

Pocket Guide

Essential Tools for Life Science R & D

November 2020

Immuno-Oncology
Discovery & Development
Cell Health & Phenotype

(Single) Cells

Proteins

DNA / RNA

Tissue / 3D

Screening



your premier life science solutions provider ● www.bucher.ch

**Please challenge us
for a detailed product evaluation!**



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Check out these powerful tools
which may significantly advance your research projects:

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Who's Who at Bucher Biotec AG



Marc Bucher
CEO & Chairman



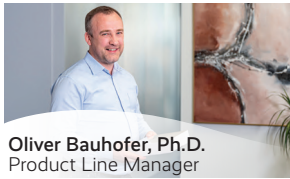
Georg Kienzle, Ph.D.
Director Sales & Support



Kathrin Dienst, Ph.D.
Product Line Manager



Lilly von Münchow, Ph.D.
Application Scientist



Oliver Bauhofer, Ph.D.
Product Line Manager



David Benz, Dipl.-Biologe
Application Scientist



Daniel Seidenberg
Service Engineer



Dominik Pinck
Service Engineer



Daniel Tanner
Manager Order Processing



Marie-Josée Schoffit
Order Processing

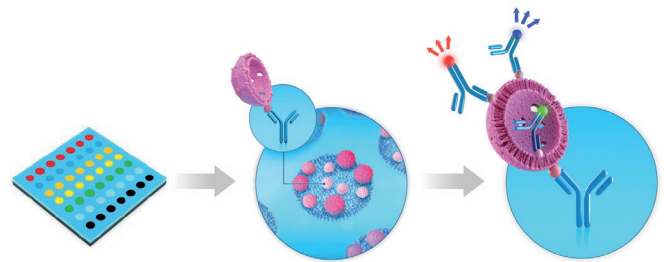
Our highly competent, well educated team is focused on understanding our customer's needs in order to propose optimal solutions for demanding research tasks enabling the acceleration of scientific exploration. Our support includes pre- and post-sales applications assistance as well as a comprehensive service support.

Exosome Characterization

NanoView Bio's ExoView® R100

Extracellular vesicles (EVs) and exosomes act as intercellular messengers, playing a key role in immune response, pathogenesis of diseases and in progression of cancer.

The ExoView R100 provides innovative solutions to accurately detect and fully characterize EVs and exosomes.



- Biomarker colocalization
- Purification not required
- High-resolution measurements of size and number
- Probe for luminal EV proteins and cargo
- Custom chip design with validated capture antibodies

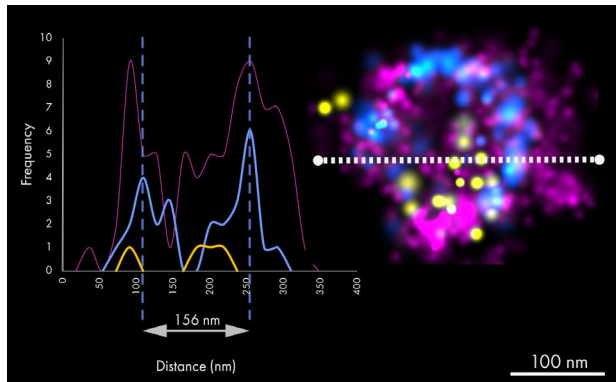


Up to 20 nm Resolution

Desktop Sized Super-Resolution Microscope

Introducing the ONI Nanoimager™

The ONI Nanoimager is the first super-resolution microscope that fits onto your bench and does not have any special requirements.



- Up to 20 nm resolution with dSTORM
- Single molecule FRET
- Single molecule tracking (3D)
- Epi / Hilo / TIRF illumination
- No dark room or optical table needed
- Incredibly small footprint (21.5 cm x 21.5 cm)



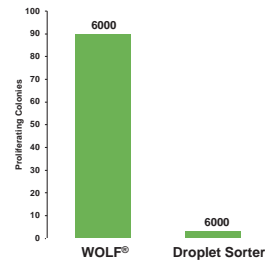
Sterile, Gentle Microfluidics to Analyze, Sort and Plate

Sorting and Dispensing of Cells

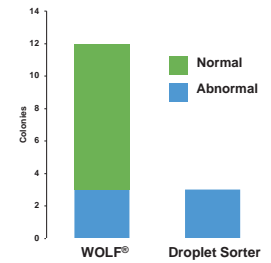
Introducing the NanoCollect WOLF® Cell Sorter

The compact Wolf is delivering sterile and simple solutions for sorting fragile samples. Cellular viability as well as integrity are preserved, which enables better and more physiological science in downstream experiments – e.g. outgrowth, differentiation, sequencing.

