

Product fact sheet

XN-1000V

Version 2.0



Manufacturer information

Sysmex Corporation
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Summary

Dedicated to laboratories processing veterinary samples of different kinds, the XN-1000V provides the full flexibility of profiles in haematology testing. It targets laboratories with a medium to larger workload or in need to cope with a short turn-around time

(TAT) at peak times. 20 pre-defined species* coupled with an intelligent built-in reflex functionality allows streamlined workflow and a significant increase in the walk-away time. Its technical performance provides reliable and accurate test results by applying a maximum of five measurement channels.

The XN-V Series allows to individualise your testing by choosing clinical applications as determined by the sample characteristics.

XN-1000V contains many functions dedicated to the specific demands of analysing veterinary samples. Hence, special species-specific reflex rules can be set up. Continuous quality control monitoring is also available using Caresphere™ XQC.

Productivity



- Decreased TAT due to 20 pre-defined animal species* and improved sensitivity
- Decreased TAT and an increased walk-away time of the analysis process by the special reflex functionality, minimising manual working steps such as sorting of samples for reflex testing
- Automatic measurement of raised bottom tubes (RBT) by Intelligent Rack Sampling
- Fast analysis, 24 hours per day, 7 days a week
- Optional: convenient automatic measurements of body fluids without the need for pre-treatment and reduction of manual chamber counts

Standard clinical insight applications



- XN-V Series offers fluorescence flow cytometry for the counting/differentiation of white blood cells in CBC and DIFF mode.
- The advanced XN-CBC profile includes the counting of rare event cells such as basophils and nucleated red blood cells in every measurement. It reports NRBC as low as 0.1/100 WBC. Furthermore, interferences from non-cellular particles such as lyse-resistant RBC or lipids are avoided. The XN-V instrument always reports automatically corrected WBC values if NRBC are present.
- Samples showing a low white blood cell concentration are re-measured automatically in the special 'Low WBC' mode. This ensures obtaining reliable results of all parameters including the differential by an extended count sequence.

*Depending on analyser software version

Optional clinical insight applications



- The optional RET application supports the diagnosis of anaemic samples based on the complete picture of the erythropoiesis by qualitative and quantitative information.
- In addition, the RET application provides improved PLT count reliability due to an automated switching algorithm in the case of interferences such as RBC fragments, microcytic RBC or giant platelets.



- The optional BF application allows the measurement of body fluids such as cerebrospinal fluid, serous fluids (e.g., peritoneal and pleural), synovial fluid, CAPD (continuous ambulatory peritoneal dialysis) fluid or BALF (bronchoalveolar lavage fluid) with high precision in clinically relevant concentration ranges and supports in detection of inflammatory processes.



- The optional PLT-F application supports the CBC analysis of non-mammalian species reducing the need of a haemocytometer.
- Furthermore, it provides information for mammals supporting the monitoring of thrombocytopenia and evaluating the status of the thrombocytopoiesis.

Configurations

The following configurations of the haematology units XN-10 are available. The XN-10 unit can be individually equipped with your choice of additional applications (RET and/or BF and/or PLT-F).




Name	Application	Description
XN-1000V		1x XN-10 unit with SA-10 reflex sampler for CBC+DIFF screening
		Optional RET application
		Optional body fluid application
		Optional PLT-F application

Components of XN-1000V

Item code	Item	Description	Qty
SE000770	XN-1000V	Haematology analyser for veterinary use incl. sampler unit, IPU and monitor	1
BE999446	WG-21	Wagon (optional)	1
AK407696	RBT RACK SET COMPLETE	Raised bottom tube set: 5 racks with fixed adapters, 20 yellow rack labels, 20 rack ID barcode labels (optional)	1

