

F.SIGHT™ 2.0

Precise and accurate single-cell dispensing with fluorescent sorting for cell line development



Streamline your cell line development capabilities

The landscape of global research has shifted in the past two decades. With many major technological advancements made in that time, scientists have become better equipped to perform precise and complex analysis. In order to produce high yields of recombinant proteins for therapeutic applications, such as the production of monoclonal antibodies, stable producer cell lines need to be developed. Here, cells are transfected with a gene of interest, isolated to derive monoclonal cell lines and, finally, screened for productivity, stability and quality. Building on the previous generation of single-cell dispensers, the new F.SIGHT 2.0 carries a series of innovations that follow CYTENA's customer-oriented philosophy. By automating labor-intensive and time-consuming steps, the F.SIGHT 2.0 significantly streamlines cell line

development (CLD) as well as cell and gene therapy. An innovative and ultrafast dual camera system, an intuitive software and full compatibility with automation help define this new generation of CYTENA's single-cell dispensers.

Why we stand out



Dispense a 384-well plate in under 8 minutes



Non-contact dispensing of single-cells



Precisely and gently dispense single cells



Assurance of single-cell dispensation via brightfield and fluorescent imaging

Reducing the risk of cross-contamination

The F.SIGHT 2.0 uses our new EASY.ON cartridges, which were precisely engineered by microfluidic experts to ensure cell viability with the gentlest handling, even with the minimum 5 μ L volume. The ability to dispose of the cartridges eliminates the risk of cross contamination between samples. Plus, setting up your experiments has never been easier; EASY.ON cartridges are magnetically mounted for quick and easy loading.



Full resolution dual imaging

The F.SIGHT 2.0 has an innovative dual camera system that simultaneously captures brightfield and fluorescence images at full resolution. In combination, these images can be used to identify different cell types. Particularly, the use of fluorescently labelled cells can facilitate the identification and isolation of cells of interest for subsequent downstream analysis. All the images are saved for monoclonality assurance necessary during CLD.

LOAD SETTINGS DROPLET-QC DISPENSE

Name: Save As

Description:

Plate ID:

Experiment/LAQC:

Cartridge ID:

MTP Configuration

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
A	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
B	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
C	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
D	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
E	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
F	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
G	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
H	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
I	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
J	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
K	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
L	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
M	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
N	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
O	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Dispense Fluorescence Co: Number of Cells:

Track Processing Data: Size: 14.0 μ m 25.0 μ m

Cell Camera

Brightfield + Fluorescence Show ROI Overlay Auto ROI

Results

Size/Fluorescence Size/FL Intensity

Fluorescence (um)

Size (um)

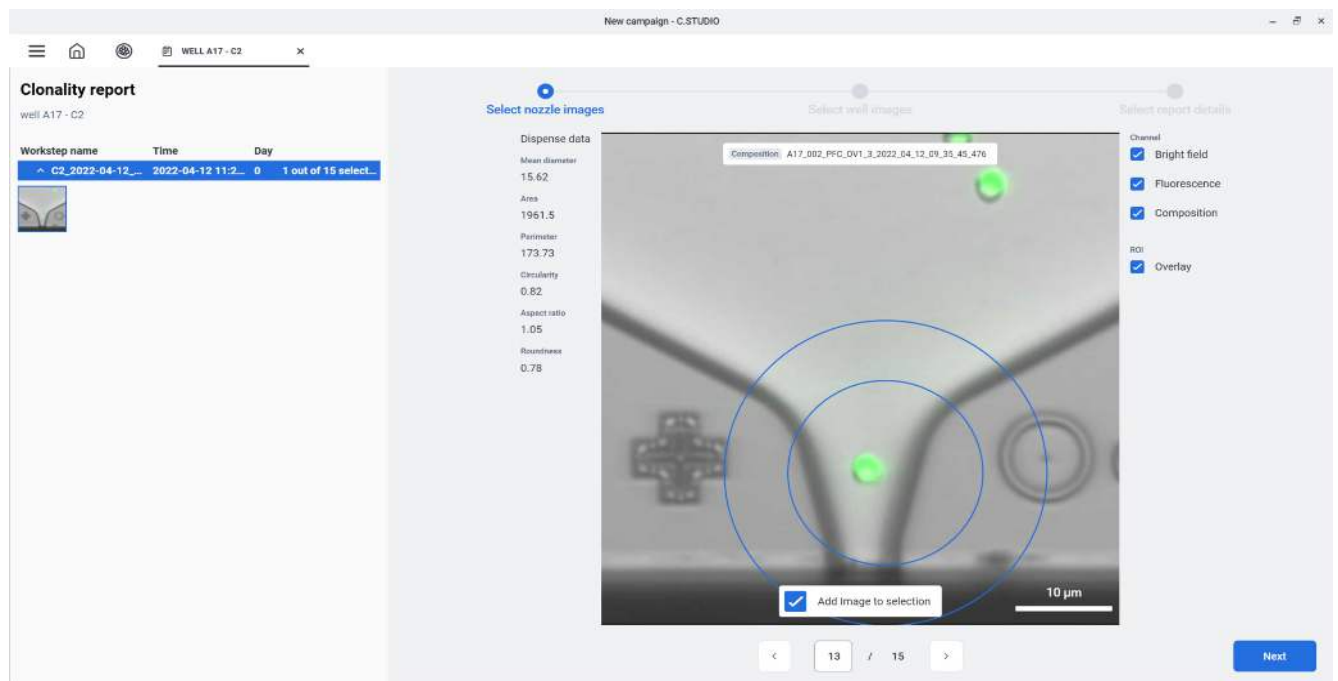
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Collect Samples Clear Results Data Points 64