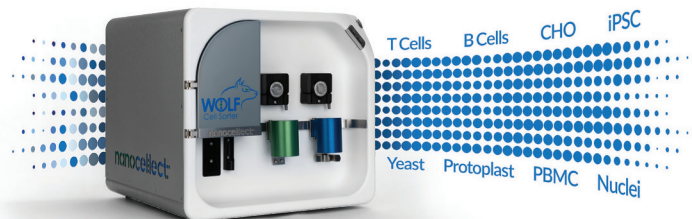
Viability



Cell/DNA/RNA Integrity



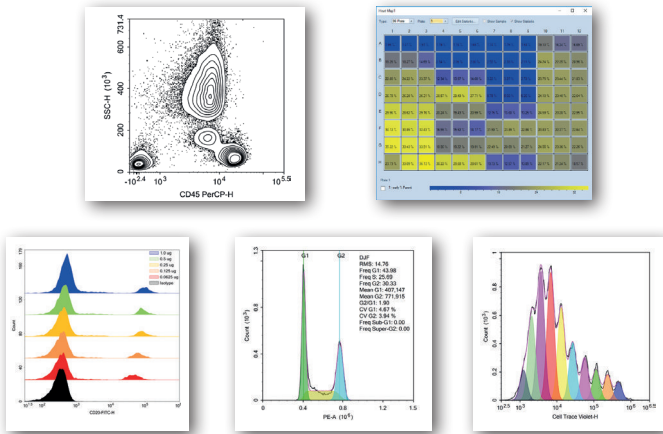
- Healthy cells at < 2 psi sorting pressure
- Contaminant and biohazard free with sterile, disposable, microfluidic cartridges
- Fits into a standard cell culture hood
- 2-way bulk or single-cell sorting
- Five parameter gating
- Use growth media as sheath fluid



Powerful Benchtop Flow Cytometers

Agilent NovoCyte Advanteon™, Quanteon™ & Penteon™

The customizable optical configuration and the latest detection optics ensure that the NovoCyte will always be at the level of your experiments.



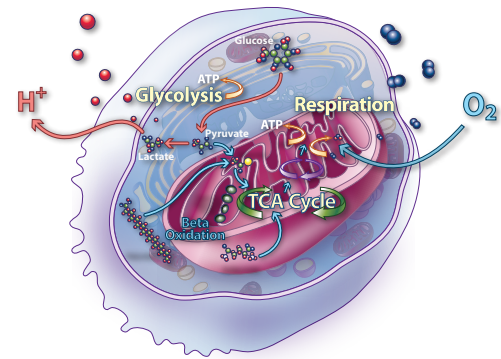
- Up to 5 lasers and 30 fluorescence channels
- Unique detection optics for highest resolution
- SSC resolution down to 100 nm
- Unique sample loader adaptable to your needs
- CE-IVD marked for clinical applications
- Truly intuitive and easy to use software



Metabolic Profiling

Agilent Seahorse XF Analyzers

Agilent Seahorse XF Analyzers are interrogating principal cellular features such as mitochondrial respiration and glycolysis of live cells in a multi-well plate. Metabolism is key to every cellular function and influencing a cell's metabolic activity can modulate drug response, differentiation, effector function, and so on.



