

Fluorowatcher, Fluorescent Imager



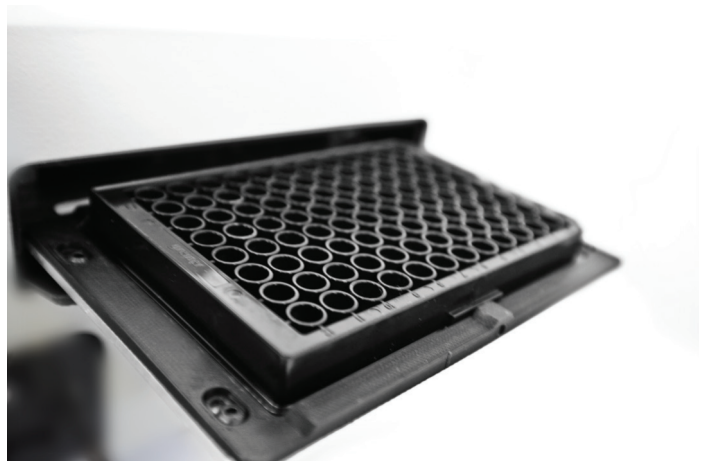
Fluorowatcher is a compact and portable fluorescent imager designed for imaging fluorescent molecules (for example, protein biochips). The instrument by standard operates on 2 channels: CY3 and CY5. The instrument is able to work with 96-well plate, a 12 x 8 well strip, as well as microscopic glasses (placed in a special adapter). The device takes images from the below, so the wells must have a transparent bottom. The device is equipped with a highly sensitive CMOS camera capable of taking more sensitive images in a short exposure time, which saves operating time. Image filtering goes through fluorescent filters. The instrument has an automatic mechanism of vessel ejection outside the body.

The instrument can operate with a 20V portable lithium-ion battery, which makes the device usable in the field studies or point-of-care.

The compact design allows the device to be carried in the hand luggage of the aircraft.

Software Features:

- Grid lay-outing
- Analysing images by the total brightness of the spots
- Qualitative/quantitative analysis of the images
- Creating Qualitative/quantitative assays
- Taking images in specified locations
- Report exports to PDF, CSV, EXCEL
- Control of camera exposure, XYZ kinematics and channels



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Specifications	
Fluorescence channels	CY3, CY5
Vessels	96 well plate/12 x 8 well strip/4 microscope slides
Light source	Laser
Lifetime of the light source	>10 000 hours
Data interface for unit controls	USB 2.0
Camera	3 MP, CMOS
Data interface for camera control	USB 3.0
Magnification	>10x
Image formats	png/bmp/tiff/jpg, 16/24/32 Bit
Focus	Manual, adjustable via PC
Exposure	Controllable, up to ~30 sec.
Software	Included
PC requirements	Windows (x32/x64 bit) 7 SP1, 8.1, 10; Intel i5, 4GB RAM, SSD 200GB, 1 port USB 3.0, 1 port USB 2.0
Size (WxDxH)	330 × 345 × 170 mm
Weight, w/o power supply	not more than 8 kg
Power supply	Input AC 100–240 V 50/60 Hz, Output DC 20-24 V, 2.5A

Software interface, picture of a well of 96 well plate on CY5

The screenshot displays the Fluorowatcher v 0.4.6.0 software interface. The main window shows a circular image of a 96-well plate with a grid of wells. The wells are arranged in 12 columns and 8 rows. The image shows a grid of wells with varying intensities of red fluorescence. The software interface includes a menu bar (File, Edit, View, Unit controls, Image analyser, Data analyser), a toolbar with various icons, and a main control panel on the left with manual and auto modes. The main control panel includes options for enabling the grid, setting exposure time (15), and various shift keys (SHIFT_X1, SHIFT_Y1, etc.). Below the main control panel are buttons for Calculate, Calculate All, Clone to next, Clone to all, Clone to all remaining, Load image, Save image, Save Coordinates, and Save All Coordinates. The main window also features a data table on the right side, which displays the results of the fluorescence measurements for each well. The data table has columns for well numbers (1-12) and rows for well letters (A-H). The data values are displayed in a color-coded format, with red indicating high intensity and yellow indicating low intensity. The data table is as follows:

	1	2	3	4	5	6	7	8	9	10	11	12
A	101.00	111.00	121.00	131.00	141.00	151.00	161.00	171.00	181.00	191.00	201.00	211.00
B	221.00	231.00	241.00	251.00	261.00	271.00	281.00	291.00	301.00	311.00	321.00	331.00
C	351.00	361.00	371.00	381.00	391.00	401.00	411.00	421.00	431.00	441.00	451.00	461.00
D	491.00	501.00	511.00	521.00	531.00	541.00	551.00	561.00	571.00	581.00	591.00	601.00
E	641.00	651.00	661.00	671.00	681.00	691.00	701.00	711.00	721.00	731.00	741.00	751.00
F	791.00	801.00	811.00	821.00	831.00	841.00	851.00	861.00	871.00	881.00	891.00	901.00
G	941.00	951.00	961.00	971.00	981.00	991.00	1001.00	1011.00	1021.00	1031.00	1041.00	1051.00
H	1091.00	1101.00	1111.00	1121.00	1131.00	1141.00	1151.00	1161.00	1171.00	1181.00	1191.00	1201.00
1	1241.00	1251.00	1261.00	1271.00	1281.00	1291.00	1301.00	1311.00	1321.00	1331.00	1341.00	1351.00
2	1391.00	1401.00	1411.00	1421.00	1431.00	1441.00	1451.00	1461.00	1471.00	1481.00	1491.00	1501.00

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