Greater insights and faster processing

The F.SIGHT 2.0 combines our patented single-cell dispensing technology with an intuitive and fast software. Individual fluorescence experiments can be set up in minutes. Separate full-resolution brightfield and fluorescence images are obtained together along with an overlay image. The instrument's operating software analyzes cell morphology to isolate single cells according to set parameters such as size, roundness and even fluorescence intensity (if working with fluorescent cells).

This information is easily accessible in our accompanying analysis software, the C.STUDIO. Additionally, users can use C.STUDIO to generate clonality reports for selected wells in order to provide comprehensive documentation supporting pharmaceutical safety approval by regulatory authorities.



F.SIGHT 2.0 carries a series of innovations that follows CYTENA's customer-oriented philosophy.

Automation Compatible

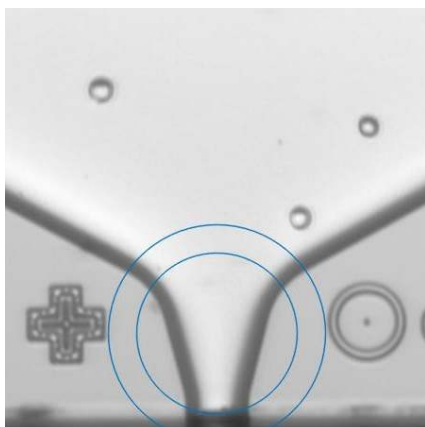
In order to best support high-throughput research, the F.SIGHT 2.0 is an automation friendly instrument. The lid from the F.SIGHT 2.0 can be programmed to open and close automatically for seamless cooperation with a robotic arm plate carrier. Additionally, previously established experiments can be saved as templates for easy setup of other following isolation runs. Finally, all the dispense runs are recorded and saved for future analysis and assurance of clonality.