- Systems-level view of cellular metabolic function
- Mitochondrial activity: oxygen consumption rate (OCR)
- Glycolysis: extracellular acidification rate (ECAR) or proton efflux rate (PER)
- Label-free detection in real time with 4-port injection system
- Compatibility with adherent cells, suspension cells, isolated mitochondria, 3D samples, non-mammalian samples

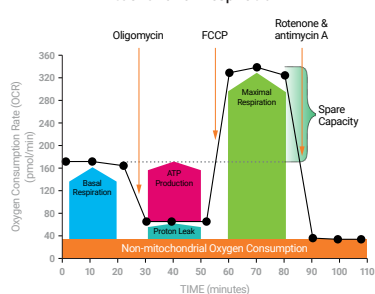


Metabolic Profiling

Kits for Agilent Seahorse XF Analyzers

We're offering a wide range of high quality Seahorse XF assay kits, reagents, and media for studying cellular function and assessing mitochondrial and glycolytic activity in real time. These kits are designed to simplify workflow and improve research productivity, enabling generation of higher quality and more consistent data with less effort on your Seahorse XF Analyzer.

Agilent Seahorse XF Cell Mito Stress Test Profile
Mitochondrial Respiration



- Measure mitochondrial function with the **Mito Stress Test**
- Quantify ATP production rates with the **ATP Rate Assay**
- Measure glycolytic activity with the **Glycolytic Rate Assay**
- Determine substrate impact with the **Substrate Oxidation Stress Test**
- Analyze 3D samples with the **Spheroid or Islet Plate**
- Use 3x less cells with dedicated HS Miniplates
- pH-ready DMEM or RPMI Seahorse Assay Media



Microplates for any Workflow

Agilent Highest-Quality Stock Products or Custom Solutions

Agilent offers a wide range of microplates including storage, assay, reservoir, and filter microplates. While there are plenty of standard products to choose from, custom microplates are available to fit the exact requirements for your uses in the field and labs.

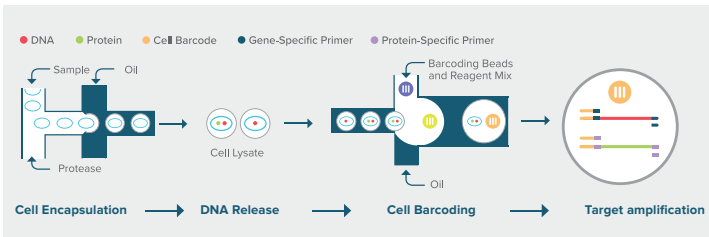


- Highest quality production at ISO 9001:2015
- Huge variety of stock products: storage / reservoir / filtration
- Free samples available
- Barcoding or heat sealing options
- Fast custom designs at attractive pricing
- Never again a missing microplate format

Single-Cell Multi-Omics

Mission Bio Tapestri® Platform

Reveal clonal diversity with Tapestri single-cell targeted DNA analysis. With novel droplet microfluidics to access DNA, we leverage primer panels that barcode and target specific regions of interest. Those single-cell DNA panels can be paired with custom oligo-conjugated antibodies to simultaneously detect the expression of multiple proteins and DNA within the same single cell.



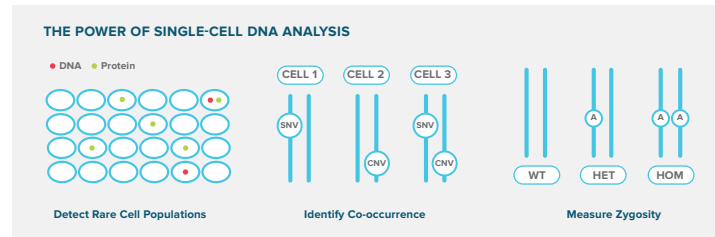
- Single-cell DNA & protein analysis from <10,000 cells
- SNV, indel, CNV and LOH calls from DNA
- High sensitivity for rare clones – down to 0.1%
- Single-cell DNA and protein panels with catalog or customizable content
- Intuitive software solution for single-cell DNA and protein analysis



Single-Cell DNA & Protein Solution

Mission Bio Tapestri® Single-Cell Multi-Omics Reagent Kits

Run targeted single-cell DNA panels with catalog and customizable content, so you can focus on the mutations and regions of interest that are most informative for your research. TotalSeq™-D antibody content from BioLegend can be added to uncover true multi-omic information from thousands of single cells.



