Design and specifications may be subject to change due to further product development.

SAP/HAEMATOLOGY/XN-L/310319/V4.0

Automated Haematology Analyser

XN-L Series

Leading Haematology
for Better Patient Care

Upgrade your 3PD to 6PD with Sysmex

Why 5PD?

3PD Analyser

Neutrophils

Mixed

Lymphocytes

5PD Analyser

Neutrophils
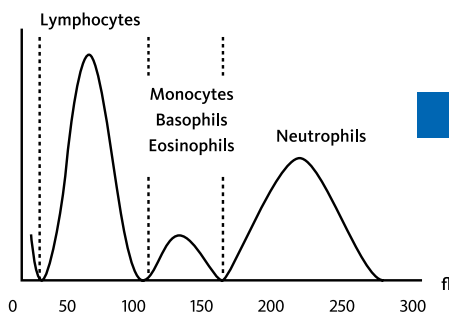
Eosinophils

Basophils
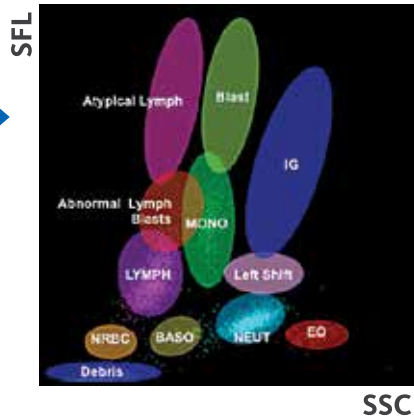
Monocytes

Lymphocytes

Five part differential analysers count monocytes, eosinophils and basophils separately rather than as a mixed population in three part differential analysers. These individual WBC parameters reveal more valuable information to clinicians to support diagnostic and treatment decisions.

Why Sysmex 6PD?

3PD Analyser

Sysmex 6PD Analyser

added-value
IG[1]

Examples of WBC Flags:
WBC Abn Scattergram
Neutropenia
Neutrophilia
Lymphopenia
Lymphocytosis
Monocytosis
Eosinophilia
Leukocytopenia
Leukocytosis
Blasts/Abn Lympho?
Left Shift?
Atypical Lympho?
NRBC?

Benefits of Sysmex 6PD Analyser

1) Assessment is not solely based on cell size

Unlike three part differential and some five part differential analysers, fluorescent flow cytometry measures not only the cell size, but also the intracellular information and nucleic acid content. This produces a highly accurate differential count in EDTA blood samples even as the cell size changes during normal storage.

2) Identification of immature cells

Identification of immature cells is possible with the XN-L as immature cells have a higher nucleic acid content. This has made the generation of six part differential, the IG count possible. The precision of an automated IG count increases laboratory efficiency by reducing manual counts.

3) Superior flagging system for abnormal cells

As compared to a flagging system based entirely on cell size on a three part differential analyser, the XN-L provides more detailed and specific flagging for abnormal cells.

XN-450

Introducing XN-L Series

XN-L Series is the latest compact fully-automated 6-part differential haematology analyser from Sysmex.

It is designed to meet today's laboratory needs by providing enhanced clinical values that only high-end models were previously able to provide; delivering improved operational efficiency in the laboratories.

XN-L Series is available in four models with different aspiration modes.

XN-550

Sampler that allows both open and closed tube analysis

XN-450

Closed tube analysis

XN-330 / XN-350

Open tube analysis

A completely new compact 6-part differential haematology analyser that caters for what matters most in your lab.

① Ease of use & peace of mind

Multi-coloured touch screen display embedded with intuitive graphical user interface to support your routine tasks.

A reagent management system that calculates remaining tests and expiry dates to allow more efficient tracking of reagent usage.

② Space saving

Compact design with an in-built IPU that fits easily to any laboratory bench or table with a smaller footprint.

