

## Product Fact Sheet

# XR-1500



## Manufacturer information

Sysmex Corporation

## Summary

The XR-1500 is a combination of a single-unit flagship XR-Series haematology analyser with the SP-50 slide preparation unit. Both modules are seamlessly interconnected by a single sampler, creating a compact, integrated workstation that allows fully automated processing of your blood samples and provides you with stained blood smears of consistently high quality.

Additionally, with an onboard rule set, the XR-1500 automatically initiates the production of peripheral blood smears for samples that require one.

## SP-50

As part of the XR-1500, the Sysmex automated SP-50 standardises and accelerates the complete slide preparation and staining procedure. With an intelligent wedge method allowing user-definable settings for sample volume, speed, waiting time and angle of the spreader blade, the SP-50 also auto-adapts to the haematocrit value of each blood sample.

Staining results are optimised using a variety of Sysmex and RAL Diagnostics reagents specifically adapted to and manufactured for the SP-50. The SP-50 comes in two throughput configurations – SP-50 (standard) and SP-50 (high throughput), so you can opt for the model that fits your smear review rate.

## Workflow automation

- Fully automated workflow from cell counting to staining without manual intervention. Decreased TAT by minimising manual work steps, such as sorting samples for reflex testing.
- High-quality blood smears through the automated adjustment to the haematocrit of the eight different levels.
- Rerun & Reflex ensure that samples for which the analyses must be repeated or extended are selected automatically.
- Micro samples and Raised Bottom Tubes can be used without sample dilution ensuring the minimisation of biohazard procedures.

## Diagnostic support

- Advanced analytical capabilities are standard, such as nucleated red blood cells (NRBC) included in every complete blood count, and Immature granulocytes (IG) with every WBC differential.
- Consistent slide preparation and stain quality support the microscopic examination or digital imaging of peripheral blood smears.
- A wide range of optional analytical applications are available, depending on your specific requirements.

## Configurations

| Name    | Configuration   | Standard applications                                                             | Optional applications                                                               |
|---------|-----------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| XR-1500 | • XR-10 + SP-50 |  |  |
| XR-1500 | • XR-20 + SP-50 |  |  |

## Available configurations for XR-1500

| Configuration            | XR-10 | XR-20 | SP-50* |
|--------------------------|-------|-------|--------|
| XR-1500<br>XR-10 (B1-B4) | 1     | 0     | 1      |
| XR-1500<br>XR-20 (A1-A2) | 0     | 1     | 1      |

\* SP-50. Please refer to specification for throughput requirement.

## Main components of XR-1500

| Item code   | Description                                    | Qty      |
|-------------|------------------------------------------------|----------|
| XR-10       | XR-10 analysis module                          | Max 1    |
| XR-20       | XR-20 analysis module                          | Max 1    |
| SP-50       | SP-50 slide preparation unit                   | 1        |
| SA-21       | Sampler for XR-1500                            | 1        |
| DI-60/CF-70 | Digital imaging analyser and connection feeder | Optional |
| WG-17       | Wagon combination for XR-1500                  | Optional |
| IPU         | Information processing unit                    | 1        |

## Product specifications of XR-Series

| Feature                      | Description                                                                                                                                                                                                                                                                      |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Diagnostic parameters</b> |                                                                                                                                                                                                                                                                                  |
| • CBC+DIFF                   | • WBC, WBC-N, WBC-D, RBC, HGB, HCT, MCV, MCH, MCHC, PLT, PLT-I, RDW-SD, RDW-CV, MicroR, MacroR, PDW, MPV, P-LCR, PCT, NRBC#, NRBC%, NEUT#, LYMPH#, MONO#, EO#, BASO#, NEUT%, LYMPH%, MONO%, EO%, BASO%, IG#, IG%, AS-LYMP%*, AS-LYMP%*, RE-LYMP%*, RE-LYMP%*, NEUT-GI*, NEUT-RI* |
| • RET                        | • PLT-O*, RET-He*, RET-He*, IRF*, LFR*, MFR*, HFR*, RET-He*, RBC-He*, Delta-He*, HYPO-He*, HYPER-He*                                                                                                                                                                             |
| • PLT-F                      | • PLT-F*, IPF#*, IPF%*                                                                                                                                                                                                                                                           |
| • BF                         | • WBC-BF*, RBC-BF*, MN#*, MN%*, PMN#*, PMN%*, TC-BF#*                                                                                                                                                                                                                            |
| <b>Research parameters</b>   |                                                                                                                                                                                                                                                                                  |
| • CBC+DIFF                   | • TNC, TNC-N, BA-N#, BA-N%, TNC-D, NEUT%&, NEUT%&, LYMPH%&, LYMPH%&, HFLC#, HFLC%, AS-LYMP%L*, RE-LYMP%L*, BA-D#, BA-D%, NE-SSC, NE-SFL, NE-FSC, LY-X, LY-Y, LY-Z, MO-X, MO-Y, MO-Z, NE-WX, NE-WY, NE-WZ, LY-WX, LY-WY, LY-WZ, MO-WX, MO-WY, MO-WZ                               |
| • RET                        | • RBC-O*, RET-Y*, RET-RBC-Y*, IRF-Y*, FRC#*, FRC%*, RPI*, RET-UPP*, RET-TNC*, HGB-O*, MCHC-O*, Delta-HGB*                                                                                                                                                                        |
| • PLT-F                      | • H-IPF*, PLT-F2*                                                                                                                                                                                                                                                                |
| • BF                         | • HF-BF#*, HF-BF%*, NE-BF#*, NE-BF%*, LY-BF#*, LY-BF%*, MO-BF#*, MO-BF%*, EO-BF#*, EO-BF%*, RBC-BF2*                                                                                                                                                                             |
| • WPC                        | • WPC-P*, TNC-P*                                                                                                                                                                                                                                                                 |