- 20-gene AML panel
- 32-gene CLL panel
- 45-gene myeloid panel
- 59-gene tumor hotspot panel
- More pre-designed content to get you started
- Custom panels for maximum flexibility
- CRISPR QC
- 45-plex TotalSeq™-D Heme Oncology Cocktail
- Add oligo-tagged antibodies to your panel

tapestri

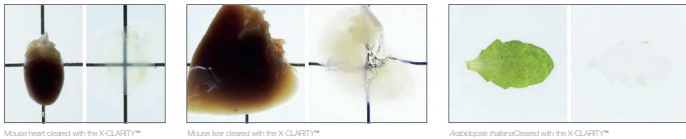
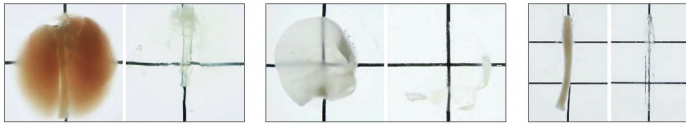
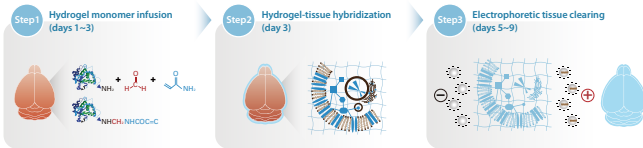


The Alternative to Tissue Sectioning

Standardized Tissue Clearing

Logos Biosystems X-CLARITY™ II

Instead of sectioning your tissues and doing 3D histological reconstruction, X-Clarity will help you to render tissue transparent and image it with a fluorescent microscope.



- Mouse brains cleared within 8h
- Usable for any type of tissue
- Best transparency even in thick samples
- Conserves endogenous fluorescence
- Load and go protocols
- Enhanced staining efficacy with the DeepLabel kit



Screen with any Objective you Want

Automated High Content Imaging

Logos Biosystems' CELENA® X

The Celena X high content imager allows you to screen your plates or slides with any magnification you can think of. Independently of whether you have histological or fluorescent stains.

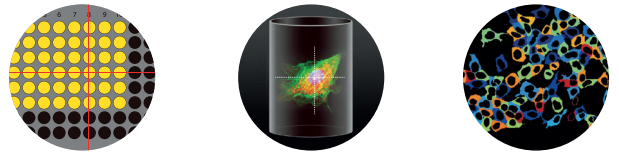


Image acquisition

Image analysis

Data analysis

- Fully automated acquisition of pictures
- 4 fluorescence channels
- Objective magnification from 1.25 – 100x
- Optional color camera for histology samples
- Intuitive analysis software for object identification and measurement
- Laser-based autofocus

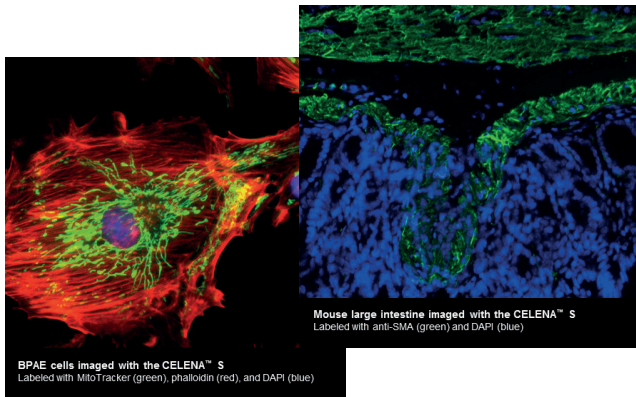


High Performance for Low Budget

Compact Digital Microscopy

Logos Biosystems' CELENA[®] S

The Celena S is a versatile imaging tool allowing to quickly acquire pictures as well as to perform publication level analysis with just a few clicks.



