sysmex | Lighting the way with diagnostics

XN-Series Automated Haematology Analysers

XN-1000 / 2000

Shaping Haematology

www.sysmex-ap.com

Smart and Compact Automation

XN-Series provides a comprehensive test menu including all Sysmex's advanced parameters, regardless of test volume or laboratory settings. Combining the analyser modules' broad capabilities in customisable configurations, the needs of both routine and specialised haematology testing are met.

The XN-Series comprise of 2 Analyser modules

XN-10

XN-20*

*White precursor cell (WPC) channel and Human Progenitor Cell (HPC) are available only in XN-20.

XN Standalone Series

There are 2 standalone XN configurations:

- XN-1000 (1 analyser)
- XN-2000 (2 analysers)

Within its small footprint, the standalone series delivers vast operational capabilities and clinical flexibility. These capabilities can be optimised for laboratories with lower daily workloads and wide clinical needs.

First step into full automation

XN-1000

- Hourly throughput of up to 100 samples
- Onboard decision rules with user-defined rerun/ reflex capabilities
- Customisable clinical applications to cater to variable clinical needs

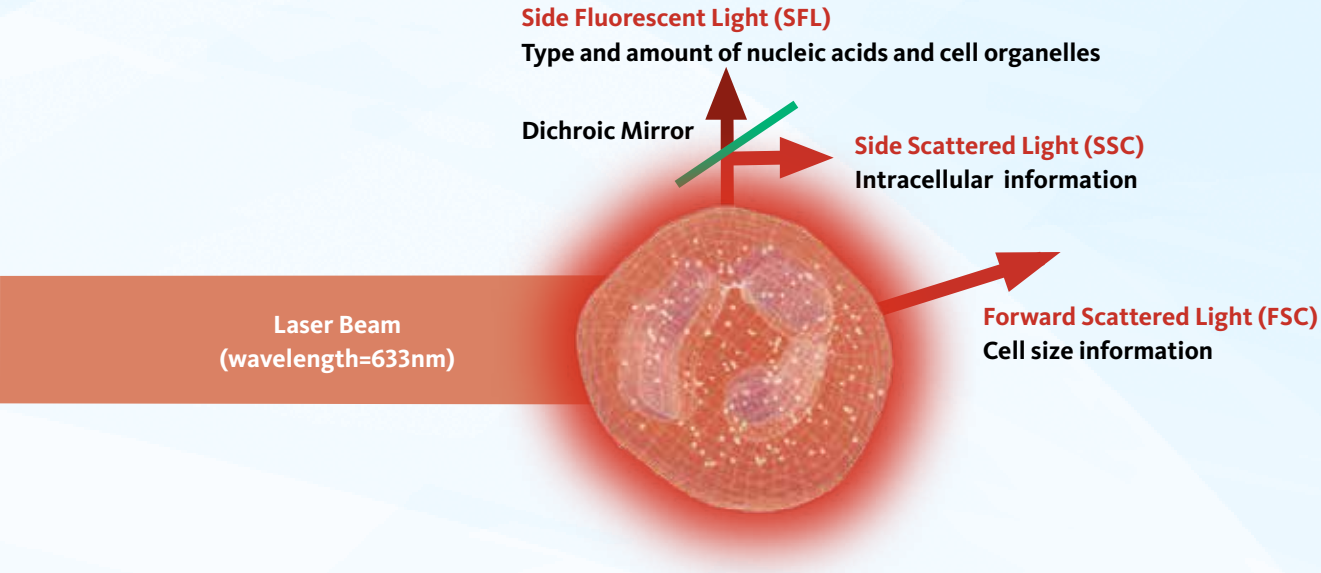
Workload optimisation

XN-2000

- Hourly capacity of up to 200 samples per hour
- Unique co-primary solution
- Automatic workload balancing between the 2 analysers
- Reagent sharing option is available

Core Technology of XN-Series

The XN series utilise the laser flow cytometry for counting of blood cells. Depending on the cellular characteristics of the cells, different intensities of the signals are collected, and scattergrams of respective measuring channels are populated. These scattergrams are used for the classification of the cells as well as flagging of the abnormal population.



