XN-1500

Count. Smear. Stain. All-in-one haematology.

sysmex

www.unlimited-possibilities.com

Differentiated counting.
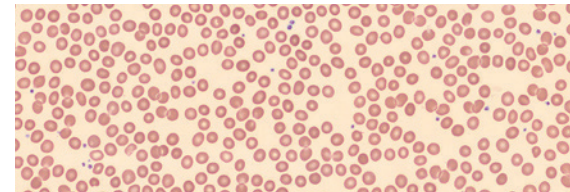# Consistent smears.
Advanced diagnostics.

Blood is remarkably precious. It carries all our bodies need to survive. It also bears the body's signals that things are not quite as they should be. At Sysmex, we have made it our task to help you identify these signals as easily and efficiently as possible. Whatever size laboratory you operate or own.

All our haematology expertise in an affordable solution – the all-in-one XN-1500.

Benefits at a glance

- Seamless workflow
- As primary analyser or back-up
- Complete standardisation:
  - consistency of blood smear preparation and staining
  - runs paediatric samples like all others thanks to low aspiration volume
- Short turnaround time, less time needed for preparing slides
- Fewer biohazardous procedures
- Eliminates manual handling steps prone to errors
- Simplified operation suitable for night shifts
- Increases your laboratory's productivity

The XN-1500 system will certainly make your life easier. For the first time, we have combined our market-leading XN-Series analyser with a brand-new slide maker/stainer in an all-in-one workstation. Should an analysis result lead to a smear, it is performed without manual intervention. The result? Consistent smears with a beautiful cell monolayer that make further microscopic diagnostics as easy and powerful as possible. Add a DI-60, our digital imaging analyser, and microscopic analysis can be performed automatically, too.

Smears: enhance your workflow, standardisation and result quality

Challenged by workflow and efficiency issues, you have to get your smear workflow just right. Ideally, the need for smears is reduced up front by intelligent technology, flagging and rule setting. Yet when smears are required, they should be of the highest quality and consistency and preferably automatic – thereby decreasing TAT and manual errors.

