

F.SIGHT™ OMICS

Precise and accurate single-cell dispensing into PCR plates to enable downstream miniaturization



Streamline your cell sorting capabilities for omics applications

Advancements in genomics have led to the development of innovative methods for faster and more efficient analysis. The miniaturization of library preparation chemistry has been a particularly significant development. This new methodology aims to improve the quality of sequencing while reducing overall costs. Building on the new generation of CYTENA's single-cell dispensers, the F.SIGHT OMICS features our customer-oriented product design made specifically for single-cell omics applications.

The device is equipped with CYTENA's patented, highly efficient and gentle single-cell dispensing technology and uses disposable cartridges capable of holding up to 80 μ L cell suspension. To better support the new miniaturization methodologies that have been developed, we have equipped the F.SIGHT OMICS with our new, high-precision Automated Offset Correction (AOC) dispensing system. Thanks to the AOC, single cells are isolated at the very bottom of PCR plates in sub-microliter droplets, thus enabling downstream miniaturization for NGS library preparation.

Additionally, the F.SIGHT OMICS has an innovative dual camera system for simultaneous capture of brightfield and fluorescence images at full resolution. Together, these images can be used to identify different cell types, and the use of fluorescently labelled cells can facilitate the identification and isolation of cells of interest from others for subsequent downstream analysis.

Why we stand out



Enable downstream NGS miniaturization



Dispense a 384-well plate in under 8 minutes



Precisely dispense single cells in the center of PCR wells



Non-contact dispensing of single-cells



Assurance of single-cell dispensation via brightfield and fluorescent imaging

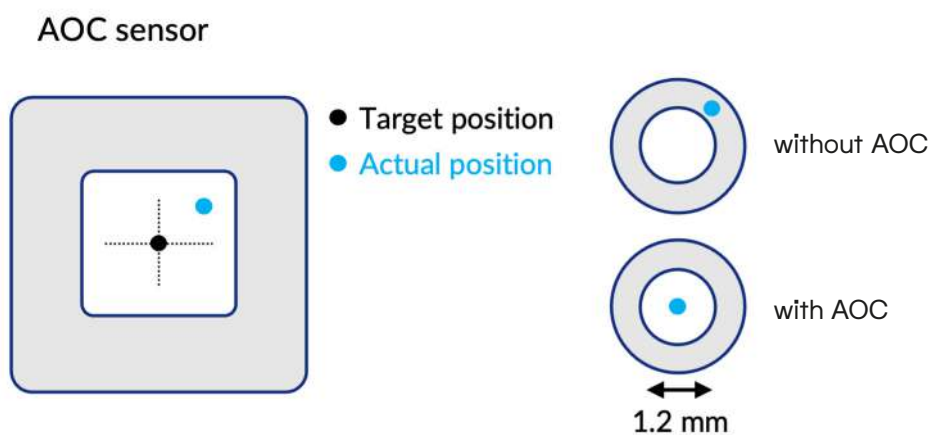
Reducing the risk of cross-contamination

The F.SIGHT OMICS 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 μL 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.



Reliable dispensing with the AOC system

Equipped with an AOC dispensing system, the F.SIGHT OMICS circumvents the need for manual drop-let alignment at target substrate positions. This contributes to highly accurate dispensing at the center of 96- or 384-well conical PCR plates. Combined with the picoliter droplets from single-cell sorting, the AOC system enables downstream miniaturization of lysis buffers in sub-microliter volumes for NGS library preparation, reducing costs and generating even better data.



Greater insights and faster processing

The F.SIGHT OMICS 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).

Information acquired during cell isolation is easily accessible in our accompanying analysis software, the C.STUDIO. Additionally, users can use the C.STUDIO to generate reports for selected wells in order to provide comprehensive documentation.

LOAD SETTINGS DROPLET-QC DISPENSE

Name Save As

Description

Plate ID

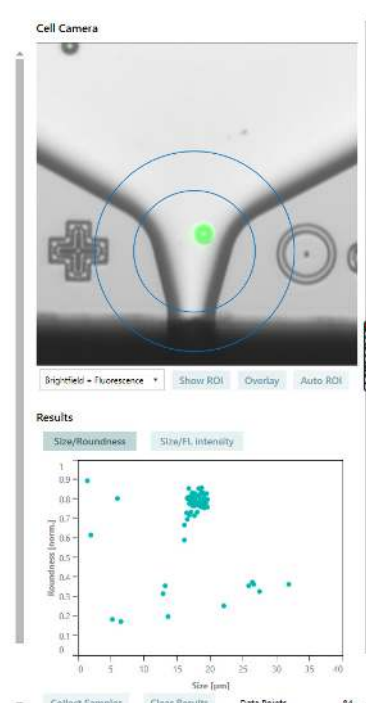
Cartridge ID

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																								
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P																								

Dispense Fluorescence Co. Number of Cells:

☒ Track Processing Status Size: 14.0 23.0



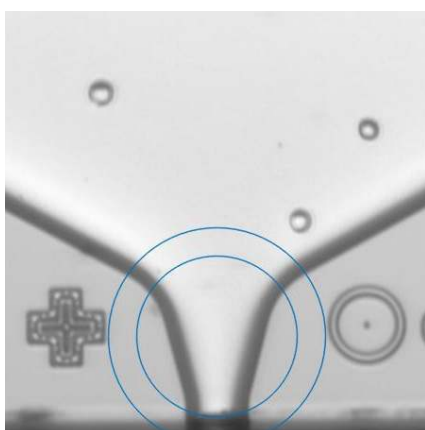
F.SIGHT OMICS features our customer-oriented product design made specifically for single-cell omics applications.



