



Fluent[®] Laboratory

Automation Workstation

for cell-based assays.

THE SIMPLE WAY TO TAKE THE COMPLEXITY OUT OF CELL BIOLOGY RESEARCH



Designed specifically for cell-based applications.

Seamless integration of cell-based assay technologies streamlines your workflows and simplifies your laboratory life.



Optimized cell protection

Fluent's three, task-specific robotic arms work in parallel for faster processing. Automated lid handling maintains sterility and minimizes evaporation, while cell cultures are protected during pipetting by an integrated laminar flow HEPA hood*.

Incubation

Incubation and environmental control for automated, high throughput, cell-based assay workflows.



Gentle cell washing

The HydroSpeed™ plate washer with Cell Protection™ features extra-gentle wash settings that you can adjust to suit specific cells, microplates and applications, enabling you to achieve reproducible results even with weakly adherent cells.



Result evaluation, cell counting and confluence measurement - all in one instrument

The Spark® modular multimode reader offers advanced sensitivity and un-compromising wavelength accuracy and precision, plus flexible bandwidth selection. Integrated air conditioning allows temperature management with active cooling, helping to ensure more reliable results for your microplate-based assays. Automated microscopy enables live cell imaging and confluence measurement in parallel with quantitative readouts.

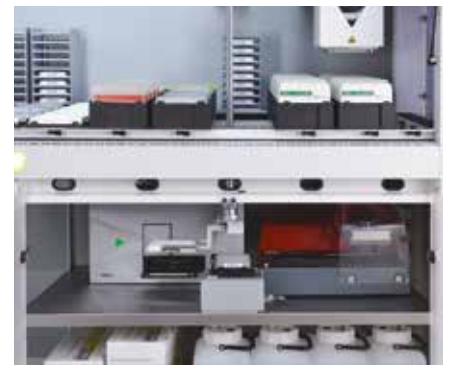
* Laminar flow HEPA hood is a product of Bigneat Ltd., Waterlooville, UK.

A solution that answers your needs.

Automate and simplify complex investigations for high productivity and confidence.

Enhanced process security

Ensure the integrity of your cell biology results with an array of fully integrated technologies and capabilities, including liquid level detection for reliable pipetting performance, automated lid handling and method recovery options to quickly restore protocols. Fluent's unique teach-free hardware and Path Finder™ move optimization technology provide unrivaled positioning accuracy and precision, maximizing efficiency and throughput for every run, no matter what the sample type.



Robust and reliable real-world results

Fluent's speed and precision minimize the time between the addition of compounds to the first and last wells of a plate, as well as the overall time your samples spend exposed, for more reliable results. Confidence in your data is further enhanced by the touchscreen user interface that ensures adherence to workflow protocols.



Simplifying every interaction, every day

Fluent's software has been designed from the ground up for quick and easy programming and configuration. This is complemented by a built-in touchscreen interface that guides users through daily tasks for fast, consistent and efficient operation.



Do more in less time – and less space.

Fluent's advanced design delivers more capacity and increased speed. An innovative, automated solution for your entire cell biology workflow, the system provides excellent precision, throughput and walkaway time – making it easier to get more done, more confidently.



EXECUTE PROTOCOLS QUICKLY, EFFICIENTLY AND RELIABLY

Perform multiple tasks simultaneously with independent, task-specific arms that move in parallel. Runs are completed faster and more efficiently with patented **Path Finder technology** that automatically calculates the shortest and fastest path for all arms, optimizing every move.

CONSUMABLES

Tecan offers a broad portfolio of **Tecan Sterile** consumables well suited for cell-based research. From disposable tips to troughs, every product undergoes stringent testing to ensure the precision, consistency and purity you need for reliable, reproducible results.



1 MORE FUNCTIONALITY IN LESS SPACE

Fluent's unique **Dynamic Deck™** allows you to freely configure the high-capacity worktable. The cabinet-mounted option lets you take full advantage of the system's below deck access, accommodating peripherals such as washers and readers to expand capacity and functionality without extending the instrument's footprint.

2 INTUITION BUILT RIGHT IN

Every Fluent comes with an integrated, intuitive **touchscreen** interface that can be customized to your specific cell-based assays and personalized for each user. Requiring little or no training, the interface clearly defines every action for simpler, more consistent operation.

3 A SPOTLIGHT ON PRODUCTIVITY

Optional **interior lighting** helps operators to visually confirm steps during a run, but can be switched off for light sensitive assays, and external lights provide status updates visible from across the laboratory.

4 DEVICE INTEGRATION FOR FULLY AUTOMATED WORKFLOWS

Enjoy true walkaway operation with Fluent's seamless **integration** of complementary cell biology peripherals. Everything from incubators* and carousels to washers and readers can be fully managed by **FluentControl™** software for maximum throughput and minimum operator interaction.

5 FLEXIBLE CHANNEL ARM

Ideal for the preparation and distribution of test compounds and detection reagents, the Flexible Channel Arm's **independent pipetting channels** can access any tube or well configuration, with

WORKING IN A REGULATED ENVIRONMENT?

