XT-2000*i*™ and XT-1800*i*™ Automated Hematology Analyzers

Mid Volume Laboratory Solution

Advanced Technology Solutions to Meet your Lab's Needs

Today's Laboratory Challenges

Laboratories continue to face a number of challenges.

These include clinical, operational and financial issues such as:

- Demand for clinically relevant information
- Medical technologist labor shortage
- Increased workload
- Need for faster turnaround time
- Requirement for high reliability
- Limited laboratory budgets

Even with these challenges, the need for hematology testing has remained steady or continued to grow. Laboratories are searching for hematology analyzers that can improve productivity and efficiency while providing enhanced clinical information. Designed to be reliable and efficient, the Sysmex XT-2000*i* and XT-1800*i* (XT) offers medium volume labs an automated hematology system that can truly meet and exceed their expectations. The XT streamlines your workflow by providing testing for up to 80 samples per hour, enabling rapid turnaround time.

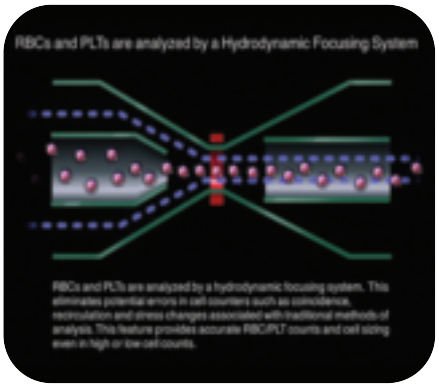
Fluorescent Flow Cytometry Yields Optimized Productivity

The Sysmex XT Automated Hematology Systems utilize the power of fluorescent flow cytometry and hydrodynamic focusing technologies. Using a unique, diode laser bench, Sysmex fluorescent flow cytometry provides the sensitivity needed for measuring and differentiating cell types in whole blood and body fluid samples. Fluorescent technology and hydrodynamic focusing enable the analyzers to consistently classify normal WBC, RBC, and PLT populations from abnormal populations, thereby decreasing the number of manual interventions.

Clinically Relevant Information

Effective Red Cell Disorder Screening and Therapy Monitoring

The XT-Series provide the panel of standard parameters for basic and reliable anemia screening and monitoring.

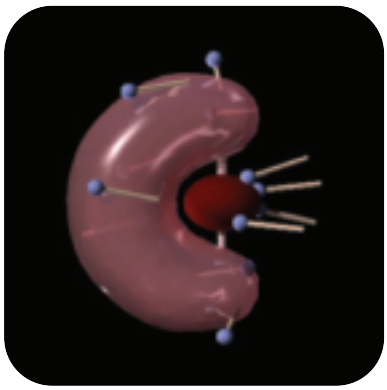


Hydrodynamic Focused Cell Counting

RBCs and PLTs

RBCs and PLTs are counted in a dedicated channel using Impedance or Direct Current (DC) detection method combined with hydrodynamic focusing technology. Challenges to cell counting such as coincidence or recirculation are circumvented and automatic discriminators separate the two cell populations.

Even with samples at extremely low or unusually high concentrations, the XT-Series analyze RBCs and PLTs with uncompromised precision and accuracy.



Conversion to SLS-Hgb

High Quality Hemoglobin (HGB) Analysis

The XT utilizes the cyanide-free reagent, Sodium Laurel Sulfate (SLS). The end product is a colored compound that is measured spectrophotometrically. Since hemoglobin determinations are performed from a dilution and in its own separate chamber, there is no interference from high WBC counts, lipemia or abnormal proteins.

Direct Hematocrit (HCT) Measurement

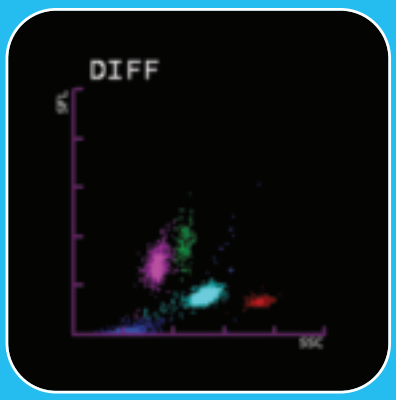
The cumulative pulse heights of all the RBC counts yield the HCT. This is based on the principle that the pulse height (voltage change) produced by cells passing through the aperture is proportional to cell volume.