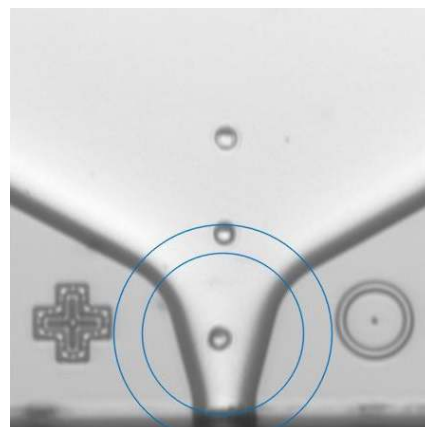
Cell Focusing - Minimizing cell loss

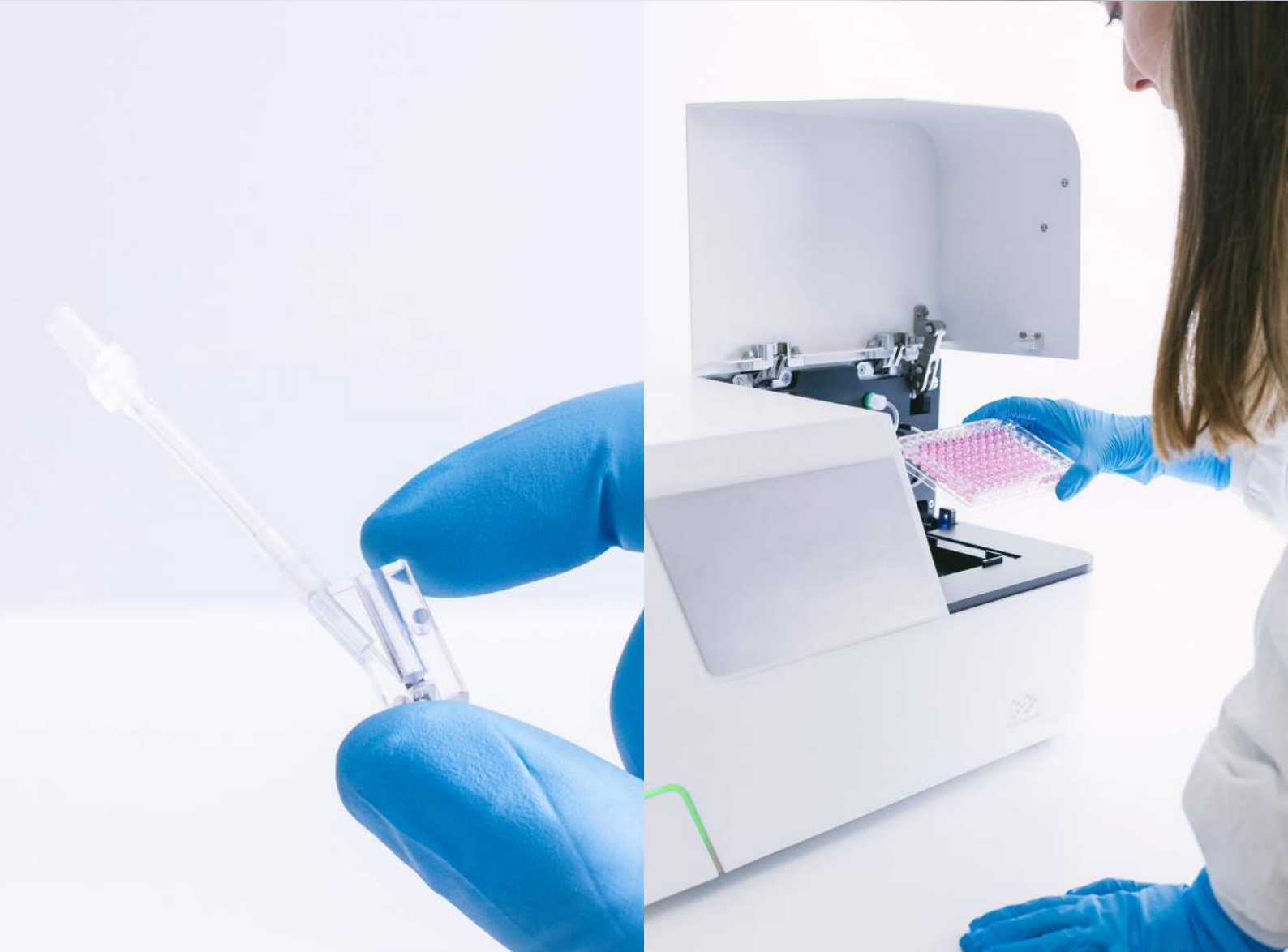
Add an additional layer of optimization with CYTENA's Cell Focusing technology, which gently aligns cells at the center of the dispensing cartridge for superior cell detection. It offers significant improvements when working with rare cell types as this alignment ensures that cells and their morphology are perfectly captured and measured, reducing cell loss and even increasing processing speeds. In combination with our proprietary EASY.ON cartridges, the F.SIGHT 2.0 can dispense a 384-well plate in under 8 minutes.

Cell Focusing Off



Cell Focusing On





Technical Specifications

Footprint	635 x 400 x 286 mm
Weight	40 kg
Power consumption ca.	156 W
Net voltage	100-240 Vac
Nozzle imaging	File type (JPEG) CMOS, 0.81 MP Objective 10x Optical resolution 3 µm Excitation wavelength 488 nm Emission wavelength 520 +/- 36 nm
Processing times	Single-cell dispensing into 96-well plate: ~2 min Single-cell dispensing into 384-well plate: ~8 min
Embedded computer	Windows
Compatibility and automation	Automation-ready incl. API and DLLs Compatible with standard biosafety cabinets class 2
Certified CE, CB, UL (TÜV), RoHS	



We create the future of health.



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CYTENA is a leading provider of high-precision instruments for isolating, dispensing, imaging, analyzing and handling biological cells. The company continues to build on the success of the single-cell dispensing technology it patented as a spin-off from the University of Freiburg, Germany, in 2014. Today, as part of BICO, the world's leading bio convergence company, CYTENA's award-winning devices are still manufactured in Germany and used at prestigious academic and pharmaceutical labs around the world to automate workflows in numerous application areas, including stable cell line development, single-cell omics, high-throughput screening and drug discovery. CYTENA's breakthrough innovations for the lab combine advanced automation, state-of-the-art software engineering and the latest insights in cell biology to maximize efficiencies in the life sciences and create the future of health. Learn more at www.cytena.com

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