Advanced Parameters On XN-Series Provides Superior Diagnostic Values

Standard applications

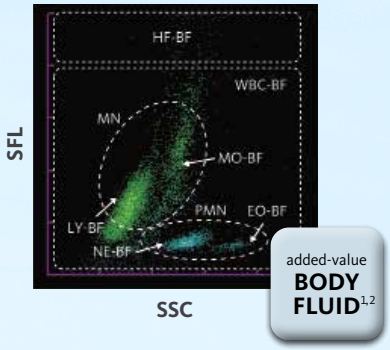
The following advanced parameters are available as a standard:

- Corrected WBC with direct measurements of NRBCs for every CBC analysis
- 6 part differential, including immature granulocytes
- Highly specific flagging of WBC abnormal population in WPC channel, available only in XN-20 (Human progenitor cell, HPC enumeration is available on XN-20 with additional software activation)

*WPC channel is available on XN-20 only

Optional applications

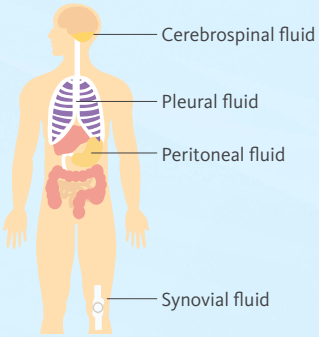
Body Fluid Scattergram



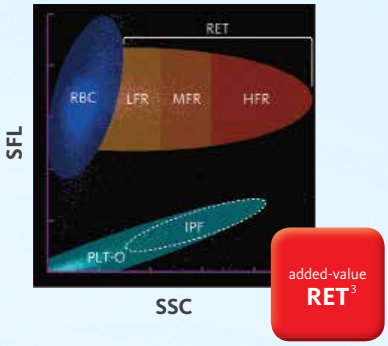
Added value:

Fully-automated body fluid analysis in BF mode:

- 2-part differential body fluid analysis includes MN (mononuclear) and PMN (polymorphonuclear) cell population to aid in the distinction between viral and bacterial infection.
- No additional reagents required.
- No special sample preparation required.



RET Scattergram

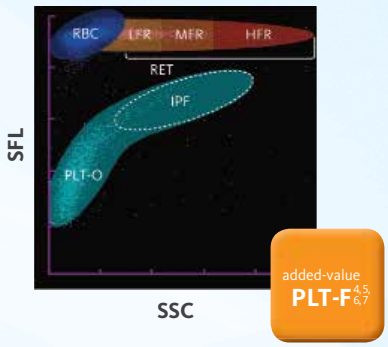


Added value:

Indices of erythropoiesis (RET, Ret-He, IRF):

- Ret-He (reticulocytes hemoglobin) and IRF (immature reticulocytes fraction) aids in monitoring of RBC production.
- Ret-He (reticulocytes hemoglobin) aids in differentiation between functional and classical iron deficiency and monitoring of EPO and/or IV iron therapy.

PLT-F Scattergram

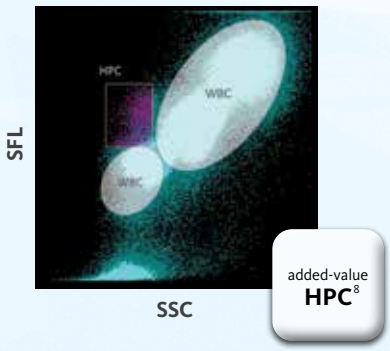


Added value:

Indices of thrombopoiesis (IPF):

- IPF (Immature platelet fraction) aids in differential diagnosis of thrombocytopenic disorders and is an early predictor of platelet recovery.
- Fluorescent platelet (PLT-F) count that shows excellent correlation with CD61/41 alongside with thrombopoietic marker, immature platelet fraction (IPF).

HPC Scattergram



Added value:

Accurate timing of peripheral blood stem cell transplant (PBSCT) harvest:

- High comparability between Human Progenitor Cells (HPC) measurement and CD34 analysis supports rapid analysis in determination of optimal PB stem cell collection.

The Needs Of Tomorrow's Laboratory

Optional applications

added-value **PLT-F** or added-value **XN-BF** or added-value **RET**

XN-Series partners your laboratory through the future. Clinical applications can be added to existing standalone configurations when the clinical needs evolved. On top of this, XN-1000 can also be upgraded to a XN-2000 when the workload of the laboratory increases. A common software throughout the XN-Series also minimises the need for re-training. XN-Series truly caters for today's and future needs of the laboratory.

