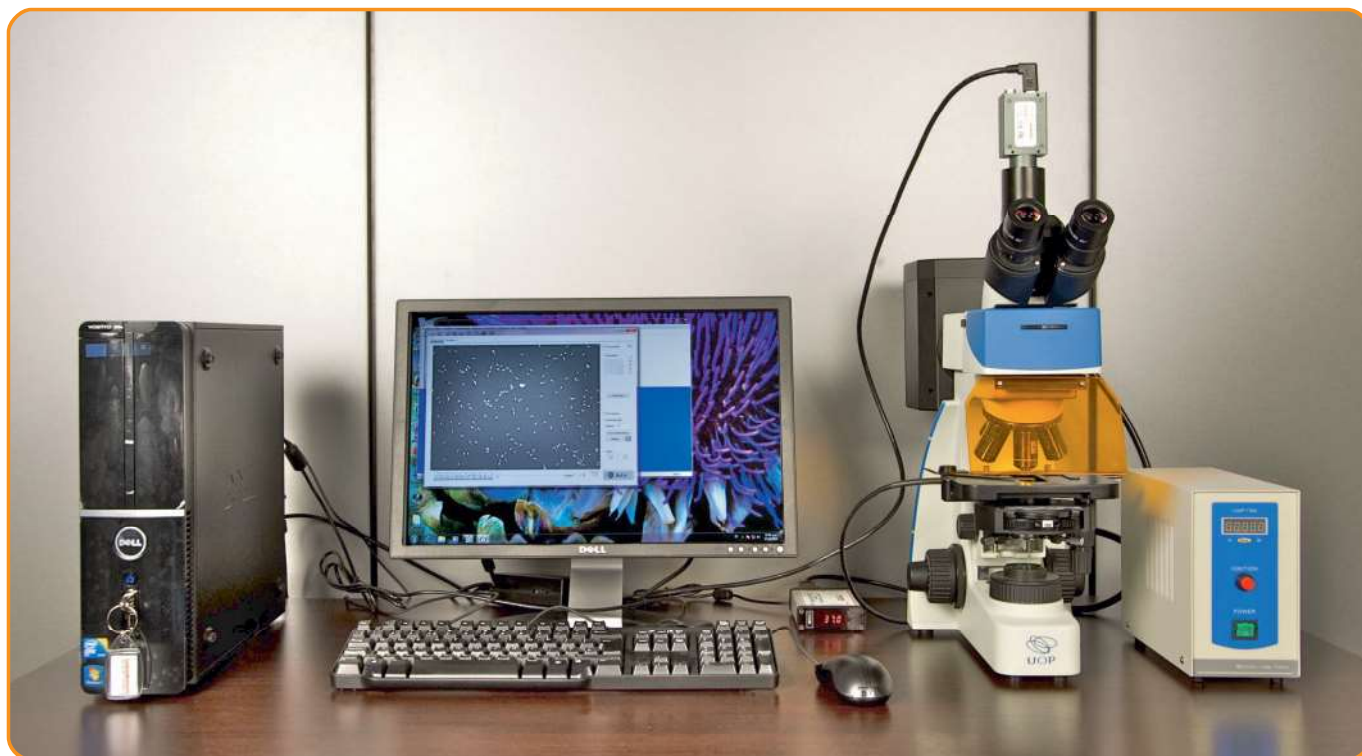


# ISAS v1

## INTEGRATED SPERM ANALYSIS SYSTEM



***Accurate***

***Fast***

***Flexible***

***User friendly***

***Complete***

**ISASv1** has been designed using the most advanced image analysis technology. **ISASv1** applications include veterinarian clinic, scientific research, livestock production and pharmaceutical and reproductive toxicology. **ISASv1** is the most complete and easiest-to-use system which, furthermore, works in different hardware and operating-system conditions, in order to adapt as much as possible to the needs of our users.

**ISASv1** is a multi-specie system (stallion, bull, boar, goat, rabbit, dog, rat, mice, rooster, ram, cod, shark, tuna, anguilla, ...). The supported species is continuously growing.

**ISASv1** works with cameras up to 200 frames per second, improving track analysis. **ISASv1** has been specially designed for quality control programs, allowing the analysis of different formats of video files (Windows AVI, Windows Media Video, MPEG-4, DVD, and many others) and images (jpg,png,bmp,gif,tif, ...).

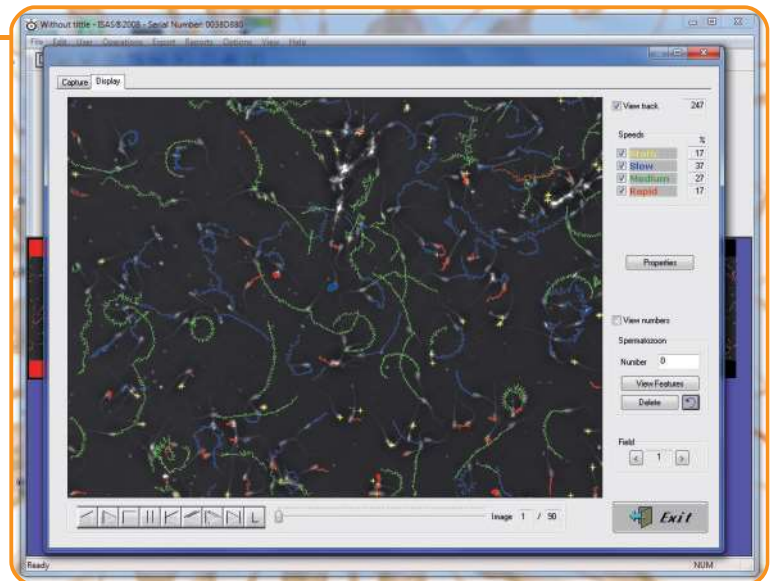
**ISASv1** is completely modular, so each module might work both independently and jointly.

