sysmex | Lighting the way with diagnostics

Flow Cytometry Sample Preparation System

SYSMEX PS-10™

www.sysmex.com/flowcytometry

The Sysmex PS-10™
Flow Cytometry Sample Preparation System

The Sysmex PS-10 unparalleled flexibility

Loading the auto-sampler

The Sysmex PS-10 Flow Cytometry Sample Preparation System alleviates the primary bottleneck in today's busy clinical flow cytometry laboratory, while providing unparalleled flexibility for the creation of complex, laboratory developed tests.

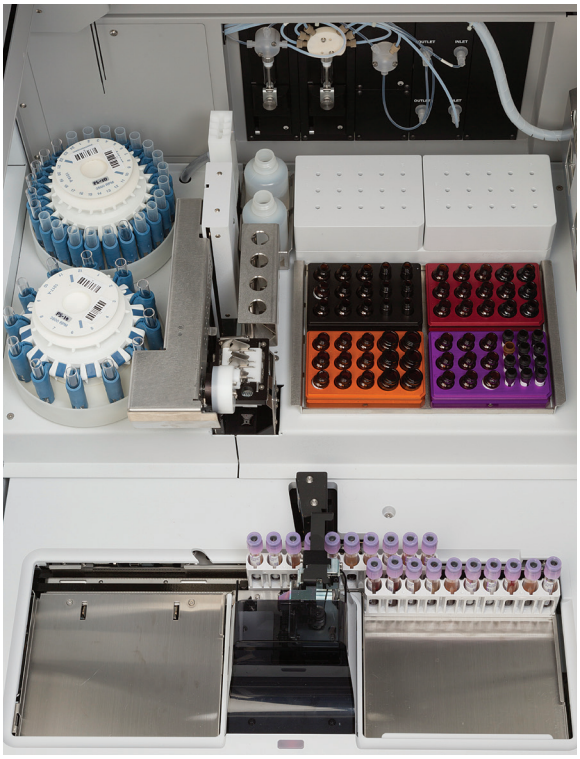
Substantially improve laboratory processes

- Continuous, uninterrupted sample introduction and worklist creation
- Efficient automation for high throughput operation
- Virtual elimination of operator-dependent variability
- Unmatched flexibility, allowing your existing laboratory procedures to be easily incorporated

High-capacity smart autosampler for reliable and safe specimen handling

- Uses standard Sysmex Hematology 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 eliminate operator errors.

