



CASA II Sperm Motility Software Boar Breeders II - Version 1.13

Data Input

Analysis Info:	Animal Species	Animal ID
	Genetic Line	Ejaculate #
	Batch #	Volume (manually or by scale)
	Sample: Extender	Collection Technician
	Lab Technician	
Dose Info:	Sperm / Dose (M/ml or B/ml)	
	Dose Volume (ml)	
Notes:	User-defined	
Data Fields:	25 User-Defined Labels/Fields	

Analysis Results

Counts:	Total, Motile, Static, Progressive, Slow
Percentages:	Total, Motile, Static, Progressive, Slow (%)
Concentrations:	Total, Motile, Static, Progressive, Slow (M/ml or B/ml)
Sample:	Total, Motile, Static, Progressive, Slow (M or B)
Kinematic Values:	VAP, VCL, VSL, ALH, BCF, LIN, STR, DAP, DCL, DSL, WOB, Elongation (head shape) and Area (head size). Includes mean, standard deviations and median.
Adjustments:	Total, Motile or Progressive
Morph:	Normal, Bent Tail, Coiled Tail, DMR, Distal Droplet, Proximal Droplet Select which to include in dose adjustment
Processing:	Extender Volume Final Volume Adjusted Concentration Number of Doses
Pie Charts:	Percent of Total (motile vs. static) Velocity Percent of Motile

Live Setup Configuration

Illumination:	Interactive illumination setting Histogram showing real-time feedback
Motility Setup:	Interactive sperm identification setup Automatic minimum tail brightness based on Photometer Offset Minimum head and tail brightness Minimum and maximum head size and head elongation Real-time feedback through color overlays

Quality Control

Auto Illumination:	One Shot and Auto on Field Change (IVOS II only)
Illumination Check:	Quick view to confirm illumination and focus
Illumination Status:	Acceptable / Unacceptable
Video Playback:	Color-coded labeling of motile, progressive and static cells
Static Tail Filter:	Automatic elimination of debris

Video Playback

Full Field:	Frame-by-frame playback Analysis results for selected field Turn on/off motility and morphology overlays Save TIFF image of individual frames Export fields as .mp4 files for presentation purposes only
Zoom Cell:	Frame-by-frame playback Analysis results for selected sperm Data point coordinates Cell classifications Turn on/off motility and morphology overlays Save TIFF image of individual frames Save individual cell data to ASCII Save data points to ASCII file

Security

HT User Groups:	Administrative or Basic user
Password Security:	Windows-based Users Unlimited User IDs and passwords
Setup Access:	Analysis Setups restricted to Administrator users only

Included Data Management Options

ASCII Export:	Transfer of summary data and/or individual track to ASCII compatible spreadsheet or database programs
Video Storage:	Ability to save video file of each field analyzed, along with sample information and analysis setup values. Recall and analyze video with saved settings or new settings Re-analyze single videos or entire analysis sets
Report Viewer:	View analysis data in report format.
Report Designer:	Report designer and manager to create unlimited professional reports from sperm analysis results. Ability to include all data (calculated and user input), images, and logo. Drag and drop design, snap-to alignment. Ability to combine results from two analyses from same Animal ID into a single report.

Optional Special Applications

Sort:	Segments sperm into sub-populations based on kinematic and/or morphometric parameters
Edit Tracks:	Save individual track data to ASCII output plus ability to manually delete tracks from cell population
IDENT:	(IVOS II Only) Automated motility analysis of high-detritus samples using DNA-specific, fluorescent stain and integrated fluorescent illumination.
VIADENT:	(IVOS II Only) Sperm viability assessment software option. Stain sperm with non-membrane permeable DNA stain and calculate viable sperm numbers under fluorescence (requires IDENT option)

Analysis Sets:	Unlimited, User-defined by administrator
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Analysis Setup Parameters (Administrative Users Only)

(Setup):	Setup Name
Analysis Limits:	Min Motility Percent Min Progressive Percent Min Total Count
Calibration:	Objective Name X-axis Magnification Y-axis Magnification
Camera:	Exposure (Ms) Gain Integrate Enabled Integrate Time (Ms)
Cell Detection:	Elongation Max (%) Enable Advanced Tail Detection Elongation Min (%) Enable Background Subtraction Head Brightness Min Head Size Max (µm²) Head Size Min (µm²) Static Tail Filter Tail Brightness Min Tail Min Brightness Auto Offset Tail Min Brightness Mode
Chamber:	Capillary Correction Chamber Depth (µm) Chamber Type (Capillary, Drop)
Illumination:	Illumination Primary (IVOS II only) Max Photometer Min Photometer
Kinematics:	Cell Travel Max (µm) Slow VAP (µm/s) Enable Motile Static Collisions Avoidance Slow VSL (µm/s) Motile Cell Require Tail Static Algorithm Motile Require Tails Max VSL (µm/s) Static VAP (µm/s) Progressive STR (%) Static VSL (µm/s) Progressive VAP (µm/s) Static Width Multiplier
Morph:	DMR Confidence (%) DMR Droplet to tail end Max (µm) DMR Tail Length Max (µm) Droplet Confidence (%) Droplet Distal Distance Min (µm) Droplet Proximal Head Length (µm) Min Tail Length (µm) Morph Normal Minimum Percent (%) Tail Bend Angle Averaging Length (µm) Tail Bending Angle Rate Min (°/µm) Tail Bent Confidence (%) Tail Coiled Angle Min (°) Tail Coiled Confidence (%) Tail Confidence (%)
Viadent:	Viadent Fluorescing System
Video Capture:	Frame Capture Speed (Hz) Frame Count

Specifications subject to change without notice.