sysmex | Lighting the way with diagnostics

Automated sample preparation for clinical flow cytometry

PS-10™ sample preparation system

Thoughtful automation for a new level of workflow efficiency

www.sysmex-europe.com/clinical-flow

From vision to reality: our new solution for flow cytometry

Our flow cytometry solution helps you efficiently manage sample and data flow.

PS-10
Automated sample preparation system

Directly transfer all tubes in a rotor from the PS-10 to the wash centrifuge to the XF-1600, with automatic barcode recognition.

Sysmex CyFlow™
CE IVD antibody reagents

Get into the flow

Specialised flow cytometry laboratories today are facing several challenges: an increasing number and complexity of tests, high requirements for documentation, and limited availability of skilled staff.

For more than 50 years, Sysmex has helped clinical laboratories improve their productivity and diagnostic quality by adding innovative testing and automation in areas such as haematology, haemostasis and urinalysis.

Applying our expertise in workflow consultancy with an on-site analysis of the current processes in your flow cytometry laboratory, we can work out the most suitable solution to simplify and standardise your work, adding automation where it makes sense, while maintaining flexibility where needed.

This helps your laboratory 'get into the flow', with

- ✔ a new level of workflow efficiency
- ✔ standardisation with flexibility
- ✔ quality assurance support
- ✔ proven brand reliability
- ✔ integrated digital solutions

while giving you – in the end – confidence in the results.

VenturiOne®
Software solution for analysis and reporting

XF-1600
Flow cytometer

Rotolavit II-S
Cell washing centrifuge

Automate your sample preparation processes

The PS-10 sample preparation system alleviates the primary bottleneck in today's busy clinical flow cytometry laboratory, while providing outstanding flexibility for the set-up of complex laboratory tests.

Substantially improve laboratory processes

- Continuous, uninterrupted sample introduction and worklist creation.
- Efficient automation for high-throughput operation.
- Virtually eliminates operator-dependent variability.
- Powerful flexibility, allows you to easily incorporate your existing laboratory procedures (SOPs).

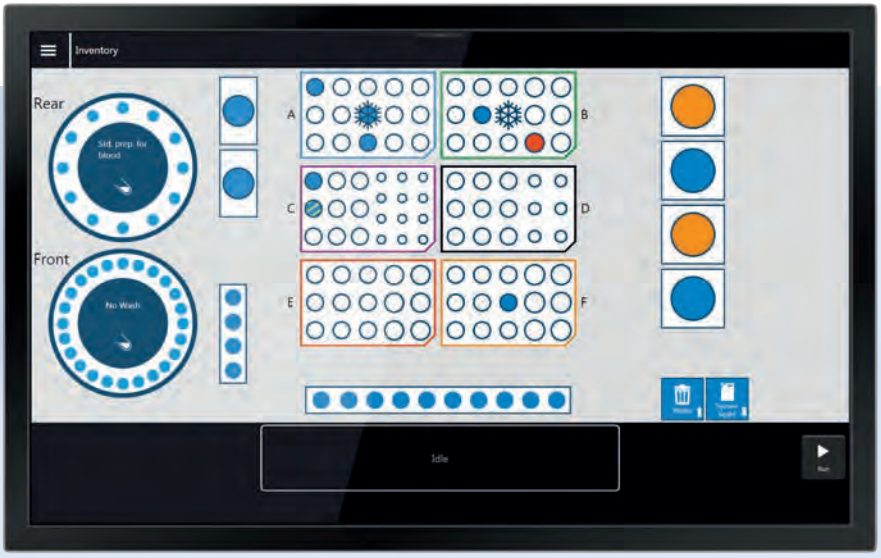
High-capacity smart autosampler for reliable and safe specimen handling

- Uses standard Sysmex haematology specimen racks.
- Up to 50 specimen tubes can be loaded at a time with additional racks loaded continuously.
- Multiple, integrated barcode readers for positive ID of samples and tube rotors to reduce operator errors.
- Four open vial positions can accommodate a larger range of specimen tube sizes.