As a primary analyser for mid-size laboratories, or as a back-up for larger systems, the XN-1500 haematology workstation provides an automated, seamless workflow that eliminates most manual procedures.
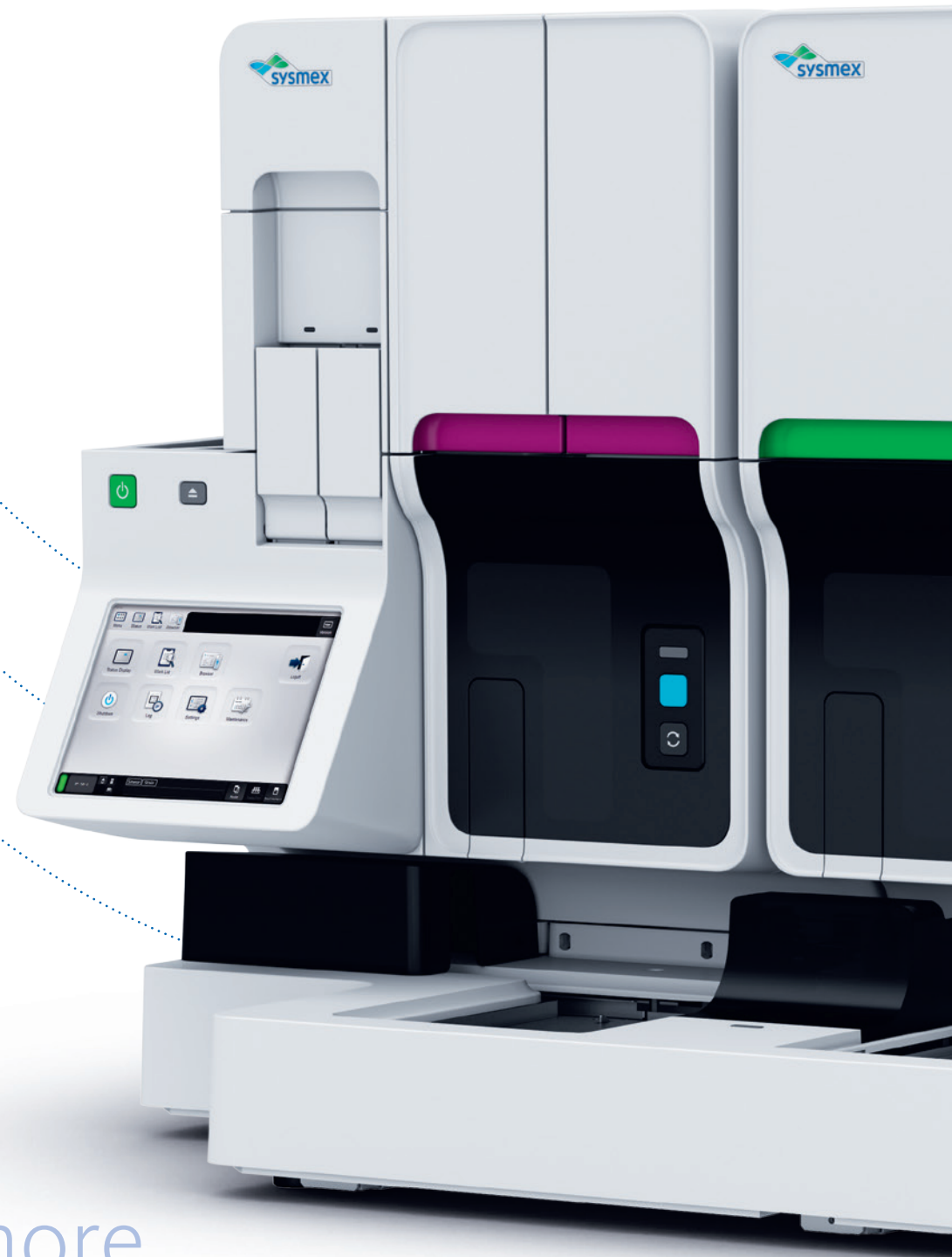
Staining

Counting

Slide-making

On-board rules

The XN-1500 is an all-in-one system: from sample analysis to slide-making and staining.

Far more than just a blood count

Sysmex haematology has moved well beyond mere cell counting. By directly addressing issues we know you face in the laboratory, our applications and advanced clinical parameters eliminate key issues common with non-XN analysers or other technologies.

You can now offer best-in-class diagnostics and upgrade your system as your or your customers' demands change. For example, add the advanced reticulocytes parameters (RET), which offer a valuable contribution to anaemia diagnosis by highlighting the complete picture of erythropoiesis and its further development. The extensive spectrum of results offered only by Sysmex is opening doors to clinical insight previously not available. Modular and scalable, your investment is future-proof.

For full capability details of the XN, we refer you to the XN-Series brochure or our website.

Know more.
Decide with confidence.
Act faster.

Physicians and clinicians get to know more and can act faster

Our research into the interdependencies between haematological cell counts and pathologies is helping us to make huge advances in delivering clinical insight. Treating physicians gain faster, more detailed insight into patients' illnesses and can confidently deliver more effective diagnoses, treatment monitoring and screening.

Monitoring thrombocytopenia, for example, is tricky using solely platelet counts. With our immature platelet count, non-responders to ITP treatment can be identified and therapy can be modified quickly. Another example is understanding real-time immune status. Using our Extended Inflammation Parameters, you can now differentiate between different types of immune response to identify the stage of an infection. Monitoring patients with inflammatory diseases and successful therapy limits the use of antibiotics. Only from Sysmex.

Be confident – rules, regulations, accreditation, etc.