|                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                             |                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Scattergrams & histograms                                                                                                   | <ul style="list-style-type: none"><li>• Up to 23 scattergrams in 2D and 3D views and surface plots</li><li>• Up to 4 histograms</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                             |                                                                                                                                                                                                                                                                                                      |
| Profiles                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                             |                                                                                                                                                                                                                                                                                                      |
| <b>XR-10</b> <ul style="list-style-type: none"><li>• Standard</li><li>• Optional (depending on the configuration)</li></ul> | <ul style="list-style-type: none"><li>• CBC</li><li>• CBC+DIFF</li><li>• CBC+RET</li><li>• CBC+DIFF+RET</li><li>• CBC+DIFF+RET+PLT-F</li><li>• CBC+RET+PLT-F</li><li>• CBC+PLT-F</li><li>• CBC+DIFF+PLT-F</li><li>• Body fluid</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>XR-20</b> <ul style="list-style-type: none"><li>• Standard</li><li>• Optional (depending on the configuration)</li></ul> | <ul style="list-style-type: none"><li>• CBC</li><li>• CBC+DIFF</li><li>• CBC+RET</li><li>• CBC+DIFF+RET</li><li>• CBC+DIFF+RET+WPC</li><li>• CBC+RET+PLT-F</li><li>• CBC+DIFF+RET+PLT-F</li><li>• CBC+DIFF+RET+PLT-F+WPC</li><li>• CBC+PLT-F</li><li>• CBC+DIFF+PLT-F</li><li>• Body fluid</li></ul> |
| Technologies                                                                                                                | <ul style="list-style-type: none"><li>• Fluorescence flow cytometry</li><li>• Hydrodynamically focussed impedance measurement</li><li>• Cyanide-free SLS haemoglobin</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                             |                                                                                                                                                                                                                                                                                                      |
| Throughputs                                                                                                                 | <ul style="list-style-type: none"><li>• CBC</li><li>• CBC+DIFF</li><li>• CBC+DIFF+WPC</li><li>• CBC+DIFF+RET</li><li>• CBC+RET</li><li>• CBC+DIFF+WPC+RET</li><li>• CBC+PLT-F</li><li>• CBC+DIFF+PLT-F</li><li>• CBC+DIFF+WPC+PLT-F</li><li>• CBC+DIFF+RET+ PLT-F</li><li>• CBC+RET+PLT-F</li><li>• CBC+DIFF+WPC+RET+PLT-F</li><li>• Body fluid analysis</li><li>• Up to 110 samples/hour</li><li>• Up to 110 samples/hour</li><li>• Up to 88 samples/hour</li><li>• Up to 83 samples/hour</li><li>• Up to 83 samples/hour</li><li>• Up to 71 samples/hour</li><li>• Up to 68 samples/hour</li><li>• Up to 68 samples/hour</li><li>• Up to 53 samples/hour</li><li>• Up to 47 samples/hour</li><li>• Up to 47 samples/hour</li><li>• Up to 47 samples/hour</li><li>• Up to 40 samples/hour (BF mode only)</li></ul> |                                                                                                                             |                                                                                                                                                                                                                                                                                                      |
| Sampler unit loading capacity                                                                                               | 5 racks (50 samples)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                             |                                                                                                                                                                                                                                                                                                      |
| STAT function                                                                                                               | Approx. 1 min by using the manual mode                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                             |                                                                                                                                                                                                                                                                                                      |
| Reagent management                                                                                                          | <ul style="list-style-type: none"><li>• Full traceability</li><li>• Uniquely barcoded reagents</li><li>• Reagent replacement history</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                             |                                                                                                                                                                                                                                                                                                      |
| Data storage                                                                                                                | <ul style="list-style-type: none"><li>• Analysis registration function</li><li>• Samples (incl. graphics)</li><li>• Patient information</li><li>• Wards registered</li><li>• Doctor names registered</li><li>• Selective test orders</li><li>• Quality control files</li><li>• 2,000 records</li><li>• 100,000 results (including histograms and scattergrams)</li><li>• 10,000 records</li><li>• 200 wards</li><li>• 200 names</li><li>• 12 discrete profiles (depending on the configuration)</li><li>• 99 files</li><li>• 300 plots x 94 files (L-J control)</li><li>• 300 plots x 5 files (XbarM control)</li><li>• Reagent replacement history</li><li>• Maintenance history</li><li>• 5,000 records</li><li>• 5,000 records</li></ul>                                                                         |                                                                                                                             |                                                                                                                                                                                                                                                                                                      |
| QC functions                                                                                                                | <ul style="list-style-type: none"><li>• Xbar and or L-J</li><li>• Xbar M</li><li>• 300 plots x 94 files (L-J control)</li><li>• 300 plots x 5 files (XbarM control)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                             |                                                                                                                                                                                                                                                                                                      |