Meeting your needs

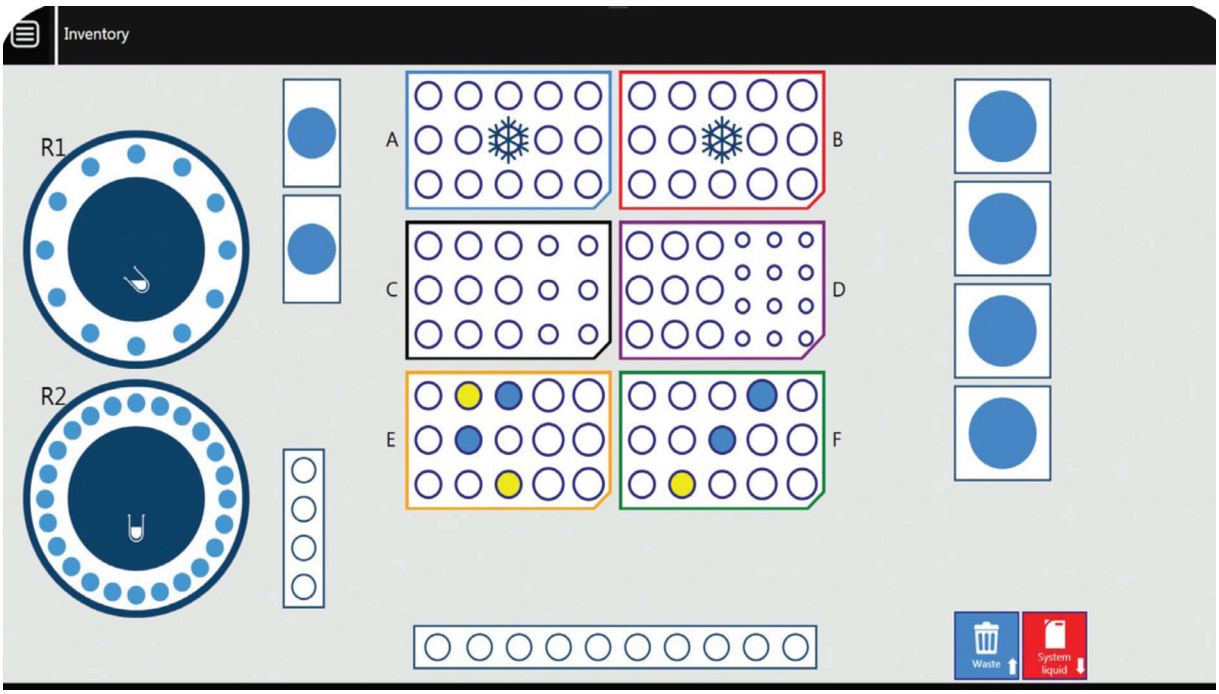


Accepts multiple reagent vial sizes

Take charge of your decision-making

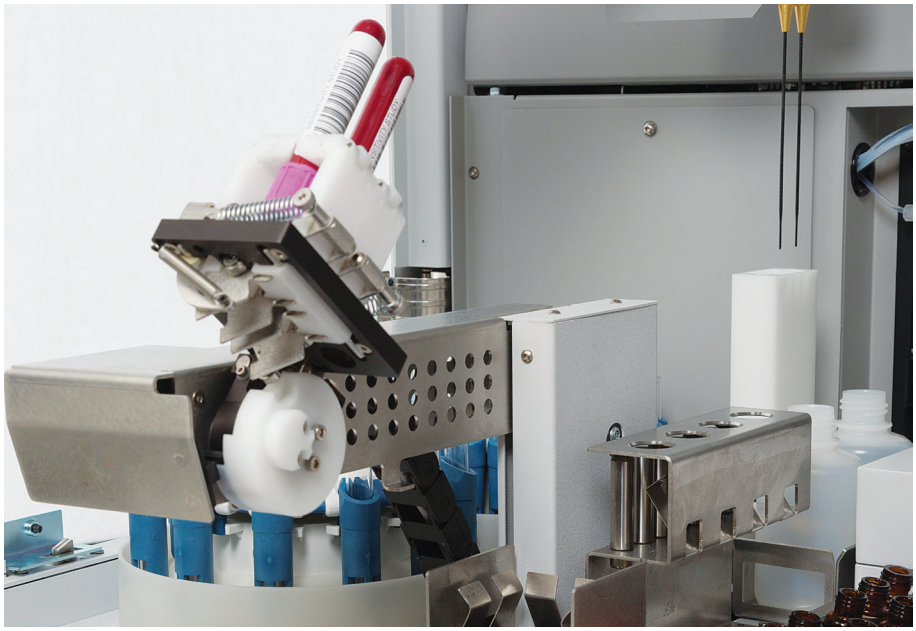
- Test request download via LIS speeds up sample processing.
- Powerful tools allow you to easily create custom tests, panels and procedures.
- Information concerning reagent blocks, bulk reagents, tests, panels and procedures is stored for future reuse.
- Two cooled racks are available to ensure reagent or cocktail stability.

Variables such as sample volume based on WBC count, antibody volume, incubation time, lyse and buffer volumes are all available for customization. There is no longer a need for cumbersome pre-dilution of primary specimens.



Example PS-10 screen

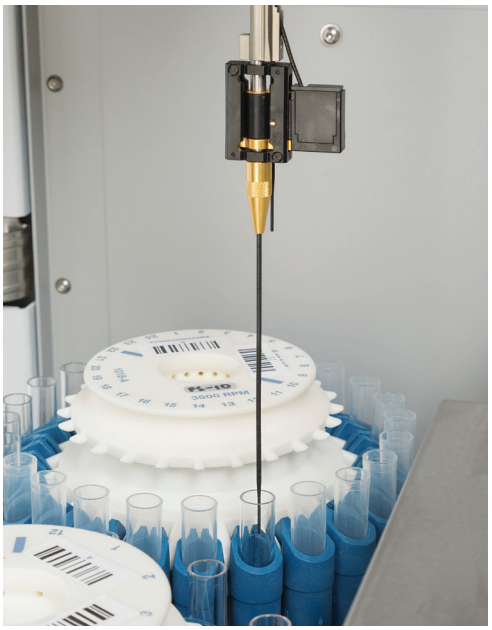
Maximizing your workflow efficiency



Primary specimen mixing using the Sysmex immersion method

Design elements that maximize workflow efficiency

- Dual pipetting probes decrease the individual steps required during sample preparation.
- Robust, reliable cap piercing minimizes operator exposure to potentially hazardous body fluids.
- Automatic allocation of daughter tubes eliminates the need for manual labeling.
- A single aspiration of blood or antibody allows multiple aliquots, saving time for multi-tube panels.



Dual pipetting probes for fast throughput

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

- Processes in excess of 48 samples per hour, for no-wash assays.
- Dual carousel/rotor configuration enables batch processing.
- Continued sample processing during incubation and wash steps maximizes efficiency.
- All reagents and waste containers have level monitoring.

