

Perform the quality control of your blood products on one haematology analyser

Blood component safety is key in transfusion medicine and blood product manufacturing. Therefore, high standards during the whole process from donor qualification to quality monitoring of the products are required. Especially residual cell enumeration is important for process quality control. Until now, haematology analysers could not reach the lower limit of quantification required for this. But now, the new Blood Bank mode offers the potential to run such analyses with confidence.

- ✓ Fully automated analysis for standardised workflows
- ✓ Single platform for multiple haematological parameters
- ✓ Time-efficient routine analysis of red blood cell, platelet and plasma packs

Blood Bank

BLOOD BANK MODE

Know more.
Decide with confidence.
Act faster.

Systemex offers a holistic solution that covers donors, patients and blood components

The parameters

- HGB (haemoglobin)
- RET-He (reticulocyte haemoglobin equivalent)

help to evaluate the donor's blood status.

Donor safety

Blood component safety

The Blood Bank mode

- measures residual white and red blood cells in blood components.
- determines RBC and platelet concentrations in blood products.



The advanced clinical parameters

- RET-He
 - IPF (immature platelet)
- are used for monitoring the patients.




Patient care

Your benefits in daily routine

- Say good-bye to current methods which are often time-consuming, costly and dependent on the individual skills of the staff.
- No manual preparation needed, so simple to operate for everyone in the laboratory.
- Save precious time by analysing various parameters on one instrument.
- Accurately and reproducibly identify those blood components in which leucodepletion has failed.
- Consistent, standardised and automated assessment of the quality of your blood products to ensure patient safety.
- The Blood Bank mode is CE IVD compliant.

Blood components and measuring profiles

The Blood Bank mode offers the analysis of blood components with four different selectable profiles – two profiles for red blood cell concentrates and two profiles for platelet concentrates. Plasma packs can be measured in the profile for platelet concentrates and residual cells.

 <p>RBC pack + residual cells</p> <p>rWBC Residual white blood cells</p> <p>RBC Red blood cell count</p> <p>HGB Haemoglobin</p> <p>HCT Haematocrit</p> <p>RBC pack RBC, HGB, HCT</p>	 <p>PLT pack + residual cells</p> <p>rWBC Residual white blood cells</p> <p>rRBC* Residual red blood cells</p> <p>PLT Platelet count</p> <p>PLT pack PLT</p>	 <p>Platelet pack + residual cells (used for plasma pack analysis)</p> <p>rWBC Residual white blood cells</p> <p>rRBC* Residual red blood cells</p> <p>PLT Platelet count</p>
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Technological requirements

The XN-1000 and XN-2000 haematology analysers can now be equipped with the Blood Bank mode offering the potential to automate, simplify and rationalise the transfusion medicine and blood manufacturing workflow. The XN analyser has to be equipped with the RET and PLT-F applications and a Blood Bank mode licence.



Required applications

* research parameter

Improving your workflow

International guidelines require blood component safety and therefore residual cell enumeration is crucial.

Current methods for the enumeration of rWBC and rRBC are either manual methods such as visual inspection and chamber counting or semi-automated methods such as flow cytometry or fluorescent image analysis. All of these methods require manual sample preparation and skilled staff, and are therefore not standardised.

Workflow improvements with the Blood Bank mode:

- Methods are standardised for more consistent results
- Easy to operate for all lab staff
- Consolidated analysis of multiple haematologic parameters on one analyser
- No additional tube sampling
- Fully automated measurement in sampler mode

Further specifications

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| ■ Measurement mode: | Manual mode and automated sampler mode |
| ■ Aspirated volume: | <ul style="list-style-type: none"> ■ RBC pack: 150 µL ■ PLT pack: 205 µL |
| ■ Time per single measurement: | <ul style="list-style-type: none"> ■ RBC profile with residual cell measurement: less than 2 minutes ■ PLT profile with residual cell measurement: approx. 3 minutes |
| ■ Performance specifications for rWBC: | <ul style="list-style-type: none"> ■ Limit of blank (LoB): 0.0000 x10³/µL ■ Limit of detection (LoD): 0.0020 x10³/µL ■ Limit of quantification (LoQ): 0.0020 x10³/µL |
| ■ Sample tube types: | We recommend using the same EDTA tubes for the Blood Bank mode as used for whole blood analysis. |