Loading the autosampler

Customise procedures to match your needs while ensuring traceability

- Test request download via LIS speeds up sample processing.
- The graphic user interface allows you to easily create custom tests, panels and procedures.
- Variables such as sample volume based on WBC count, antibody volume, incubation time, lyse and buffer volumes are all available for customisation. There is no longer a need for cumbersome pre-dilution of primary specimens.
- Information concerning reagent blocks, bulk reagents, tests, panels and procedures is stored for future use – easing your daily work, and your work for accreditation.
- Two cooled racks are available to ensure reagent or cocktail stability.



Example screen of PS-10 user interface

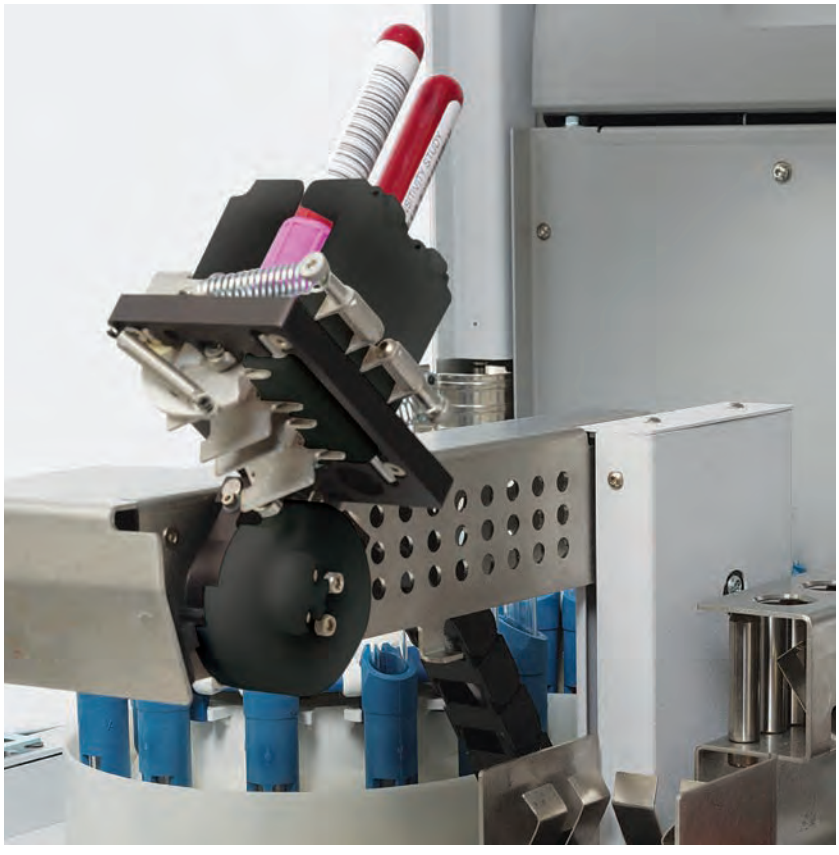
Maximise your workflow efficiency

Design elements that maximise workflow efficiency

- Dual pipetting probes decrease the individual steps required during sample preparation.
- Robust, reliable cap piercing minimises operator exposure to potentially hazardous biological specimens.
- Automatic allocation of daughter tubes for specimen security.
- A single aspiration of blood or antibody allows multiple aliquots, saving time for multi-tube panels.
- Daughter tube rotors are directly transferable to the automated cell washing system.

The new standard for throughput of routine, no-wash assays

- Processes approximately 2 x 24-tube rotors per hour, for no-wash assays.
- Dual rotor configuration enables batch processing.
- Continued sample processing during incubation and wash steps maximises efficiency.
- All reagents and waste containers have level monitoring.



Primary specimen mixing

Dual pipetting probes for fast throughput

Flexibly standardise your preparation processes

Hettich Rotolavit II-S automated cell washing system

Custom procedures for sample preparation

- Multiple bulk reagent bottles for lyse and buffer solutions allow multiple reagent choices.
- Easily accommodate lyse-wash or no-wash and intracellular staining procedures.

For wash procedures, the PS-10 rotors are directly compatible with the Hettich Rotolavit II-S automated cell washing system.