Existing model XS-1000*i*

Approx. 200mm
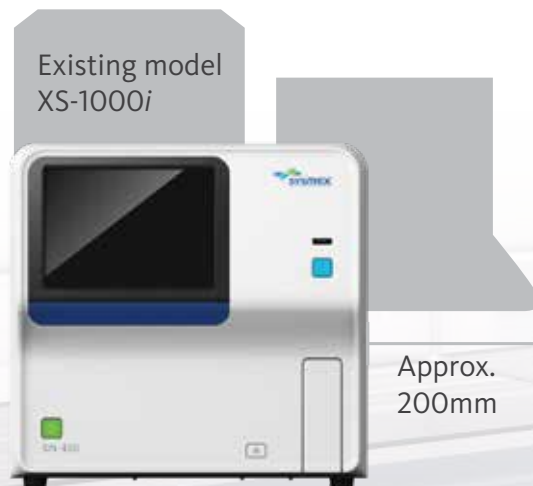
③ Flexibility

Only 25µL of aspiration volume

Requires only 25 µl of aspiration volume for whole blood mode and low WBC mode.

Auto-diluent dispensing function

Auto-diluent dispensing function is available for dilution of samples

4 Improved workflow and TAT

Up to **70** samples/hour*

Better TAT with one of the highest throughput compact 6PD analysers in the market.

Sampler available for a truly walk-away system**

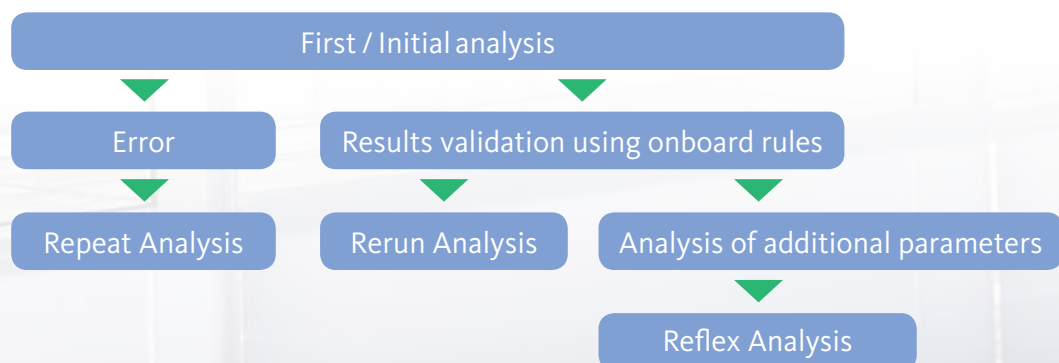Left drawer

Right drawer

Sampler comes with two drawers to allow continuous loading of samples

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Integrated auto Repeat, Rerun and Reflex** of sample