\* The availability of these functions depends on your system configuration.

## Product specifications of SP-50

| Feature                 | Description                                                                                                                                           |                                                                                                                                                  |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Throughput              | <ul style="list-style-type: none"> <li>• SP-50</li> </ul>                                                                                             | <ul style="list-style-type: none"> <li>• Up to 30 slides/hour (standard mode)</li> <li>• Up to 75 slides/hour (with speed up license)</li> </ul> |
| Slide preparation time  | <ul style="list-style-type: none"> <li>• Double stain method</li> <li>• Single stain method</li> </ul>                                                | <ul style="list-style-type: none"> <li>• Up to 25 minutes</li> <li>• Up to 20 minutes</li> </ul>                                                 |
| Sample volume           | <ul style="list-style-type: none"> <li>• Regular sample tube</li> <li>• Micro sample tubes</li> <li>• Raises Bottom tube</li> </ul>                   | <ul style="list-style-type: none"> <li>• 70 µL +/- 3 µL</li> <li>• 1 smear 38 µL +/- 3 µL</li> <li>• 2 smears 70 µL +/- 3 µL</li> </ul>          |
| Glass slide             | SP-Slides                                                                                                                                             | 76 x 26 x 1 mm                                                                                                                                   |
| Carryover               | WBC                                                                                                                                                   | <ul style="list-style-type: none"> <li>• 0.01% regular rinse</li> <li>• 0.001% extended rinse</li> </ul>                                         |
| Software specifications | <ul style="list-style-type: none"> <li>• Sample storage</li> <li>• Error log</li> <li>• Reagent replacement log</li> <li>• Maintenance log</li> </ul> | <ul style="list-style-type: none"> <li>• 10,000 samples</li> <li>• 5,000 entries</li> <li>• 5,000 entries</li> <li>• 5,000 entries</li> </ul>    |

## Technical specifications

| Feature                                                                                                                      | Description                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Interface                                                                                                                    | LP, DP, GP, host computer via LAN                                                                                                                                                                                                                                       |
| Operating temperature                                                                                                        | <ul style="list-style-type: none"> <li>• 15 to 30 °C</li> </ul>                                                                                                                                                                                                         |
| Operating humidity                                                                                                           | <ul style="list-style-type: none"> <li>• 20 to 85 %</li> </ul>                                                                                                                                                                                                          |
| Power supply <ul style="list-style-type: none"> <li>• Main unit</li> <li>• Sampler</li> <li>• Pneumatic unit</li> </ul>      | <ul style="list-style-type: none"> <li>• AC 100 to 240 V (50/60 Hz)</li> <li>• AC 100 to 240 V (50/60 Hz)</li> <li>• AC 100 to 117 V (50/60 Hz)</li> <li>• AC 220 to 240 V (50/60 Hz)</li> </ul>                                                                        |
| Power consumption <ul style="list-style-type: none"> <li>• Main unit</li> <li>• Sampler</li> <li>• Pneumatic unit</li> </ul> | <ul style="list-style-type: none"> <li>• 270 VA or less</li> <li>• 110 VA (SA-21) / 130 VA (SA-31) or less</li> <li>• 50 Hz: 230 VA or less (100-117 V), 220 VA or less (220-240 V)</li> <li>• 60 Hz: 280 VA or less (100-117 V), 250 VA or less (220-240 V)</li> </ul> |
| Noise level*                                                                                                                 | 66 dBA or less                                                                                                                                                                                                                                                          |
| Dimension XR-1500<br>Pneumatic unit<br>Wagon WG-17                                                                           | <ul style="list-style-type: none"> <li>• 1006 x 1053 x 855 mm (WxDxH)</li> <li>• 280 x 355 x 400 mm (WxDxH)</li> <li>• 1161 x 1115 x 706 mm (WxDxH)</li> </ul>                                                                                                          |
| Weight XR-1500<br>Pneumatic unit<br>Wagon WG-17                                                                              | <ul style="list-style-type: none"> <li>• Approx. 207 kg</li> <li>• Approx. 17 kg</li> <li>• Approx. 137 kg</li> </ul>                                                                                                                                                   |

\* Excludes sounds during rinse cup discharge, shifting/discharge of sample racks, clamping/release of sample tubes, and alarm sounds.

**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.

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