

TM iD™



Tissue MALDI Vision Enhanced Matrix Spotting System



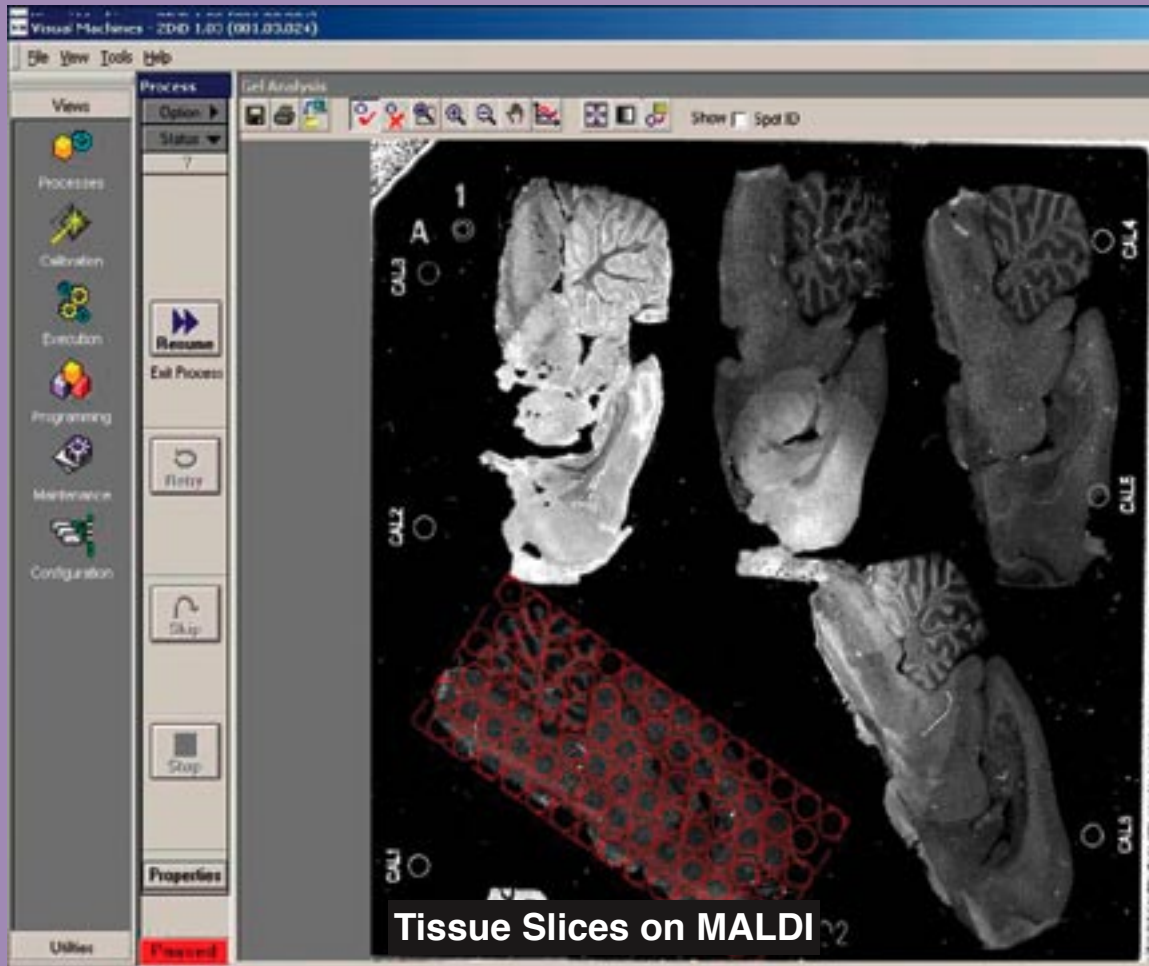
- Imaging Mass Spectrometry
- Biomarker Discovery
- Protein Profiling
- Diagnostic Pathology
- DMPK/ADME - Toxicology



- Non-Contact Nano Dispensing
- See and Spot™ Technology
- Industrial Quality Robotics
- Reproducible Automated Sample Prep
- Process Data Integration

Enabling Technology for Advancements in Tissue MALDI

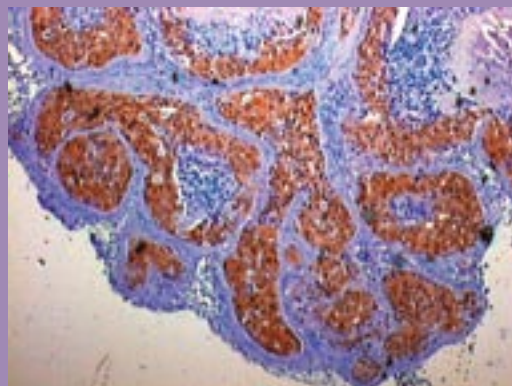
TM iD™ Tissue MALDI Spotting System



- High Precision XYZ; 2-4 micron reproducibility
- High resolution CCD camera 1-5 micron/pixel
- Non-contact matrix dispensing, down to 3nL/spot
- Spot size diameter to 200µm
- Accurate over spotting
- Automated dispense tip wash in ultrasonic bath



High Resolution Vision System to Pinpoint Areas of Interest



Specifications

ROBOTIC PLATFORM:

Distributed FireWire (IEEE-1394) control for motion (X, Y, head axes), analog and digital I/O, and vision

SYSTEM ACCURACY:

Linear Motor control with encoder. X/Y positioning resolution of 2-4 microns (10-6m)

IMAGING SYSTEM:

Color or black/white FireWire CCD camera can be used. The image optics can be used down to 5 microns/pixel

CCD CAMERA:

1024x768 square pixels, progressive scan, 10 bits, size 44x33x116 mm, 250 grams, 8-30 VDC, power 3.5 Watt (12 VDC)

LED ILLUMINATION:

White LED Light (can change to other colors), 24 V

DISPENSING HEAD:

Non-contact printing with solenoid valve controlled volume setting, 500Hz (dispensing speed), volume down to 2 nls.

DISPENSING CONFIGURATION:

Single or array pattern dispensing with adjustable pitch-pitch spacing, multiple dispensing with same matrix material or multiple matrix dispensing capability

DISPENSING NOZZLE WASHING:

On-board ultrasonic bath with multiple washing option

ULTRASONIC BATH:

7W, 4 ml capacity, 1 additional vial (0.6 ml) position

AIR PUMP:

110-120 V, 50 Hz, 7.5 W, 6-7 psi pressure

VIAL HOLDER FOR DISPENSE RESERVOIR AND REAGENTS:

5 ml-4 positions, 1 ml -4 positions, 0.6 ml -4 positions

MALDI PLATE:

Multiple different MALDI plates support - 4 positions

DIMENSIONS:

System: 26 x 30 x 34 inch (D x W x H)
Working X, Y Axes range: 15.8 x 15.8 inch

SYSTEM WEIGHT:

132 lb (60 kg)

COMPUTER:

Microsoft Windows XP operating system (>300 MHz), 256 MB RAM, 17" monitor, 256 colors, 1,024 x 768 pixel resolution

SOFTWARE:

Standard Microsoft development platform with XML data handling

OPERATING CONDITION:

4-30°C, 95% relative humidity, noncondensing