XN-Series, the automated haematology solutions for your laboratories.

Specifications

Principles & Technologies	
Fluorescent Flow Cytometry	WBC, Differential, NRBC, RET, IRF, PLT-F, IPF, HPC[2], 2 part differential for body fluid analysis
Hydrodynamic Focusing (DC Detection)	PLT-I (Impedance), RBC, HCT
Cyanide-free SLS Method	Haemoglobin

30 Standard Parameters
WBC, NRBC#, NRBC%, RBC, HGB, HCT, MCV, MCH, MCHC, RDW-SD, RDW-CV, MicroR,[1] MacroR, PLT, PDW, MPV, PCT, P-LCR, NEUT#, NEUT%, LYMPH#, LYMPH%, MONO#, MONO%, EOSIN#, EOSIN%, BASO#, BASO%, IG#, IG%

16 Optional Parameters
RET#, RET%, IRF, LRF, MFR, HFR, RET-He, RBC-He, Delta-He, HYPO-He, HYPER-He, PLT-O (Optical), PLT-F (Fluorescent), IPF#, IPF, HPC#[2]

Body Fluid Analysis	
Sample Type	CSF, CAPD, Synovial and Serous fluids
7 Reportable Parameters	WBC-BF, MN#, MN%, PMN#, PMN%, TC-BF#, RBC-BF

Throughput (Whole Blood)	
XN-1000	up to 100 samples/hour (max.)
XN-2000	up to 200 samples/hour (max.)

Sample Aspiration Volumes	
Whole Blood	88µL
Pre-dilute Mode	20µL
Body Fluid Mode	88µL
HPC Mode	190µL

Quality Control
Tri-level QC material for all parameters
Bi-level Body fluid QC materials

Note:
1. MicroR, MarcoR, RBC-He, Delta-He, HYPO-He, HYPER-He are reportable from software version 21.00 onwards.
2. HPC# is available only for XN-20.

References

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2. *Seghezzi M, Buoro S, Manenti B, Mecca T, Ferrari R, Zappalà G, et al. Optimization of Cellular analysis of Synovial Fluids by optical microscopy and automated count using the Sysmex XN Body Fluid Mode. Clin Chim Acta. 2016;462:41-8.*

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5. *Sakuragi M, Hayashi S, Maruyama M, Kabutomori O, Kiyokawa T, Nagamine K, et al. Clinical significance of IPF% or RP% measurement in distinguishing primary immune thrombocytopenia from aplastic thrombocytopenic disorders. Int J Hematol. 2015;101(4):369-75.*

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Sysmex Asia Pacific Pte Ltd
Tel +65 6221-3629 Fax +65 6221-3687
www.sysmex-ap.com

PT Sysmex Indonesia
Tel +62 (21) 3002-6688 Fax +62 (21) 3002-6699
www.sysmex.co.id

Sysmex India Pvt. Ltd
Tel +91 (22) 6112-6666 Fax +91 (22) 2577-6790
www.sysmex.co.in

Sysmex (Malaysia) Sdn Bhd
Tel +60 (3) 5637-1788 Fax +60 (3) 5637-1688
www.sysmex.com.my

Sysmex (Thailand) Co., Ltd
Tel +66 (2) 032-2536 Fax +66 (2) 116-5396
www.sysmex.co.th

Sysmex Philippines Inc.
Tel +63 (2) 621-2460 Fax +63 (2) 621-2432
www.sysmex.com.ph

Sysmex New Zealand Ltd
Tel +64 (9) 630-3554
www.sysmex.co.nz

Sysmex Vietnam Co., Ltd
Tel +84 (8) 3997-9400 Fax +84 (8) 3997-9405
www.sysmex.com.vn

Sysmex Vietnam Co., Ltd (Hanoi Branch)
Tel +84 (4) 3776-7020 Fax +84 (4) 3776-7022
www.sysmex.com.vn

Sysmex Australia Pty Ltd
Tel +61 (2) 9016-3040
www.sysmex.com.au

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