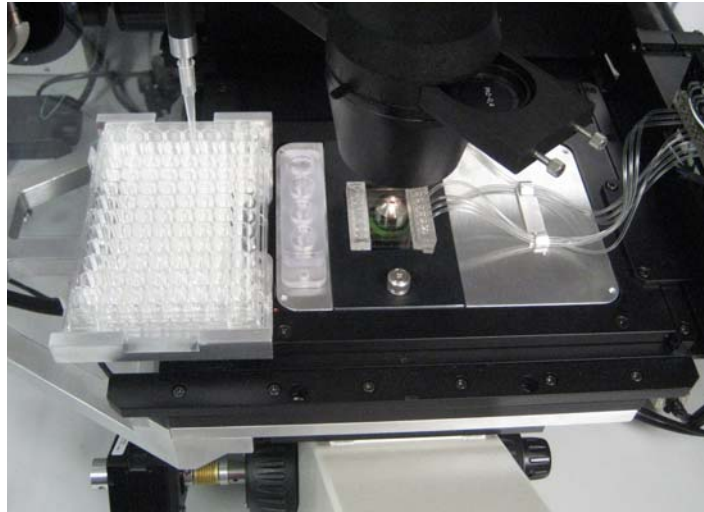


VenaFlux™ Platform



- **Microscope Axiovert 40 CFL :**
Contrast option: Brightfield, Phase, Varel, Fluorescence (TRITC, FITC, etc).
Shutters: Automated Brightfield and Fluorescence.
Objectives: 10x LD A-Plan, 20x LD A-Plan, 32x CP-Achromat, 40x LD A-Plan .
Eyepieces: E-PL 10x/20 Br. , 10x/20 Br. foc.
Stage: Vena8 biochip compatible stage holder, Eppendorf tubes holder.
- **Mirus 1.0 Nanopump**
Specifications: Shear Stress Range of 0.05-20 dyne/cm², Volumetric Flow Rates 100nL-20µL/minute (100µL syringe), Sample Volume Increments Freely adjustable
 Linear Velocity Range of 10 µm/s to 10 cm/s; Flow Direction Reversible; Sample Volume Aspiration Accuracy ±1% ; Shear Stress Accuracy ±0.5%; Sample Volume Aspiration Precision < 1%.
Multichannel: 16-Way manifold allowing individual addressing microchannels of Vena8 biochip.
- **Motorized stage with Z-focus module.**
Specifications: Marzhauser IM series stage, Travel 120mm x100 mm, Repeatability <1µm, Precision ±3 µm, Maximum Travel speed 180 mm/s.
- **Microscope Cage incubator:**
Capabilities: Temperature control ± 0.1°C, CO₂ and humidity module.
Options: Temperature monitoring software module, black panels for use in fluorescent microscopy.
- **Dispenser Arm:**
Capabilities: 96-well plate into Vena8 biochip transfer, tip washing, cell sample dilution.
Pipettor: Tricontinent Z-series pump, 200 µL max volume, 0.191 µL/half-step, Z-drive.
- **Deltapix DP 450 USB 2.0 camera**
Specifications: 2 Mega Pixels (1,616 x 1,216); Color CDD; 1/1.8" format; Pixel 4.4 µm x 4.4 µm.
Resolution: 12 FPS @ 1,616 x 1,216 pixels; 14 FPS @ 1,280 x 1,024 pixels; 18 FPS @ 1,024 x 768 pixels; 22 FPS @ 800 x 600 pixels; 26 FPS @ 640 x 480 pixels. Dynamic Range > 66 dB.
- **Dell Optiplex 745 PC computer**



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Configuration: Intel Core2 processor; 1.86 GHz; 2GB RAM; ATI Radeon X1300PRO; Objective Imaging stage control hardware; 19" LCD monitor. Windows XP Professional SP2; DeltaPix Viewer Software; VenaFluxAssay and DucoCell software preinstalled.

- **VenaFluxAssay Software.**

Capabilities: Execution of preset protocols, simultaneous control of pumping, scanning and image acquisitions, sample transfer and protocol flow. Intuitive stepwise protocol interface with steps hierarchy and status control. Office2007 GUI interface, preset and user-designed protocols.

- **DucoCell software**

Specifications: Automatic Counting and Detection; Morphological parameters analyzed automatically (Area, diameter, form-factor, ellipticity, eccentricity, orientation, perimeter, asymmetry, cell centroid coordinates, elliptical axis); Cell sorting and filtering; Ability to analyze sub-populations based on inclusion/exclusion of morphological parameters. Data may be exported to Excel spreadsheet incorporating automatic graph generation (e.g. % cell adhesion vs. shear stress). File Formats analyzed *.jpg, *.jpeg, *.tif, *.tiff, *.bmp, *.gif, *.png.

- **Vena8 biochips pack of 10**

Specifications: Minimum Sample Volume 3 μL ; Maximum Sample Volume 100 μL ; Shear Stress Range of 0.05 - 20 dyne/cm^2 , steps of 0.05 dyne/cm^2 . Number of channels per biochip is 8; Volume of each channel is 0.8 μL . Dead volume at input port is 0.1 μL . Vena8 biochip dimensions are 400 μm (W) x 100 μm (D) x 20 mm (L).