

XN-L Series

Changing perspectives



Take your haematology to the next level

Changing your perspective

As the global leaders in haematology, we consider it our responsibility to offer you solutions that make your work easier, more efficient and more effective. In 2011 we introduced the benchmark in haematology – our flagship XN-Series. For some, such a comprehensive solution may be too large. Now, with the introduction of the XN-L Series, XN quality and Sysmex's knowledge and support are within your grasp.

Whether you want to upgrade from a 3-part differential device, or replace an existing analyser, all XN-L models are 5-part differential analysers that offer the quality of larger devices at an *excellent price: quality ratio*.

You can now offer *best-in-class diagnostics* and since the XN-L Series is *scalable*, you can upgrade it as the demands of your customers change. You can even open the door to *new diagnostic disciplines* such as body fluids. Or add one of our morphology solutions to create a full smear workflow.

Each XN-L is also a perfect secondary analyser, giving you confidence even at times when your primary analyser is unavailable.

Whatever your setup, you get full support in terms of knowledge and service from our certified staff and audited services, within our established sales and service network. Now that's a change in perspective for you ...

Benefits at a glance

XN analysers in a small and compact size:
XN-350, XN-450, XN-550.

- Proven quality – XN is the benchmark in the haematology world
- Modular – combines perfectly with our morphology solutions and connects to *Extended IPU* and online quality control
- Scalable – based on APP concept – upgrade according to your needs
 - **RET** – for anaemia management with RET-H_e and PLT-O incl. switching algorithm for accurate PLT counts
 - **XN-BF** – measure body fluids straight from the tube, automated and 24/7
 - **L-WBC** – for more reliable analysis of leucocytopenic samples

True Sysmex haematology analysers

Our new XN-L analysers surpass the competition in this market segment in terms of technological performance and specifications¹. All three incorporate the proven Sysmex technologies of fluorescence flow cytometry, impedance counting with hydrodynamic focussing and our cyanide-free SLS method for determining haemoglobin.

¹ Hotton J, et al. Performance and Abnormal Cell Flagging Comparisons of Three Automated Blood Cell Counters. *Am J Clin Pathol* 2013;140:845–852.

The XN-L Series



XN-350

The XN-350 offers single sample analysis in open mode. It has a fully integrated IPU (information-processing unit) including an LCD colour touchscreen – so you do not need a separate computer to operate the analyser.



XN-450

With the XN-450 you can run single samples safely in closed mode. The instrument offers open mode too and comes with a fully integrated IPU, including an LCD colour touchscreen that makes it easy to operate.



XN-550

The XN-550 features an automated sampler and so improves workflow productivity with its Rerun & Reflex functionality and continuous loading feature. This model also has an integrated IPU and is operated via a compact LCD colour touchscreen.



With the integrated Intelligent Rack Sampling available on the XN-550 you can detect and process raised bottom tubes automatically and so improve your overall workflow productivity.

Upgrade according to your needs

With XN-L's flexible APP concept, you can upgrade your system at any time. This secures your investment and lets your haematology solution grow with you and your clients' needs. The systems are also ready for future APPs, giving you a continuous growth perspective.

You can tailor your:

- routine haematology and specialty testing,
- workflow efficiency and
- knowledge and workflow management

by choosing individual:

- clinical values,
- productivity values and
- professional services.

Clinical values

The XN-L Series outperforms any other analyser in this market segment*. Even its CBC+DIFF testing and associated flagging delivers a greater range of clinically relevant parameters, such as the immature granulocyte (IG) count and information on high-fluorescence lymphocytes (HFLC*). Both help to quickly assess inflammations and infections.

By adding optional APPs, you can further enhance the clinical value of your new analyser:

The 'RET' APP delivers automated reticulocyte counting. The advanced clinical parameter RET-H₂ reflects reticulocytes' haemoglobinisation status and helps to manage iron-deficient and anaemic patients.

The PLT-O parameter provides accurate platelet counts even in the event of common interferences, without the need for manual counting.

Unique to this class of analysers, your XN-L can handle more than blood samples. The 'XN-BF' APP lets you measure body fluids automatically and straight from the tube. You don't need to specially prepare the sample and the results provide valuable information on the possible cause of inflammations – fast. You can analyse CSF, peritoneal fluid, pleural fluid, synovial fluid and CAPD samples.

Our parameters' proof of performance, clinical use and relevance are reflected in numerous publications – please contact a Sysmex representative for a copy of the relevant literature.

Productivity values

Modern labs are focused on efficiency. The XN-550's 'Rerun & Reflex' feature reduces TATs and results are received more quickly should a sample need to be reanalysed due to technical and/or analytical reasons. The XN-550 reruns the samples automatically for you so correct results are reported directly.

Our XN-550 also offers 'Intelligent Rack Sampling' and continuous loading as standard to help increase the efficiency of your workflow. It shortens the time you need to report to your customers and ensures a high quality of results.