## Motility

**ISAS v1 Motility** performs the sperm motility and concentration analysis. It works in a very great range of species and each species has its own configuration and analysis algorithms.

Depending on the sample, both negative or positive phase contrast can be used. The motility analysis of one field is done in real-time (less than 1 second), and it can be configured to analyze motility up to 250 frames, at 200 frames per second and with concentrations higher than 1000 sperms/field.

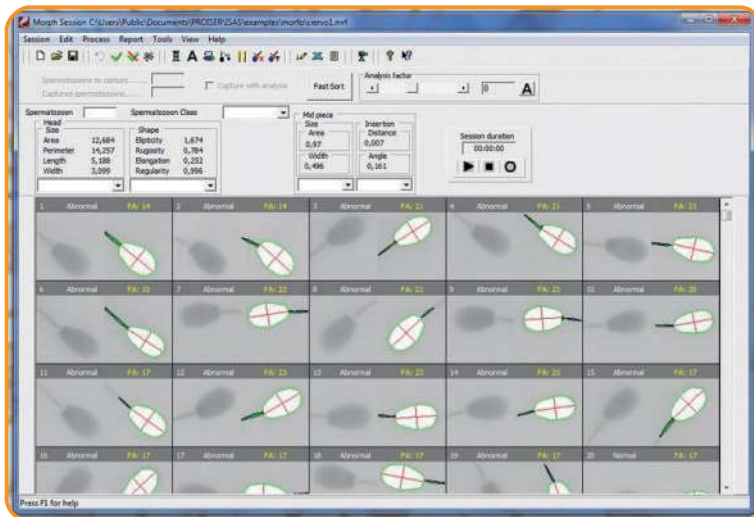
Additionally to **concentration, motility** and **progressivity** percentages, following kinetic parameters are calculated: **VCL, VAP, VSL, LIN, STR, WOB, ALH, BCF, DNC, MAD, ...**



## Morphometry

**ISASv1 Morphometry** performs the morphologic and morphometric spermatozoa analysis from stained samples or fresh samples (using phase contrast optics). The morphometric analysis is done using different optics depending on species (40x, 60x or 100x) in short time.

**ISASv1 Morphometry** gives **14** morphometric parameters: head size (area, length, width and perimeter), head shape (ellipticity, elongation, roughness, regularity), acrosome percentage, head color level, midpiece size (area and width) and midpiece insertion (angle and distance).



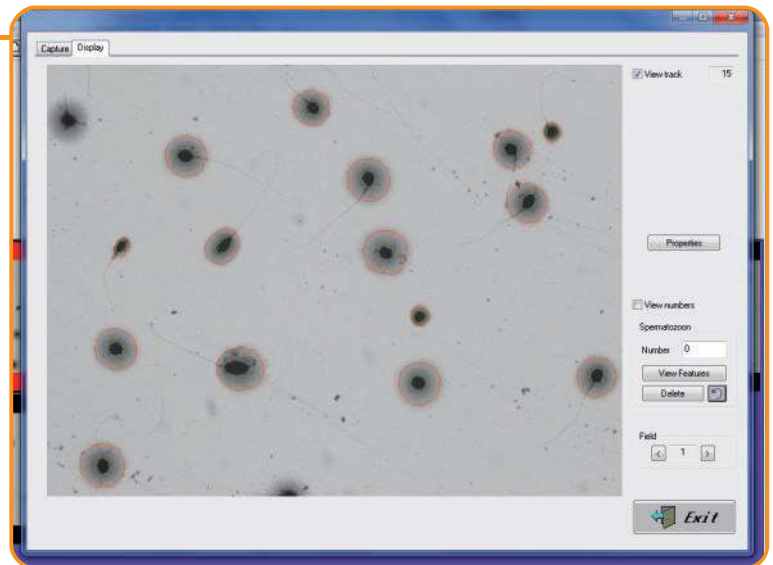


## DNA Fragmentation

**ISASv1 DNA Fragmentation** automatically performs the analysis of the percentage of DNA fragmented sperm percentage.

The fragmentation analysis of one field is done using 20x or 40x objectives in real-time (less than 1 second). Depending on the species, information about size of core and halo is used to define the DNA fragmentation level.

**ISASv1 DNA Fragmentation** requires the use of different kits, like Halotech DNA, based on the Sperm Chromatin Dispersion test (SCD) technology, or Tunnel Assay Test.



## Vitality

**ISAS v1 Vitality** performs automatic viability analysis of sperm cells. We need to determine the real percentage of viability cells in a sample, and to perform accurately this analysis we need to use fluorescent techniques with their correspondent use of appropriate staining kits. Anyway, the **classic eosine-nigrosine stain can be also used now!**