WBC, A Clear Differentiation

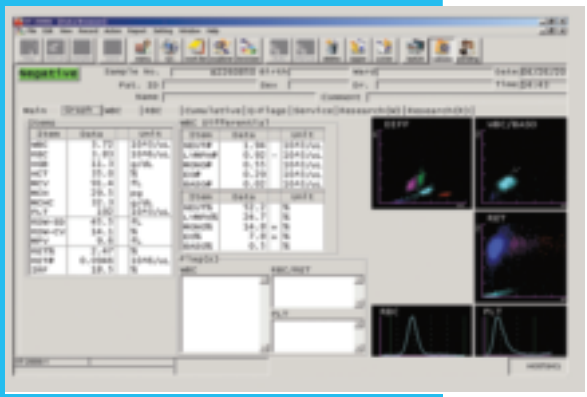
The combination of side scatter (cell complexity), forward scatter (cell size) and fluorescence (DNA & RNA concentration) of nucleated cells provides a concise and precise image of each detected peripheral blood cell.

This 3-dimensional blood cell analysis provides unique accuracy and precision. Fluorescence labeling of peripheral blood cells is a milestone for the routine leukocyte differential.

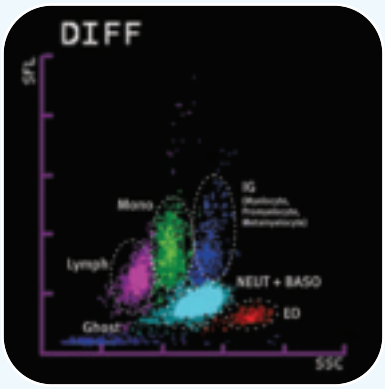
Fluorescent technology enables the XT to reliably differentiate normal WBC populations from abnormal WBC populations. The sensitivity of the unique application of fluorescent flow cytometry gives the lab a high level of confidence in reporting accurate WBC differentials, even on critical patient samples when the WBC count is low.



WBC Differential Scattergram



Advanced Clinical Parameters



Immature Granulocyte Count

Immature Granulocytes (IG) Determination

- Cells included in the IG count are metamyelocytes, myelocytes, and promyelocytes
- The IG parameter is provided from the DIFF channel
- The IG software applies a flexible gating algorithm tailored to individual samples, thus providing reliable IG counts

The IG Parameter provides:

Improved accuracy and sensitivity

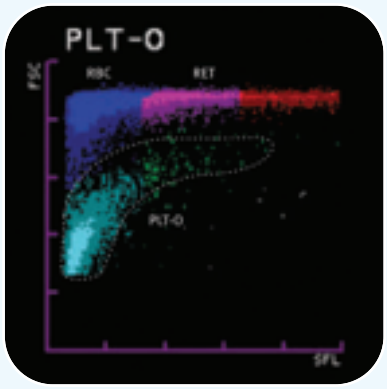
- Reduced false positive and false negative rates
- Result consistency by reducing tech-to-tech variation in reporting manual differentials

Improved workflow

- Fewer manual differentials means faster turnaround time (TAT)

Labor savings

- Fewer manual slide reviews improves laboratory efficiency and supports higher laboratory output



Fluorescent Optical Platelet

Fluorescent Optical Platelet*

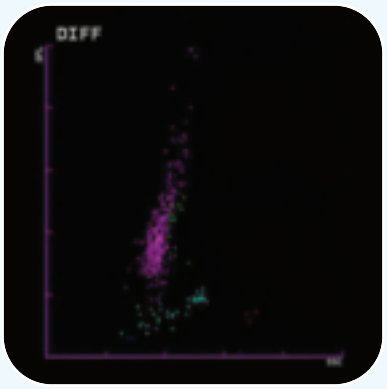
The XT-2000*i* offers both a Fluorescent Optical Platelet (PLT-O) in addition to the traditional impedance PLT count. Flagging associated with atypical or abnormal platelets, due to increased size or fragmentation is minimized by use of the optical platelet count. Accuracy in reporting is supported by the availability of both technologies.

Fluorescent Optical Platelet is a complementary, reportable parameter to the impedance platelet count.

The PLT-O parameter provides:

- Improved accuracy on low platelet counts
- Accurate counts when interferences are present, thus reducing manual intervention
- Automated judgment for reporting PLT-O or impedance PLT through instrument settings, eliminating tech-to-tech decision variability

**XT-2000i only*



Body Fluid

Body Fluids

The XT analyzers include measurement for body fluids. These analyzers provide reportable WBC and RBC counts for all common body fluid samples (CSF, synovial and serous).