- Rotors can be easily transferred to and off the system for required wash steps, virtually eliminating daughter tube handling and human errors when transferring tubes to and from a centrifuge for washing.
- The Rotolavit II-S is fully programmable for automatic wash cycles, decanting, and resuspension of cell pellets.

PS-10 reagent blocks hold up to 90 antibody reagent vials of different sizes

Sample preparation and automated cocktailing in one system

- PS-10 reagent blocks are colour-coded to conveniently accommodate a combination of Sysmex and other producer's vials.
- Peltier-cooled locations keep antibody vial blocks and reagent cocktail blocks at optimum temperature.
- An automated cocktailing function is supplied, selecting from the up to 90 onboard reagent vials.
- Barcoded reagent blocks containing antibodies can be refrigerated after use and are already registered for the next run.

We are continuously expanding our CyFlow CE IVD antibody reagents portfolio to cover the needs for all important panels. Visit our shop to see the current list:
www.sysmex-flowcytometry.com

High-quality Sysmex CyFlow™ antibody reagents

Sysmex CyFlow CE IVD antibody reagents feature a convenient, readable QR code for automatic entry of reagent type, product code, lot number and expiry date.

Technical specifications

User-programmable procedures	lyse no-wash, lyse-wash, pre-lyse (bulk), intracellular staining and custom sequences variables: sample volume, antibody volumes, cocktail volume, lyse volumes, buffer volumes, incubation times
Sample and reagent volume ranges	sample: 50 µL or 100 µL in fixed volume mode or threshold mode; 20 µL – 100 µL in variable mode, adjusted based on the sample WBC count; either via autosampler or open tube positions antibodies: 4 µL – 100 µL, either single clone vials or cocktail vials lyse/buffer solutions: 450 – 2,000 µL, configurable
Reagent capacity	system fluid: (DI H_2O) 9 L waste: 9 L lyse/buffers: 4 × 500 mL and 2 × 125 mL antibody reagents: positions for up to 90 standard vials Peltier cooling: 20C – 80C for up to 30 Sysmex standard and cocktail vials
Sample tube capacity	50 primary sample tubes simultaneously via autosampler up to 48 daughter tubes via 2 racks: 24-tube fixed-angle rack or 12- or 24-position swing-out rotor compatible with Hettich Rotolavit II-S automated cell wash centrifuge for automated sample wash steps
System performance	accuracy: ■ sample: 20 µL – 49 µL +/- 10 % by volume ■ sample: 50 µL – 100 µL +/- 5 % by volume ■ reagent: 4 µL – 19 µL +/- 20 % by volume ■ reagent: 20 µL – 100 µL +/- 7 % by volume ■ lyse: 450 µL – 2,000 µL +/- 3 % by volume precision: ■ sample: 20 µL – 100 µL CV ≤ 5 % by volume ■ reagent: 4 µL – 19 µL CV ≤ 15 % by volume ■ reagent: 20 µL – 100 µL CV ≤ 5 % by volume ■ lyse: 450 µL – 2,000 µL CV ≤ 3 % by volume throughput: ■ 48 tests/h, two-tube panel, lyse no-wash, includes 10 min stain incubation and 10 min lyse incubation
Weight	129 kg (258 lbs)
Dimensions W × H × D	PS-10: 75.5 × 106.3 × 94 cm (29.7” × 41.8” × 37”) (excluding keyboard and touchscreen) optional base: 100 × 70.6 × 114 cm (39” × 28” × 45”)
Power requirements	100 – 240 VAC +/- 10 %, 50/60 Hz, 10 A
Environment	operating temperature: 15C – 35C (59F – 95F) operating relative humidity: 10 % – 80 % non-condensing noise level: standby mode < 60 dB, run mode < 75 dB peak

XF-1600, PS-10 and Rotolavit II-S: compliant with CE IVD.
VenturiOne software is for Research Use Only.

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You will find your local Sysmex representative’s address under www.sysmex-europe.com/contacts
The products listed may not be available for sale in all countries. Please contact your Sysmex representative for availability.

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