Sysmex PS-10 flexible preparation processes

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 Helmer UltraCW®II Automatic Cell Washing System.

- Rotors can be easily transferred on 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 UltraCW II is fully programmable for automatic wash cycles, decanting, and resuspension of cell pellets.

Helmer UltraCW® II cell washing system

Sample preparation and automated cocktailing in one system

- PS-10 reagent blocks are color coded to conveniently accommodate a combination of Sysmex and other company's vials.
- Peltier-cooled locations keep antibody vial blocks and reagent cocktail blocks at optimum temperature.
- An automated cocktailing function is supplied from up to 90 reagent vials.
- Four open vial positions are available for cell suspensions from bone marrow, lymph nodes or other fluids.
- Reagent blocks containing antibodies can be conveniently refrigerated after use.

PS-10 racks hold up to 90 antibody reagents
Sysmex reagent vials are conveniently QR coded

High quality Sysmex reagents

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

The PS-10 is backed by Sysmex's commitment to the service and support laboratories need to meet the challenges of increasing demands and decreasing resources. With Sysmex CyFlow™ Monoclonal Antibodies and the PS-10, Sysmex offers a new vision for Flow Cytometry.

Sysmex PS-10 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: 20µL – 100µL, variable based on WBC count adjustment, either via Autosampler or open tube positions • Monoclonal antibodies: 4µL – 100µL, either single clone vials or cocktail vials • Lyse A: 500µL or 1000µL for no-wash procedure • Lyse B: 1mL or 2mL for wash procedures • Buffers: 0 – 2mL for PBS • Intracellular fix and permeabilize: 100µL
Reagent Capacity:	• System fluid: (DI H_2O) 9L • Waste: 9L • Lyse: 2 x 500mL • Buffers: 2 x 500mL • Fix and permeabilize reagents: 2 x 125mL • Monoclonal antibody positions: up to 90 standard vials • Monoclonal Peltier cooling: 2°C – 8°C 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 standard carousel or 12 or 24 position rotors compatible with Helmer Ultra CW Centrifuge for automated sample wash steps
System Performance:	• Carryover: – Primary blood sample: <0.2% – Monoclonal reagent: <0.01% • Accuracy: – Sample: 20µL – 49µL +/- 10% by volume – Sample: 50µL – 100µL +/- 5% by volume – Reagent: 4µL – 19µL +/-20% by volume – Reagent: 20µL – 100µL +/-7% by volume – Lyse: 500µL – 2000µL +/-3% by volume • Precision: – Sample: 20µL – 100µL CV ≤ 5% by volume – Reagent: 4µL – 19µL CV ≤ 15% by volume – Reagent: 20µL – 100µL CV ≤ 5% by volume – Lyse: 500µL – 2000µL CV ≤ 3% by volume • Throughput: – 48 daughter tubes <64min, single-tube panel, lyse no-wash, includes 10min stain incubation and 10min lyse incubation – 48 daughter tubes <52min, two-tube panel. Criteria as above - increase in speed due to dual cap piercing and multi-pipetting
Weight:	• 250lbs. (115Kg)
Instrument Dimensions:	• PS-10: 46" H x 29.5"W x 37.5"D (117cm x 75cm x 95cm) • Optional base: 24"H x 41"W x 38"D (61cm x 104cm x 97cm) • With monitor/keyboard: 52" W (132cm)
Reagent Racks:	• Positions for up to 90 vials
Power Requirements:	• 100-240 VAC +/-10%, 50/60 Hz, 10 Amps
Environment:	• Operating temperature: 64°F – 82°F (18°C – 28°C) • Operating relative humidity: 15% – 80% non-condensing • Noise level: Standby mode <60dB • Run mode <75dB peak

Sysmex Corporation
1-5-1-Wakinohama-Kaigandori Chuo-ku, Kobe 651-0073, Japan · Phone +81 78 265-0521 · **www.sysmex.co.jp**

Sysmex America, Inc.
577 Aptakisic Road, Lincolnshire, IL 60069, U.S.A. · Phone +1 800 379-7639 · **www.sysmex.com/us**

Sysmex Canada, Inc.
5700 Explorer Drive Suite 200, Mississauga, ON L4W0C6 Canada · Phone +1 905 366-7900 · **www.sysmex.ca**

Sysmex Latin America and the Caribbean
Rua Joaquim Nabuco 615 - Bairro Cidade Jardim, São José dos Pinhais Paraná – Brasil – CEP 83040-210 · Phone +55 41 2104-1314 · **www.sysmex.com.br**

MKT-10-1274, 03/2018