The analyzers apply proven impedance and fluorescent flow cytometry technology ensuring an accurate body fluid count from a single sample analysis.

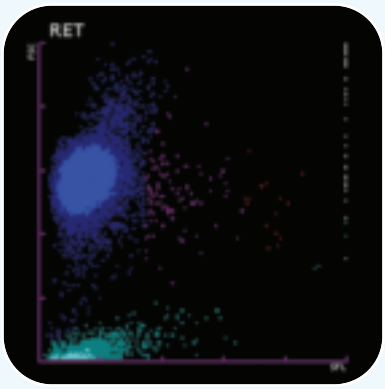
The XT Body Fluid Count provides:

- No sample pre-treatment
- No additional reagents or additional quality control material requirement
- An automatic background check prior to analyzing a sample

The XT Body Fluid Count benefits:

- Improved productivity
- Decreased turnaround time (TAT)
- Decrease manual technical intervention

One Comprehensive System



Fluorescent Reticulocyte Count

Reticulocyte Analysis*

Known as the "Gold Standard" reticulocyte testing parameter, the fluorescent reticulocyte count is available on the XT-2000*i*. Sysmex was one of the first companies to provide on-board retic testing in a dedicated channel, which improved efficiencies in reticulocyte counting.

With the use of fluorescent technology, the reticulocyte count assures:

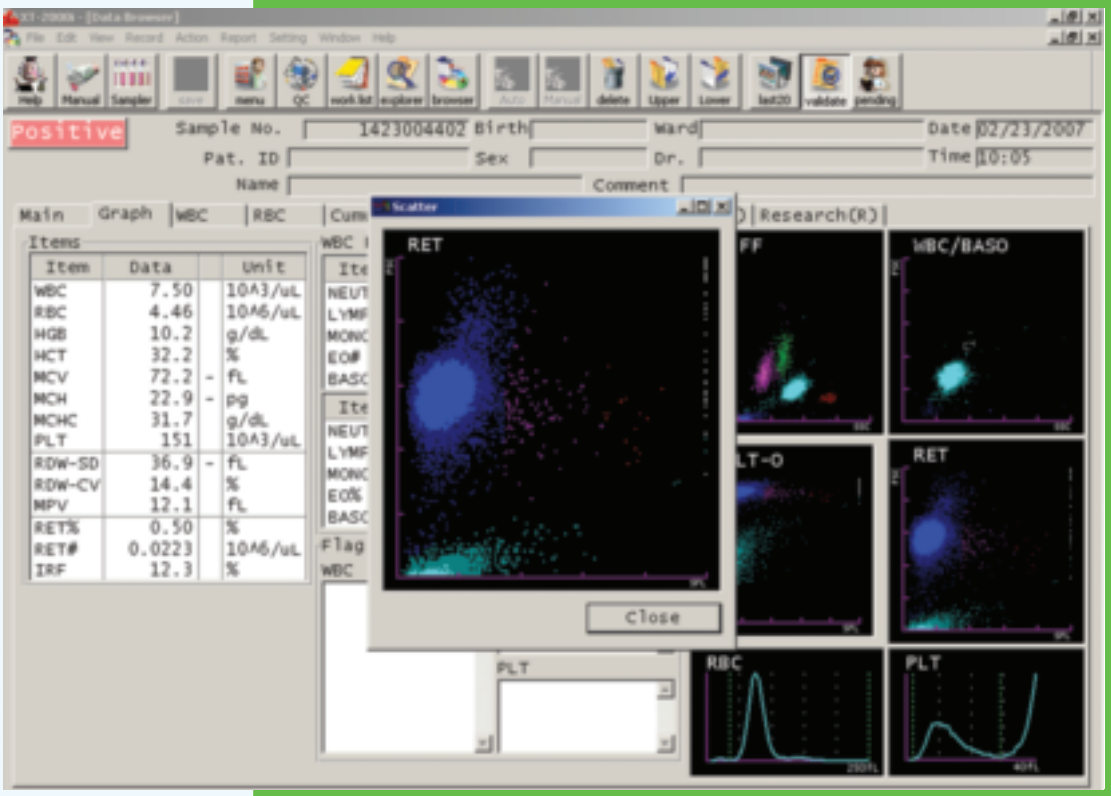
- Accurate reticulocyte % and #
- Improved immature reticulocyte fraction (IRF) information for earlier diagnosis and treatment by clinicians
- Elimination of common interferences from Howell-Jolly bodies, Pappenheimer bodies and immature reticulocytes to avoid manual counts

In addition, the Reticulocyte Hemoglobin (RET-H*e*), is a parameter measured in the reticulocyte channel which is used to measure the incorporation of iron into erythrocyte hemoglobin.