- All-in-One imaging system
- 3 fluorescence channels
- Objective magnification from 1.25 – 100x
- Integrated computer
- No dark room or optical table needed
- Small footprint



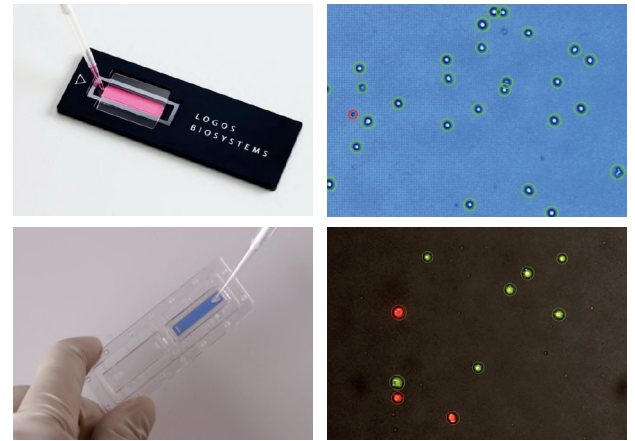
Standardize your Cell Counting for more Reliable Results

Platinum Awarded Cell Counting

Logos Biosystems LUNA[™] Cell Counter Family

We are not the only ones convinced by the LUNA cell counters: The LUNA[™] family of automated cell counters was awarded a Platinum Seal of Quality by SelectScience[®]!

This highest achievable award is only given to the top 0.1% of products based on customer feedback, and only 6 have ever been awarded!



- Brightfield, Trypan Blue or fluorescence based counting
- Best in class declustering algorithm
- Disposable or reusable slides
- Automatic report generation
- Counting volume equal to manual counting
- Count up to 8 samples simultaneously

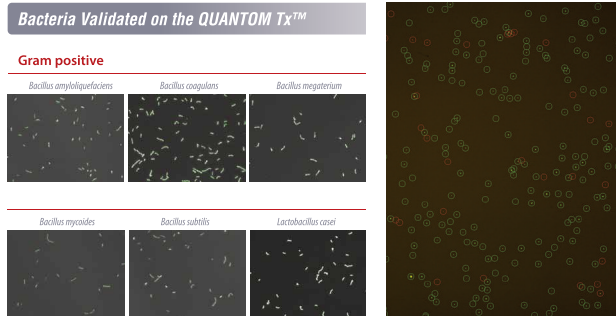


The Alternative to Agar Plates and Colony Counting

Bacteria and Yeast Cell Counting

Logos Biosystems Quantum Tx[®] and LUNA-II YF

The Quantum Tx and the LUNA-II YF counter allow you to count individual bacteria / yeast and determine their viability within an hour without the need of a single plate.



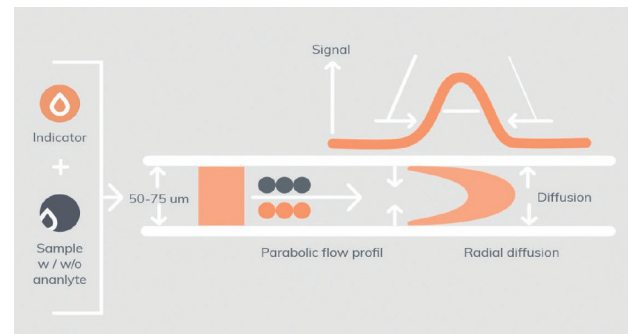
- Rapid single bacteria / yeast cell counting
- Powerful declustering algorithm
- Automatic report generation
- Determination of viability
- Standardized counting
- Small footprint

In-Solution Binding Kinetics

Protein Characterization

FIDA Technology

Flow Induced Dispersion Analysis (FIDA) is an in-solution assay providing direct measurement of the hydrodynamic radius as an absolute value. This parameter can be utilized to quantify proteins in complex solution like serum, determine binding kinetics and protein stability, or to monitor conformational changes.



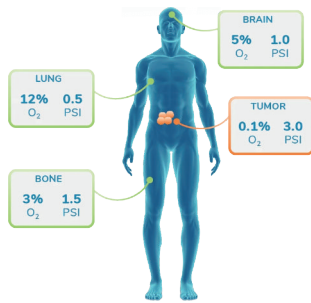
- Analyze binding affinity and stoichiometry
- Complex sizing under physiological conditions
- Determine titers in complex solution
- Compatible with a broad concentration range
- Assay diffusion coefficient and viscosity



Cell Culture under Hypoxia and Pressure

XcellBio Avatar, Avatar AI, and Kali Cell Foundry

In vitro modeling of the physiological or tumor microenvironment enables predictive drug screening & cell killing assays and results in optimized immunotherapy research. In real-time, advanced cell analysis algorithms predict IC50 values and dose-response curves.