Optional APPs for all XN-L analysers

The optional APP 'L-WBC' (Low WBC) improves reliability when analysing leucocytopenic samples. When the WBC count and differential results are defined as unreliable because of low cell numbers, the system offers L-WBC analysis to ensure statistically sound results. The XN-550 triggers this automatically as a reflex. You can also order the L-WBC test in advance, possibly for known leucocytopenic patients.

To increase your throughput to 70 samples/hour, you can select the optional 'Speed-up' application.

Extend beyond cell counting – Smear Workflow

Combine your XN-L analyser with our Blood Film Master™ or our Blood Film Master Advanced™ to create a single, comprehensive solution for your haematology work area. While the XN-L does the cell counting and differentiation, these staining devices will increase the quality and efficiency of your smear workflow. Superbly stained blood films facilitate and improve microscopy differentials, ultimately improving the overall quality of your results and your service to your clients.

Professional services

XN-L uses our proven XN IPU software with workflow intelligence on board as standard. Integrated rules steer the automated Rerun & Reflex messaging or re-analysis (XN-550) for both technical and analytical trigger criteria. The rule set also serves as a validation aid. This means the knowledge and optimal analysis procedures are already in place – based on our long-term experience in haematology. You can rely on your XN-L.

Performance and uptime

Our Support Manager is pre-installed and ensures your system runs at maximum reliability. Preventive maintenance is carried out as required (Interactive Services and Cycle-based Maintenance) and your IPU is protected via the Application Security. These functionalities run in the background so you can focus on your other work at hand.

Our SNCS Online QC service automatically monitors the analysis quality with daily external quality control – without the need for additional control materials or measurements. The service is included with your control materials. Since it is accredited according to ISO/IEC 17043 and an accepted external quality control scheme, it can be used officially for your lab accreditation.

Connecting your XN-L to the optional Extended IPU provides access to further intelligence for managing your workflow and validation processes, which are controlled by extensive integrated rule sets based on the recommendations of an independent expert group. The Extended IPU also connects individual instruments in different network locations, e.g. for centralised order management and validation, accessing results outside the lab, and more. Please contact a Sysmex representative for further details.

The XN-L Series delivers specialist solutions for labs that need to offer niche diagnostics. Dedicated functionalities support the following medical specialties:

- **Paediatrics.** Low aspiration volume of 25 µL plus the availability of an IG count and HFLC* information with every DIFF analysis.
- **Dialysis centres.** The RET-H₂ parameter (with RET) and CAPD measurement (with XN-BF) for monitoring patients.
- **Neurology wards.** Dedicated analysis for various body fluids (with XN-BF) – fast and available 24/7.
- **Oncology.** Precise and accurate measurement of leucocytopenic samples (with L-WBC) helps, for example, to obtain reliable neutrophil counts during chemotherapy.

* Research parameter

Hotton J, et al. Performance and Abnormal Cell Flagging Comparisons of Three Automated Blood Cell Counters. *Am J Clin Pathol* 2013;140:845–852.

**RAL Stainer and RAL StainBox are registered products of RAL Diagnostics – www.ral-diagnostics.fr



XN-350



Key specifications

Models	XN-350, XN-450, XN-550
Throughput	up to 60 samples/h in whole blood (WB) mode up to 70 samples/h in WB mode with the optional Speed-up licence
Aspiration volume	25 µL in whole blood (WB) mode, 70 µL in pre-diluted (PD) and body fluid (BF) mode
Analysis parameters	
Whole Blood	WBC, RBC, HGB, HCT, MCV, MCH, MCHC, PLT, RDW-SD, RDW-CV, MicroR%, MacroR%, PDW, MPV, P-LCR, PCT, NEUT#, LYMPH#, MONO#, EO#, BASO#, IG#, NEUT%, LYMPH%, MONO%, EO%, BASO%, IG%
With RET (optional)	RET#, RET%, IRF, LFR, MFR, HFR, RET-H _e , RBC-H _e , Delta-H _e , HYPO-H _e %, HYPER-H _e %, PLT-O
Body Fluids with XN-BF (optional)	WBC-BF, RBC-BF, MN#, PMN#, MN%, PMN%, TC-BF#
Measurement principles	WBC DIFF/RET: Fluorescence Flow Cytometry WBC: Flow Cytometry RBC/PLT: DC Impedance method with hydrodynamic focussing HGB: Cyanide-free SLS method
Data storage capacities	Results: 100,000 samples Patient information: 10,000 records Calibration history: 20 times/module QC files: 99 files including XbarM
User maintenance	Daily shutdown Weekly cleaning sequence with Cellclean or Cellclean Auto
Dimensions / weights	
W x H x D [mm/kg]	XN-350: 450 x 510 x 460/approx. 35 XN-450: 450 x 440 x 460/approx. 35 XN-550: 450 x 450 x 660/approx. 53

Design and specifications may be subject to change due to further product development. Changes are confirmed by their appearance on a newer document and verification according to its date of issue.

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