The RET-H*e* parameter supports:

- Rapid, direct analysis of an earlier stage of RBC development for prompt clinical follow-up
- Assessment of anemia. RET-H*e* is an established parameter used in KDOQI (Kidney Disease Outcomes Quality Initiative) guidelines for assessing the initial iron status of patients
- Accuracy and sensitivity in measurement of red cell production that aids the clinician in effective monitoring of costly drug protocols for cell stimulation

**XT-2000i only*



Positive Patient Sample with Retic Analysis

Improved Productivity & Efficiency

e-Tools: Assuring Quality and Optimizing Performance

SNCS™, Sysmex Network Communications System, is proprietary software which enables fast, secure communication from your analyzer to Sysmex servers using a high-speed, outbound internet connection. This powerful tool is the instrument data link feeding a variety of innovative tools and services.

Insight™

Insight is a web-based Interlaboratory Quality Assessment Program (IQAP) which allows on-demand quality control reporting with access anytime, anywhere. ***Insight*** meets the requirements to document peer comparison data for your analyzer while eliminating manual steps.

Remote Monitoring

Continuous collection and monitoring of instrument performance data is linked to our tracking and dispatch system. We monitor your instrument performance, instrument configuration settings and back-up settings continuously.

Make your lab more efficient with:

- Unobtrusive, remote and real-time monitoring
- Proactive identification and follow-up of potential issues
- Enhanced first-time field fixes, if needed

e-Supply – Reagent Inventory Management

The ***e***-Supply program offers online reagent monitoring that simplifies both ordering and inventory processes.

This innovative program helps you:

- Track reagent usage and inventory
- Maintain appropriate inventory levels
- Reduce your shipping cost

Sysmex WAM™

The XT can be used in conjunction with Sysmex WAM Decision Support Software for the Clinical Laboratory, which enhances sample and data workflow and improves turnaround time (TAT).

For the Mid Volume Laboratory

The XT offers comprehensive clinical testing menus for whole blood and body fluids, providing accurate, precise and sensitive results. Your clinicians receive quality results to assist in the diagnosis, management and therapeutic monitoring of disease states.

Sysmex XT-2000*i*™ and XT-1800*i*™ Specifications

Principles & Technologies	Fluorescent Flow Cytometry: WBC-Diff DC-Sheath-Flow: RBC, HCT, PLT Cyanide-free SLS-Method: HGB
21 Whole Blood Reportable Parameters	WBC, RBC, HGB, HCT, MCV, MCH, MCHC, PLT (Impedance and Fluorescent Optical) NEUT%, LYMPH%, MONO%, EO%, BASO%, NEUT#, LYMPH#, MONO#, EO#, BASO#, RDW-SD, RDW-CV, MPV
Additional Parameters	
IG	XT-2000*i* Standard XT-1800*i* Optional
RET-H*e*	XT-2000*i* Optional
2 Body Fluid Reportable Parameters	WBC-BF, RBC-BF
Linearity	WBC: 0.00 – 440.0 x 10^3/µL RBC: 0.00 – 8.00 x 10^6/µL PLT: 0 – 5,000 x 10^3/µL
Throughput	Whole Blood: 80 samples/hour (max.) Body Fluid: 30 samples/hour (max.)
Sample Volumes	Closed Mode: 150µL Manual Mode: 85µL Capillary Mode: 40µL
Data Storage (IPU: Information Processing Unit)	10,000 samples (including graphics)
Quality Control (Total QC Management)	Comprehensive QC files including "current" and "new" lot feature Levey-Jennings control chart X-barM file Online Quality Assurance Program – ***Insight***™
Interfaces	ASTM Sysmex WAM™ (HL7 & ASTM)
Dimensions / Weight w x h x d [in] / [lbs]	Main unit (including sampler): 20.9 x 24.8 x 28.3 / 129.8

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Document Number MKT-10-1136 05/2012 1M