Increasingly we're all faced with rules, regulations and accreditation challenges. Thanks to embedded software and use of our *Extended* IPU, you have full transparency and full control over how you manage your pre- and post-analytical data. Safety and traceability come first. We want you to be confident everything is under control; internally and externally. You can be.

Need-based, differentiated counting with the XN module

The XN analyser offers high diagnostic capabilities as standard, including nucleated red blood cells in every CBC count. You save time and resources thanks to the advanced flagging that reduces the need for smears while the on-board trigger criteria automate their processing.

Take advantage of optional parameters for anaemia diagnostics, automated body fluid analysis, or high-precision platelet counts that deliver reliable results even with extremely low counts. Information provided by progenitor cell analysis enables a more cost-effective yet equally reliable apheresis process.

Our optional *Extended* IPU provides further support for determining the causes of thrombocytopenia. You can also integrate manual differentials, digital imaging or a count pad, and solve the challenge of determining the cause of an increased MCHC with our 'CBC-O'* solution.

---

added value XN-CBC

XN-CBC: more than the standard CBC (included)
- always includes nucleated red blood cells (NRBC%, NRBC#)
- auto-corrects WBC counts by metrological separation from NRBC

added value XN-DIFF

XN-DIFF: more than a standard 5-part differential (included)
- always includes IG%, IG#
- uses special 'low WBC' mode for critically low cell counts
- optional licence: Extended Inflammation Parameters (RE-LYMP, AS-LYMP, NEUT-GI, NEUT-RI)

added value RET

RET: extensive red cell diagnostics (optional)
- quantifies mature and immature reticulocytes (RET%, RET#, IRF)
- determines the haemoglobinisation of reticulocytes (RET-H$_e$)
- determines more quantitative and prognostic anaemia parameters (RBC-H$_e$, Delta-H$_e$, HYPO-H$_e$, HYPER-H$_e$, FRC, RPI)
- optional: management of increased MCHC (CBC-O*)

added value PLT-F

PLT-F: specific platelet diagnostics (optional)
- quantifies platelets precisely, even in the thrombocytopenic range
- provides accurate platelet counts, even with RBC interferences and giant platelets
- quantifies immature platelets: fraction (IPF) and absolute count (IPF#)
- improves your platelet workflow with the 'TWO'* algorithm

added value WPC

WPC: specific white cell diagnostics (optional)
- detects white pathological and precursor cells
- helps you confidently exclude malignancies in combination with XN-DIFF
- allows multi-parametric assessment of reactive conditions
- optional: XN Stem Cells

added value XN-BF

XN-BF: automated analysis of body fluids (optional)
- analyses cerebrospinal fluid, synovial fluid, pleural fluid and others 24/7
- counts and differentiates cells (RBC-BF, WBC-BF, PMN%, PMN#, MN%, MN#, TC-BF, HF-BF)
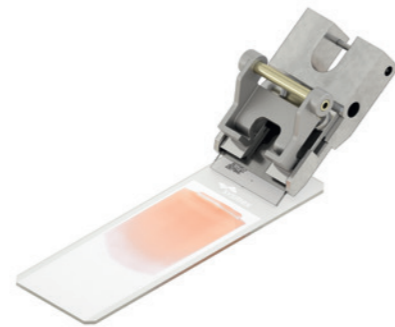
For more details on the clinical insights that can be gained with the XN, we refer you to our XN-Series clinical cards and white papers on **www.sysmex-europe.com/whitepapers.**
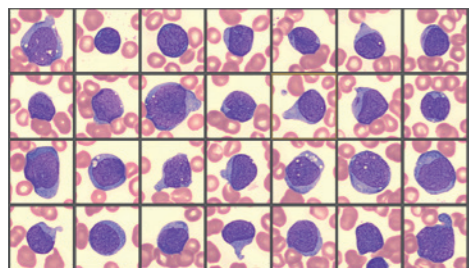
*available with *Extended* IPU

Standardisation from smear preparation to stained blood smear

The SP-50 is equipped with the very latest technology to create a consistent, high-quality smear. With its intelligent wedge method, you define settings for sample volume, speed and angle of the spreader blade. The SP-50 produces standardised blood films regardless of the blood sample's consistency. Auto-adapted to the HCT value of each blood sample, the length of the smear guarantees a particularly wide monolayer area for performing the blood cell differential count.