Product specifications

Feature	Description
Specimen	<ul style="list-style-type: none"> • Whole blood • Body fluids
Species*	<ul style="list-style-type: none"> • Mouse, rat, dog, non-human primates (NHP), rabbit, cat, horse, cattle, pig, mini pig, guinea pig, gerbil, camel, dolphin, marmoset, ferret, sheep, goat, hamster, bird <p>(* depending on analyser software version)</p>
Strain species	<ul style="list-style-type: none"> • Mouse 1-15, rat 1-10, NHP 1-10, rabbit 1-5, dog 1-5, pig 1-5
Customisable free species	<p>Free 1-99</p> <ul style="list-style-type: none"> • Free species are to analyse non-defined species. Customisation of scattergram gating or histogram discriminators is performed using the Manual Analysis function.
Technologies	<ul style="list-style-type: none"> • Hydrodynamic focused impedance measurement • Cyanide-free SLS Haemoglobin method • Fluorescence flow cytometry Adaptive cluster analysis system (ACAS) and special 3-dimensional shape recognition analysis of each WBC subpopulation
Standard parameters (whole blood)	WBC, RBC, HGB, HCT, MCV, MCH, MCHC, PLT, RDW-SD, RDW-CV, MicroR ¹ , MacroR ¹ , PDW, MPV, P-LCR, PCT, NRBC%, NRBC# NEUT%, NEUT#, LYMPH%, LYMPH#, MONO%, MONO#, EO%, EO#, BASO%, BASO#

Feature	Description
Optional parameters	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;">  </div> <div> <p>RET%, RET#, PLT-O, IRF, LFR, MFR, HFR, RET-H_e, HYPO-H_e¹, HYPER-H_e¹</p> </div> </div>
	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;">  </div> <div> <p>WBC-BF, RBC-BF, PMN%, PMN#, MN%, MN#, TC-BF#</p> </div> </div>
	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;">  </div> <div> <p>PLT-F², IPF², WBC³, RBC³, H-RBC^{1,3}, PLT³</p> </div> </div> <p>¹Parameter hidden as default ²Not analysed in LA mode ³Only for bird species analysis</p>

Discrete mode profiles	
<ul style="list-style-type: none"> Standard Optional (depending on the configuration) 	<ul style="list-style-type: none"> CBC CBC+DIFF CBC+RET CBC+PLT-F CBC+DIFF+RET CBC+DIFF+PLT-F CBC+RET+PLT-F CBC+DIFF+RET+PLT-F

Throughput*	
<u>Whole blood mode</u>	
<u>Low WBC mode ()</u>	
<ul style="list-style-type: none"> CBC CBC+DIFF CBC+RET CBC+DIFF+RET CBC+PLT-F CBC+DIFF+PLT-F CBC+RET+PLT-F CBC+DIFF+RET+PLT-F 	<ul style="list-style-type: none"> 100 samples/hour 100 (88) samples/hour 83 samples/hour 83 (65) samples/hour 68 samples/hour 68 (55) samples/hour 47 samples/hour 47 (41) samples/hour

Pre-dilution mode	
<ul style="list-style-type: none"> CBC CBC+DIFF CBC+DIFF+RET CBC+DIFF+PLT-F CBC+DIFF+RET+PLT-F 	<ul style="list-style-type: none"> 90 samples/hour 90 samples/hour 53 samples/hour 52 samples/hour 39 samples/hour

Low aspiration volume mode	
<ul style="list-style-type: none"> CBC+DIFF CBC+DIFF+RET 	<ul style="list-style-type: none"> 100 samples/hour 83 samples/hour
<u>Body fluid mode</u>	40 samples/hour

Sampler unit capacity	5 racks (50 samples)
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STAT function	Approx. 1 min by using the manual mode
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Reagent management	Available
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User management	Available
Customised rules	Available
Customisable software	Available
Data storage	<ul style="list-style-type: none"> Samples <ul style="list-style-type: none"> 30,000 (including histograms and scattergrams) 2,000 records Analysis registration function <ul style="list-style-type: none"> 5,000 records Reagent replacement history <ul style="list-style-type: none"> 5,000 records Maintenance history <ul style="list-style-type: none"> 5,000 records
Quality control	<ul style="list-style-type: none"> X-bar and or L-J <ul style="list-style-type: none"> 300 plots x 94 files XbarM control <ul style="list-style-type: none"> 300 plots x 400 files

*Using a Raised Bottom Tube processing throughput is reduced.

Analysis modes, aspiration volume and required sample volumes

Analysis type	Analysis modes	Tube type	Aspiration volume	Required sample volume
Manual analysis	WB	Closed tube	88 µL	1 mL
		Open tube		300 µL
		Micro-collection tube		160 µL
		RBT*		250 µL
	PD	Open tube	70 µL	300 µL
		Micro-collection tube		140 µL
LA	Open tube	50 µL	260 µL	
	Micro-collection tube		122 µL	
BF	Closed tube	88 µL	1 mL	
	Open tube		300 µL	
	Micro-collection tube		160 µL	
Sampler analysis	WB	Closed tube	88 µL	1 mL
		RBT*		250 µL

* Raised Bottom Tube

Reagents

All Sysmex reagents are provided in polytainers, paper packs, bottles and/or cartridges depending on the products.

