TissueGnostics: TissueFAXS Slide Scanner

TissueFAXS can scan digital slides or images of tissue sections, Tissue Microarrays (TMA), cell culture monolayers, smears and of other samples on slides and oversized slides, in Microtiter plates, Petri dishes and plates in both bright-field and epifluorescence modes.

A few ways which showcases its flexible imaging capability are the customisable scan area per well and scanning range along all X-, Y- and Z-axes as well as its ability to do tissue detection. TissueFAXS aims to make image acquisition more efficient with its adjustable autofocus scan strategy, autofocus interval range across samples and its instantaneous internal stitch features.

Features:

Imaging Modes	Epifluorescence and Brightfield
Stage	Motorized XY-scanning stage suitable for experiments with fixed multiple positions
Stage Holder	4-slides holder, Well-plate holder
Scan Resolution	256 x 256 – 1024 x 1024 pixels
Fluorescence Detector	PCO. Pixelfly usb - Digital 14 bit CCD monochrome camera - High resolution 1392 x 1040 pixels - 1 µs - 60 s exposure times Binning 1 x 1 – 4 x 4
Transmitted Light Detector	Baumer HXG40c - Dual Gigabit Ethernet progressive scan CMOS camera - 10 bit /12 bit depending on pixel format - High resolution 2048 x 2048 - 4 msec exposure time Up to 56 pixels/s
Tile Scan / Mosaic Scan	High resolution imaging of a larger field of view

Objective lenses:

Magnification	Immersion	Type	Numerical Aperture	Additional Features	Working Distance (mm)
2.5X	Air	Plan-NEOFLUAR	0.075	-	9.5
10X	Air	Plan-NEOFLUAR	0.30	-	5.6
20X	Air	EC Plan-NEOFLUAR	0.50	-	2.0
40X	Air	Plan-NEOFLUAR	0.75	Ph2	0.75

Fluorescence Light source:

X-Cite 120PC-Q

- Proprietary 120W Mercury Vapor Short Arc
- Power supply of 47-63 Hz

Installed Filer sets	Excitation (nm)	Emission (nm)
DAPI	G 365	BP 445/50
FITC	BP 450 – 490	BP 515 – 565
TRIC	BP 545/25	BP 605/70
Cy5 (far-red)	BP 640/30	BP 690/50
Cy7	BP 710/75	BP 810/90

Transmitted Light Source:

VIS-LED bright-field light source

Software:

TissueFAXSViewer