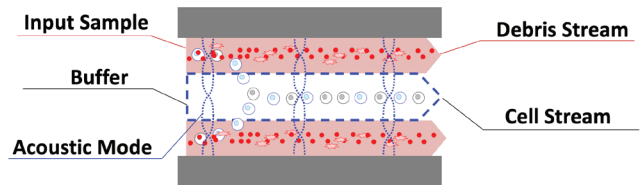
- Mimic the body micro-environment
- O₂, Temperature, CO₂, Pressure
- Cell culture under hypoxia AND pressure
- Target the cell population of choice
- Predict drug behaviour in tumor microenvironment
- Label-free, real-time analysis of cell health and drug sensitivity
- Automated, closed system for the production of autologous cell therapies



Cell Isolation

Sample Preparation using MARS® by Applied Cells

The MARS System purifies and enriches cells from blood, cell culture or from tissue samples by an automated standardized process. Cells are separated and extracted with high purity, close to zero loss, and alive, enabling countless down-stream cellular and genomics analyses, and meeting cell therapy needs.



- Fully automated process, ideal for clinical SOPs
- No centrifugation, increased viability
- Modular system for cell isolation and/or enrichment
- Milliliter per minute throughput



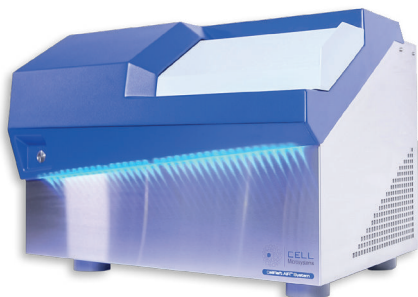
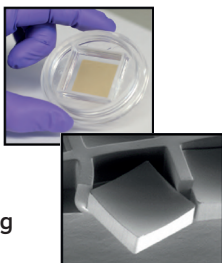
Single-Cell Analysis with Image-based Sorting

Cell Microsystems CellRaft® AIR™

The CellRaft® AIR™ System is an automated platform to image, sort, and isolate single cells using the CytoSort™ Array line of consumables. The System enables complex workflows to be performed on a single consumable, including clonal propagation of single cells for CRISPR gene editing, stem cell research, organoid studies, cell line development, antibody discovery, T-cell screening, as well as end-point destructive analysis of single cells for genomics.



- Functional phenotyping
- Viable clonal colony growth
- Rapid CRISPR edited clones
- iPSC and 3D Organoid compatible
- Fluorescence imaging-based sorting
- Faster cell line development
- “On-Array” cell-based assays
- No minimum sample size requirement
- Fully automated



Company Profile

Bucher Biotec AG is a privately held Swiss distributor company representing some of the most advanced US, European and Asian manufacturers of highly innovative life science research instrumentation, associated reagents and consumables.

Founded in 1978 by Paul and Anna Bucher the company management in 2003 changed to the next generation. Marc Bucher has taken over the lead of the company as CEO and Chairman. Anna and Paul Bucher remain members of the board.

We are extremely proud of our distinguished customer base in the pharmaceutical, biotechnology, agricultural, food and related industries, in all life science research oriented academic institutions, in numerous governmental, clinical and environmental labs and in all of the University hospitals.

Our highly competent, well educated team is focused on understanding our customer's needs in order to propose optimal solutions for demanding research tasks enabling the acceleration of scientific exploration.

Company Mission

Since our inception we strive to provide a truly high standard in customer support, pre- and post-sales, applications support as well as a comprehensive technical service.

**Please challenge us
for a detailed product evaluation!**

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Happy Cells Better Science

Discovery & Development Cell Health & Phenotype Immuno-Oncology

- Metabolic Phenotyping
- Multicolor Flow Cytometry
- Physiological Cell Culture
- Digital Imaging & Cell Counting
- Tissue Clearing & Staining
- Protein Characterization
- Microvesicle Analysis
- Single Cell Cloning
- Gentle & Easy Sorting & Dispensing
- Targeted Single-Cell Multi-Omics
- Super Resolution Microscopy
- Cell Isolation and Enrichment