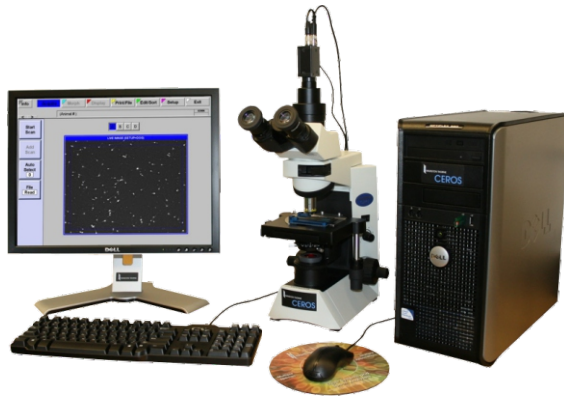


# CLINICAL (HUMAN) MOTILITY

## Version 14 HTM-CEROS Sperm Analysis System Specifications



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The standard CEROS system includes the CEROS analyzer, CCD camera, negative phase contrast microscope, monitor, keyboard, mouse, and standard Clinical analysis software.

Dimensions	H	W	D	lb. (kg)
	in. (mm)	in. (mm)	in. (mm)	
CEROS:	14.2 (361)	7.1 (180)	17.4 (442)	38 (17.3)
Monitor:	16.9 (429)	16.7 (424)	7.9 (200)	17.0 (7.7)
Microscope:	16.8 (428)	11.1 (283)	12.8 (326)	

Electrical	CEROS	Monitor
Input Voltage:	110-240 VAC	110-240 VAC
Power:	250 watt	95 watt
Line Frequency:	50/60 Hz	50/60 Hz

### Specimen Chambers

Cannula:	100, 200 micron
Slide:	20, 50 micron
User Defined	Programmable

### Optical System

Imaging Device:	High Resolution B&W CCD array 120 or 240 VAC
Microscope:	Olympus CX41 Negative Phase Contrast C-Mount Adapter Objective: 10x Negative High Phase Contrast MiniTherm Stage Warmer
Image Type:	Phase Contrast, negative and positive Dark field, Bright field
Signal Output:	NTSC, RS-170 60 Hz <i>optional: PAL, CCIR 50 Hz</i>
Magnification:	Set by User
Illumination:	Set by User
Photometer:	Scale on Screen

### Analyzing System

Input Signal:	NTSC, RS-170 [ <i>optional: PAL, CCIR</i> ]
Image Resolution:	640 x 480
Control:	Mouse, Keyboard [ <i>optional: Touchscreen</i> ]
Analysis Time:	<5 seconds for 200 cells
Software:	On Hard Disk: Updates on Diskette, CD-ROM
Quality Control:	4 Levels: <i>Video Playback, QC by Size, Intensity, Elongation</i>
Analysis Sets:	7 User-defined

### Digital Image Acquisition

Frame Rate:	60, 30, 15, 7.5 Hz <i>[optional: 50, 25, 12.5, 6.25 Hz]</i>
Frames:	Min. 5, Max. 100
Fields:	1 - 20
Designation:	Manually Selected

### Standard Clinical Software

Counts:	Total, Motile, Progressive % Motile, % Progressively Motile Rapid, Medium, Slow and Static Cells
Concentrations:	Total, Motile, Progressive (millions/ml) Rapid, Medium, Slow and Static Cells
Mean Values:	<b>VAP, VCL, VSL, ALH, BCF, LIN, STR, Elongation (head shape) and Area (head size).</b> Includes standard deviations.
Distributions:	<b>VAP, VCL, VSL, Elongation, ALH, BCF, LIN, STR</b>
Graphics:	Distribution Bar Charts Color coded tracks, Plots

### Security

Password Security:	3 Levels Analysis Setup access 99 unique User IDs and passwords Electronic signatures
Audit Trail:	Log file of user actions
Timer:	Automatic log-off after system is idle for designated number of minutes

### Included Special Applications

*HDATA ASCII Export:* Transfer of summary data and/or individual track to ASCII compatible spreadsheet or database programs.  
*HT InScribe:* Custom report designer and manager. Design unlimited reports. Ability to import images.  
*Motility Digital Image Storage:* Allows storage and retrieval of exact fields analyzed. Includes add on program to convert saved video files to industry standard avi or wmv.

### Optional Special Applications

*Sort Function:* Determines fraction of cells within user-specified limits on: **VCL, VSL, VAP, LIN, STR, ALH, BCF, Head Size, and Elongation.**  
*Track Editing:* View and store detailed data for individual sperm tracks. Used for validation procedures.  
*Dimensions:* Strict Criteria morphological analysis for human sperm.  
*Metrix:* Interactive, user-defined morphology program applicable to human and other species.  
*Morph-Merge:* Provides capability for users to analyze motility in the morning and morphology in the afternoon, and then combine results into one report. Users visualize and manually classify sperm based on gross morphology of head, droplets and tail.

### CEROS Computer System (subject to changes)

OS:	Windows 7
CPU:	Pentium Dual Core 3 GHz or Core i5
Memory:	2 GB DDR
Drives:	250 GB HD CD/DVD-RW Dual Layer
Display:	20" flat panel, UXGA
Ports:	Serial, Parallel, USB 2.0, PS/2
Network:	10/100/1000 Ethernet