First / Initial analysis

Error

Results validation using onboard rules

Repeat Analysis

Rerun Analysis
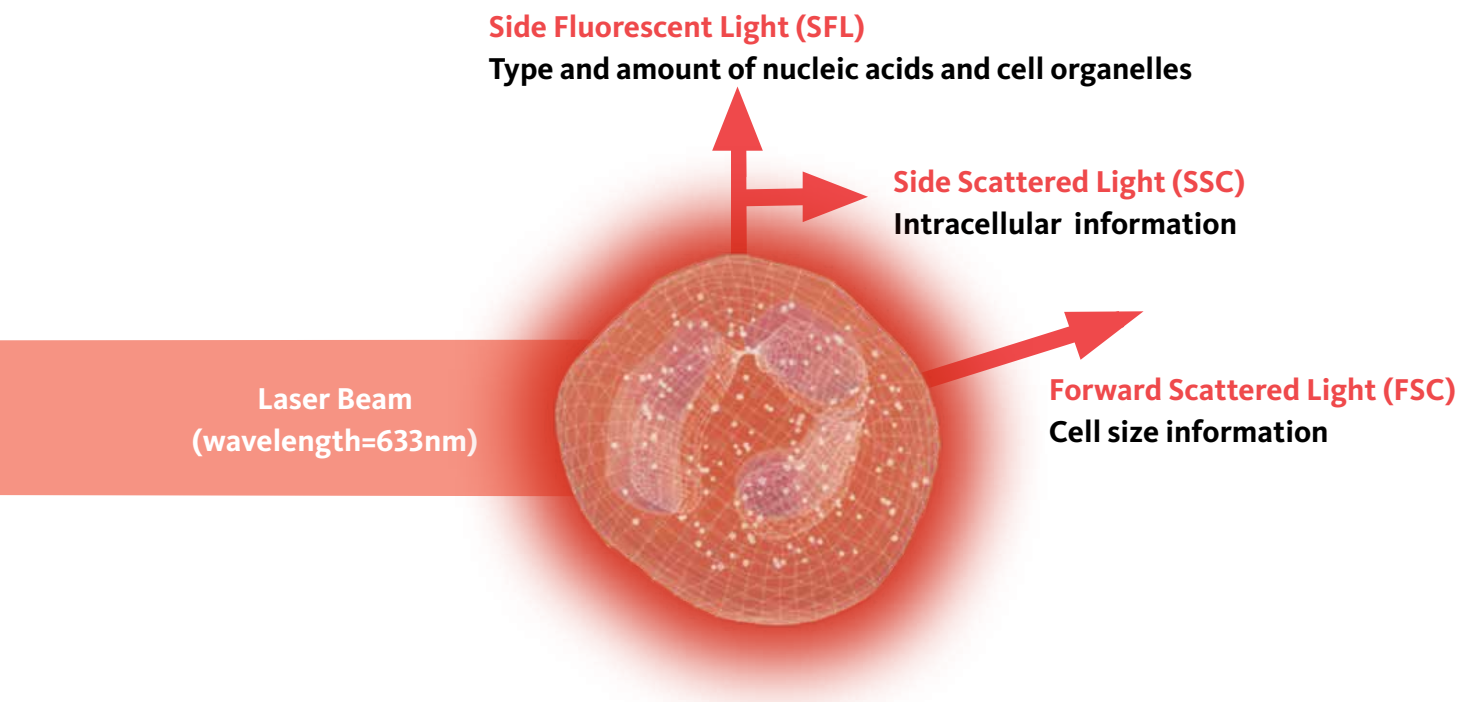
Analysis of additional parameters

Reflex Analysis

Only available on XN-350 / XN-450 / XN-550
**Only available on XN-550*

More than just CBC + DIFF

Core Technology of XN-L Series

XN-L Series utilises the same core technology as high-end haematology analysers - the proven and reliable laser flow cytometry - to count and analyse cells. After the cells are irradiated by the laser beam, the forward scattered light (FSC), side scattered light (SSC) and side fluorescent light (SFL) of the cells are analysed. The three signals are used to differentiate and count cells with the help of unique digital technology and algorithms.

Side Fluorescent Light (SFL)
Type and amount of nucleic acids and cell organelles

Side Scattered Light (SSC)
Intracellular information

Forward Scattered Light (FSC)
Cell size information

Laser Beam (wavelength=633nm)

Standard application

added-value
IG[1, 2]

WDF Scattergram

SFL

MONO
IG
LYMPH
NEUT
BASO
EO
Debris

SSC

Added value:

A true 6-part differential count (IG):

- Immature granulocytes (IG) with every differential analysis aids in the early prediction of infection and inflammation.

- **No additional reagents required.**

Optional applications*
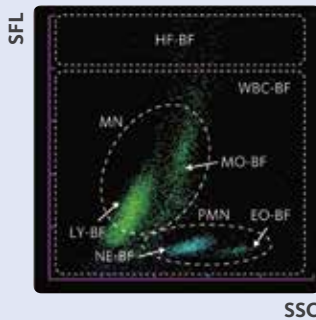
added-value
Low WBC

Added value:

Analysis of low WBC samples in L-WBC mode:

- Samples with low white blood cell count can be measured accurately by counting twice as many cells; providing reliable results that aid in chemotherapy monitoring.
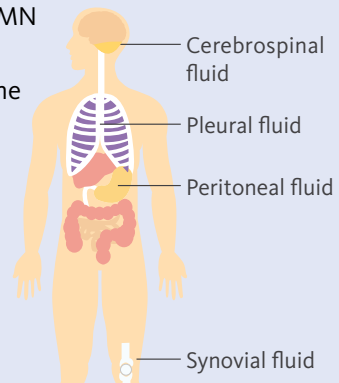
added-value
Body Fluid[3,4]

SFL

HF-BF

WBC-BF

MN

MO-BF

LY-BF   PMN   EO-BF

NE-BF

SSC

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.
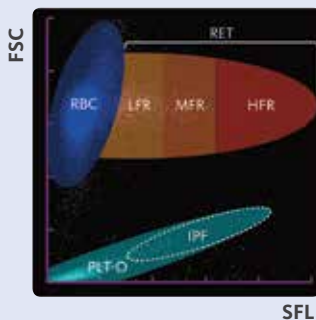
- **No additional reagents required.**

- No special sample preparation required.

Cerebrospinal fluid

Pleural fluid

Peritoneal fluid

Synovial fluid

added-value
RET[5]

RET Scattergram

FSC

RET

RBC   LFR   MFR   HFR

IPF

PLT-O

SFL

Added value:

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

- RET-He (reticulocytes haemoglobin) and IRF (immature reticulocytes fraction) aids in monitoring of RBC production.

- RET-He (reticulocytes haemoglobin) aids in differentiation between functional and classical iron deficiency and monitoring of EPO and/or IV iron therapy.

added-value
IPF[6,7,8]

PLT-O Scattergram

FSC

RBC   LFR   MFR   HFR

RET

IPF

PLT-O
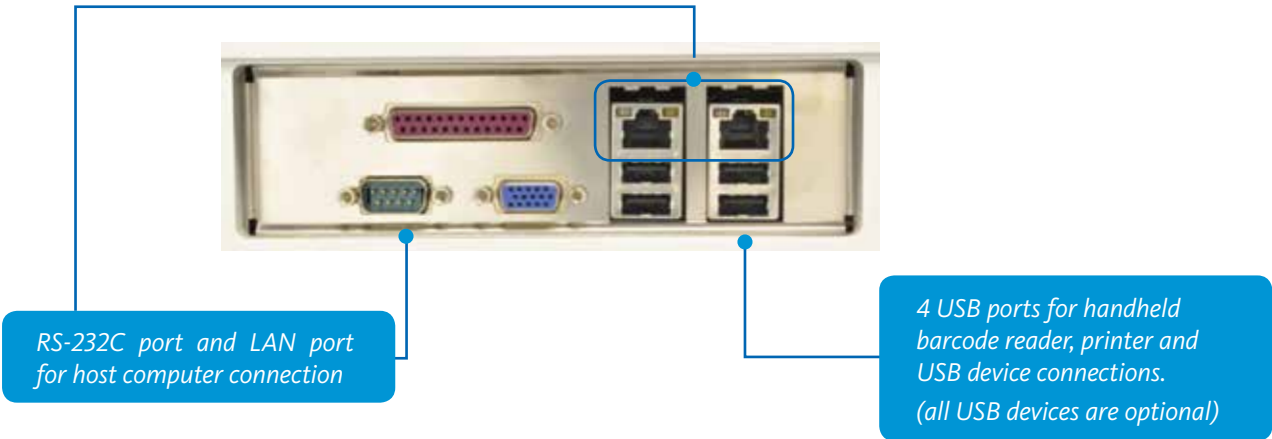
SFL
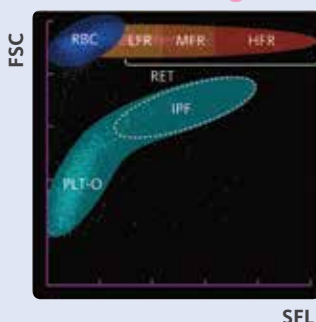
Added value:

Indices of thrombopoiesis (IPF):

- IPF (Immature platelet fraction) aids in differential diagnosis of thrombocytopenic disorders and is an early predictor of platelet recovery.