It now needs to be stained properly, which means that cytoplasmic and nuclear details of the various cell types need to be accentuated. The SP-50 handles the RAL Classic staining reagents for May Grünwald, Giemsa and Wright stains perfectly. A wide variation of staining reagents reveal the cell characteristics fully, whether under a manual microscope or with digital microscopy. To complete the automation from start to finish, you can choose to add our digital imaging analyser – the DI-60.

Manual tasks? No more.

Since the counter and slide-maker/stainer are connected physically, the XN-1500 eliminates most manual tasks. Simply place the sample in a rack and you can remove the stained blood smear at the end. That's it.
This also means you minimise work with biohazardous material and dangerous staining solutions.

Also for night and weekend shifts

Clinicians are calling for accurate and reliable results for their patients around the clock, with a guaranteed short turnaround time. The simple operation of the XN-1500's blood count and smear workflow means it can be operated easily by night or weekend staff.

Blood cells are special and deserve the best treatment

Consistent, high-quality slides are the backbone of diagnostic haematology since blood cell morphology differentials depend directly on the quality of the blood smear. This again depends on both the spreading of the blood on a glass slide and properly staining the cells.

With the XN-1500, results of the automated cell count as well as the morphology blood smear review are highly comparable and reproducible. This delivers the greatest cell recognition by the onlooker for an accurate differential count and better diagnostics.

Technical specifications

Measurement principles	WBC DIFF/RET/PLT-F/WPC: fluorescence flow cytometry
	RBC/PLT: hydrodynamically focussed impedance
	HGB: cyanide-free SLS haemoglobin

Throughput

XN: up to 100 samples/h in whole blood (WB) mode,
up to 40 samples/h in body fluid (BF) mode

SP-50: up to 30 slides/h in standard mode,
up to 75 slides/h with the optional high-throughput licence

Aspiration volume

XN: 88 µL in whole blood (WB) mode and body fluid (BF) mode

SP-50: 70 µL for smear preparation in auto mode,
38 µL for smear preparation in manual mode

Analysis parameters

Whole blood

WBC, NRBC%, NRBC#, RBC, HGB, HCT, MCV, MCH, MCHC, PLT, RDW-SD, RDW-CV, MicroR%, MacroR%, PDW, MPV, P-LCR, PCT, NEUT%, NEUT#, LYMPH%, LYMPH#, MONO%, MONO#, EO%, EO#, BASO%, BASO#, IG%, 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

With PLT-F (optional)

PLT-F, IPF, IPF#

With WPC (optional)

Extended Inflammation Parameters licence: NEUT-GI, NEUT-RI, RE-LYMP%, RE-LYMP#, AS-LYMP%, AS-LYMP#

XN Stem Cells licence: HPC%, HPC#

Body fluids with XN-BF (optional)

WBC-BF, RBC-BF, MN%, MN#, PMN%, PMN#, TC-BF#

Staining protocols (SP-50) May Grünwald – Giemsa, Wright – Giemsa, Wright

Data storage capacities (XN)

Results: 100,000 samples

Patient information: 10,000 records

QC files: 99 files (300 plots per file)

Reagent replacement history: 5,000 records

X-bar control (L-J control): 300 plots x 94 files

X-barM control: 300 plots x 5 files

Dimensions / weights

w x h x d [mm/kg]

Main unit (including sampler) 1006 x 1053 x 855 / approx. 211

Pneumatic unit (PU) 280 x 355 x 400 / approx. 17

(two PUs are required per XN-1500)

Wagon (optional) 1161 x 1115 x 706 / approx. 137