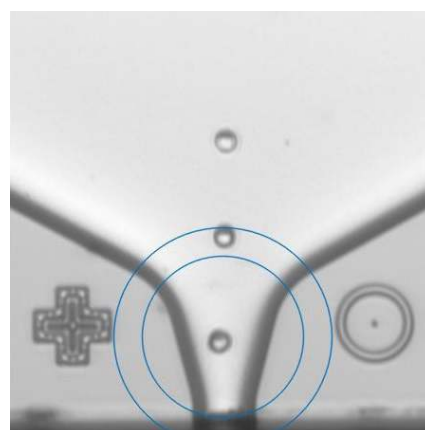
Cell Focusing - Minimizing cell loss

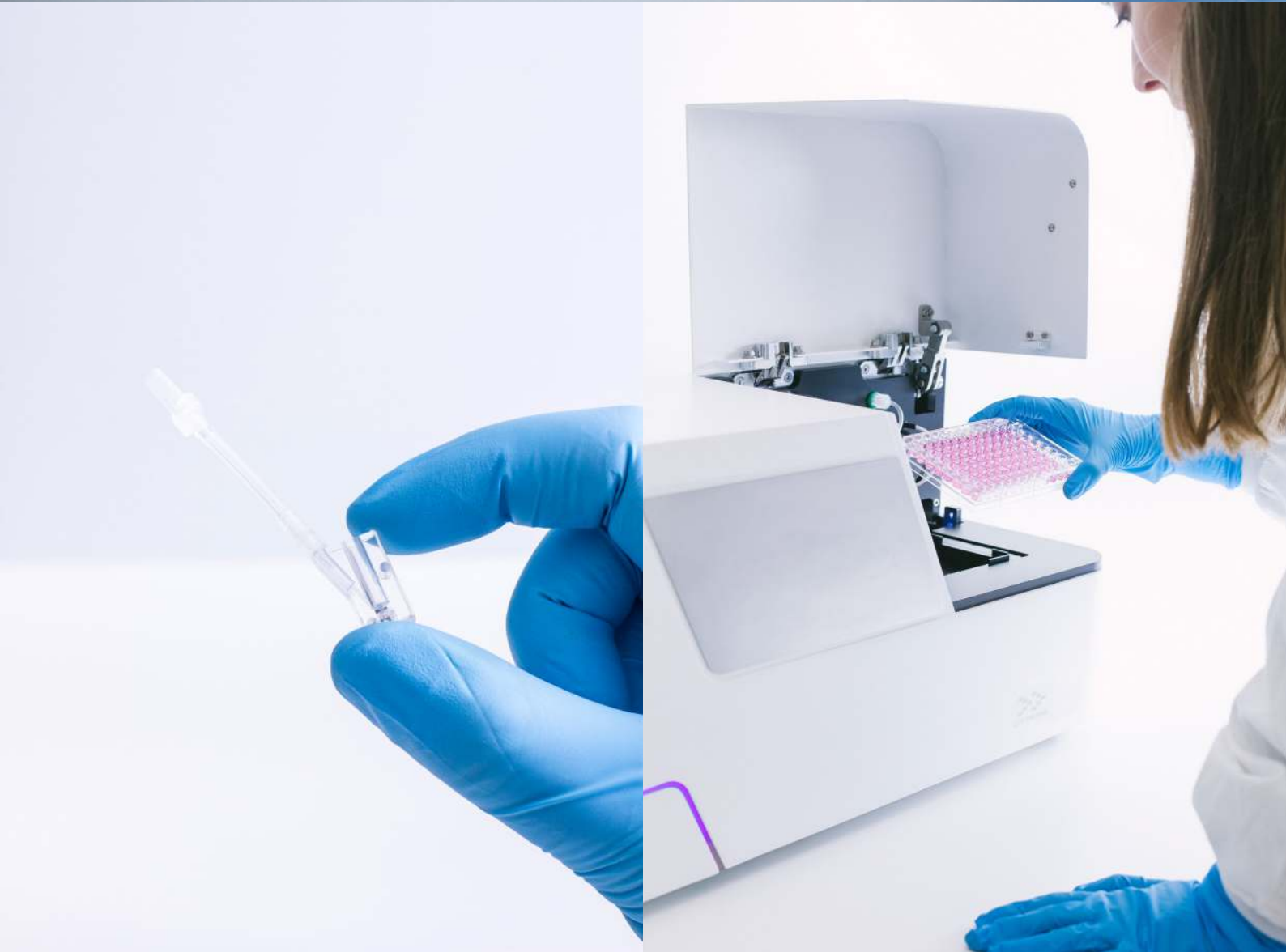
Add an additional layer of optimization with CYTENA's Cell Focusing technology, which gently aligns cells at the center of the dispensing cartridge for superior cell detection. It offers significant improvements when working with rare cell types by ensuring that cells and their morphology are perfectly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

*Cell Focusing **Off***



*Cell Focusing **On***





Technical Specifications

Footprint	635 x 400 x 282 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 (Win 10 x 64 Prof.) 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.



CYTENA, A BICO COMPANY

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