Fluent Gx Assurance software offers a logical extension of essential features that enables the use of the Fluent in regulated laboratories. Features include user management, method approval, audit trail, sample tracking & compliance checker. For more information refer to the **FluentControl Software** brochure.

automatic adjustment of tip spacing between labware formats. By offering both air and liquid displacement pipetting technologies, the Flexible Channel Arm provides additional flexibility: you can choose liquid displacement with fixed tips to pipette into high density 1,536-well plates, or use air displacement with sterile disposable tips to maintain optimal conditions for long-term cell-based assays.

6 MULTIPLE-CHANNEL ARM

Automatically swaps between multichannel pipetting formats, including **96- and 384-channel heads**. This option offers the flexibility to switch between fixed and disposable tips within an assay, as well as providing a broad dynamic pipetting range. Starting at sub-microliter volumes, this smooths the way for optimal performance of cell-based assays in 96-, 384- and 1,536-well formats. The ability to pick up individual rows and columns enables the straightforward preparation of compound serial dilutions for dose-response experiments.

7 ROBOTIC GRIPPER ARM

Rapidly moves plates between logistical and processing devices, without interrupting the pipetting process. This arm smoothly and quickly delivers labware to pipetting positions and integrated devices, with automated lid handling to guarantee that cells are not exposed longer than required. The patented **Finger Exchange System™** automatically changes gripper configurations in seconds, extending the boundaries of walkaway workflow automation for microplates and tubes using a single arm.

* Product shown is Cytomat™ 10 C, ThermoFisher Scientific Inc, MA, USA.

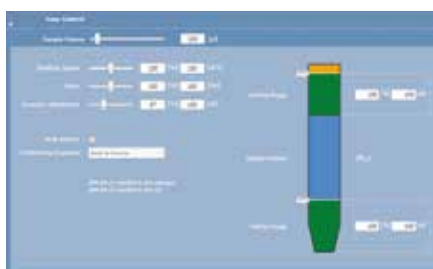
Run fast. Run smart.

Fluent's robust FluentControl software simplifies the programming, management and operation of the instrument, giving you a powerful set of tools to quickly and easily set up and run even the most challenging cell based assays.



An excellent fit for operators and programmers

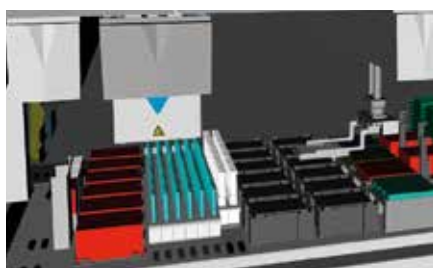
FluentControl software was designed to meet the needs of both day-to-day operators and system programmers without compromise. Development of complex assays and system configuration are quick and easy using a dedicated programming environment. A special run-time environment presents a clear and simple user interface on the built-in touchscreen, which shows the operator how to set up the system with cell plates, compounds, reagents, disposable tips and more, ensuring efficient performance of the programmed assays.



Fast and easy scripting

Configuring cell-based assays in FluentControl is straightforward, with drag and drop command editors and an intuitive 3D worktable. It automatically checks for errors while editing to ensure rapid, easy scripting. Highlights include:

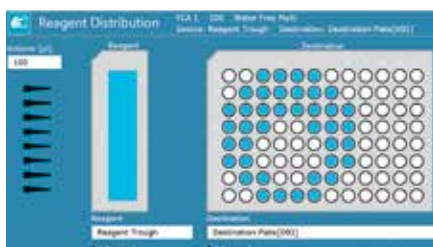
- **Liquid class editor** – use predefined parameters for a wide range of liquids, or quickly define custom liquid classes required for compound dilutions, reagent distribution, etc.
- **3D simulations** – create and visualize new assays at your desk, while the Fluent is running your routine tasks.
- **Method approval** – prevent unauthorized changes to validated protocols.



Smart commands

These simple, one-line programming tools take care of common activities, making it faster and easier to generate basic protocols. Functions include:

- Fill a plate, or series of plates, with a reagent for simple add-mix-measure assays
- Dilute compounds based on imported files, run information (e.g., concentrations calculated during the run), or predefined factors



Sample in, data out – at the touch of a button.

Consolidating your entire cell-based assay workflow on a single automated system allows you to focus on other tasks around the laboratory as the instrument runs unattended.

A complete, fully automated system

Fluent gives you that freedom and flexibility by seamlessly integrating all the devices you need to store, transfer, manipulate and measure cellular samples in a small footprint. Every step, from incubation to detection, can be performed and controlled by the system allowing you to quickly go from samples to clear, reliable, and actionable data.



Optimal capacity. Optimal throughput. Optimal results.

Accelerating your investigations

Cell signaling

Signal transduction studies, cell/cell communications and research on intra-cellular pathways.

Reporter gene

Promoter structure, gene expression and gene transformation/transfection research.

Cell health

Cytotoxicity, viability, proliferation and apoptosis studies.

No matter what your area of cell-based assay research is, Fluent can automate your entire workflow for greater throughput, more reliable results and faster discoveries.

DISCOVER THE FLUENT LABORATORY AUTOMATION SOLUTION

To see Fluent in action and learn how it can improve the productivity of your laboratory, contact your nearest Tecan office or visit www.tecan.com/fluent

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