Reagents for dilution

Item code	Item	Description	Qty
• CT661628	CELLPACK DCL	Diluent	• 20 L
• CU228496			• 10 L

Reagents for XN-CBC

Item code	Item	Description	Qty
• 90411414	SULFOLYSER	Lysing reagent to measure HGB	• 5 L
• 05433514			• 1 x 500 mL
• 90411317			• 3 x 500 mL
BL121531	LYSERCELL WNR	Surfactant to measure WBC, BASO and NRBC	5 L
CP066715	FLUOROCELL WNR	Labelling reagent to measure WBC, BASO and NRBC	2 x 82 mL

Reagents for XN-DIFF

Item code	Item	Description	Qty
• AL337564	LYSERCELL WDF	Lysing reagent to obtain the WBC differential	• 5 L
• BG689680			• 2 L
• CV377552	FLUOROCELL WDF	Labelling reagent to obtain the WBC differential	• 2x 42 mL
• AA325279			• 2x 22 mL

Reagents for RET

Item code	Item	Description	Qty
• BT965910	CELLPACK DFL	Diluent for RET/ PLT-F channels	• 2 x 1.5 L
• AR829995			• 1 x 1 L
BN337547	FLUOROCELL RET	Labelling reagent to detect RET and PLT-O	2 x 12 mL

Reagents for XN-PLT-F

Item code	Item	Description	Qty
• BT965910	CELLPACK DFL	Diluent for RET/ PLT-F channels	• 2 x 1.5 L
• AR829995			• 1 x 1 L
CY787031	FLUOROCELL PLT	Labelling reagent to detect PLT-F	2 x 12 mL

Quality control materials

Item code	Item	Description	Qty
• 213484	• XN CHECK L1	QC material for monitoring the whole blood mode	• 8 x 3 mL
• 213485	• XN CHECK L2		• 8 x 3 mL
• 213486	• XN CHECK L3		• 8 x 3 mL
213510	• XN CHECK BF L1 • XN CHECK BF L2	QC material for monitoring the body fluid mode	• 3 x 3 mL • 3 x 3 mL
213523	XN CAL	Calibrator material	3 x 3 mL
213523	XN CAL PF	Calibrator material PLT-F	3 x 3 mL

Reagents for cleaning and maintenance

Item code	Item	Description	Qty
BQ095093	CELLCLEAN AUTO	Ready to use cleaning reagent with barcoded vials	20 x 4 mL
83401621	CELLCLEAN	Cleaning reagent	50 mL

Technical specification

Feature	Description
Weight	
<ul style="list-style-type: none"> Main unit (incl. sampler unit) Pneumatic unit Wagon WG-21 	<ul style="list-style-type: none"> Approx. 78 kg Approx. 17 kg Approx. 110 kg
Dimensions	
<ul style="list-style-type: none"> Main unit (incl. sampler unit) Pneumatic unit 	<ul style="list-style-type: none"> 645 x 855 x 755 mm (WxHxD) 280 x 400 x 355 mm (WxHxD)
Operative temperature	15 to 30°C
Operative humidity	20 to 85 %
Power supply	
<ul style="list-style-type: none"> Main unit (XN-10) Sampler Pneumatic unit 	<ul style="list-style-type: none"> AC 100 to 240 V (50/60 Hz) AC 100 to 240 V (50/60 Hz) AC 220 to 240 V (50/60 Hz)
Power consumption	
<ul style="list-style-type: none"> Main unit (XN-10) Sampler Pneumatic unit 	<ul style="list-style-type: none"> 270 VA or less 110 VA or less 50 Hz: 230 VA or less (100-117 V) 220 VA or less (220-240 V) 60 Hz: 280 VA or less (100-117 V) 250 VA or less (220-240 V)

Disclaimer:

This product fact sheet does not contain the complete information of the product as described in the 'Instructions for Use', and neither is it intended to replace the 'Instruction for Use'. The required information in the 'Instruction for Use' must be observed at all times.