Only available on XN-350 / XN-450 / XN-550

What's more

Extended Connectivity

- XN-L supports extended connectivity to meet a laboratory's various connectivity requirements.

RS-232C port and LAN port for host computer connection

4 USB ports for handheld barcode reader, printer and USB device connections.
(all USB devices are optional)

Standardisation across Sysmex platforms

- Compatibility with the XN-Series through common reagents, controls and technology allows for consistency across laboratory operations.

1 **Common reagents and QC materials**

2 **Uniform user interface**

3 **Identical core technology and clinical parameters**

added-value **IG**

added-value **RET**

added-value **Body Fluid**

added-value **Low WBC**

Reagents and QC materials utilised with the XN-Series can be used on the XN-L Series.

The XN-L analysers use the same user interface as the XN-Series.

Enhanced clinical parameters makes the XN-L Series the perfect backup for 24/7 laboratories.

Specifications

	XN-330	XN-350	XN-450	XN-550

Principles & Technologies

Fluorescent Flow Cytometry method:
WBC, DIFF
RET, IPF, 2-part differential for body fluid analysis (except XN-330)

Hydrodynamic focusing DC detection method:
PLT-I (Impedance), RBC, HCT

Cyanide-free SLS-haemoglobin method:
HGB

Parameters

28 Parameters
Whole blood / Pre-dilution mode:
WBC, RBC, HGB, HCT, MCV, MCH, MCHC, PLT, RDW-SD, RDW-CV, PDW, MPV, P-LCR, PCT, NEUT#, LYMPH#, MONO#, EO#, BASO#, NEUT%, LYMPH%, MONO%, EO%, BASO%, IG#, IG%, MicroR, MacroR

Optional Parameters
(Except XN-330)

14 RET & IPF Parameters
RET#, RET%, IRF, LFR, MFR, HFR, RET-He, PLT-O, IPF#, IPF, RBC-He, Delta-He, HYPO-He, HYPER-He

7 Body Fluids Parameters
Body Fluid mode
WBC-BF, RBC-BF, MN#, PMN#, MN%, PMN%, TC-BF#

Throughput

CBC : up to 60 samples/hour	CBC: up to 70 samples/hour
CBC + DIFF: up to 60 samples/hour	CBC + DIFF: up to 70 samples/hour
	CBC + DIFF + RET: up to 35 samples/hour
	Body fluid mode: up to 30 samples/hour

Sample Aspiration Volume

Whole blood mode: 25 µl	Whole blood / Low WBC mode: 25 µl
Pre-dilution mode: 70 µl	Pre-dilution mode: 70 µl
	Body fluid mode: 70 µl

Data Storage

Results: 100,000 samples
Patient information: 10,000 records
QC files: 99 files / analyser
QC plots : 300 plots / file
Reagent replacement history: 5,000 records
Maintenance history: 5,000 records

Dimensions and Weight

XN-330	XN-350	XN-450	XN-550
Width : 450 mm	Width: 450 mm	Width: 450 mm	Width: 450 mm
Depth : 460 mm	Depth: 460 mm	Depth: 460 mm	Depth: 660 mm
Height : 510 mm	Height: 510 mm	Height: 440 mm	Height: 450 mm
Approx. 35 kg	Approx. 35 kg	Approx. 35 kg	Approx. 53 kg
			Monitor
			Width: 267 mm
			Depth: 205 mm
			Height: 240 mm
			Approx. 3 kg

References : -

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8. van der Linden N, Klinkenberg LJJ, Meex SJR, Beckers EAM, de Wit NCJ, Prinzen L. Immature platelet fraction measured on the Sysmex XN hemocytometer predicts thrombopoietic recovery after autologous stem cell transplantation. Eur J Haematol. 2014;93(2):150-6.