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.

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.

For further details please visit www.sysmex-europe.com/bloodbank
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.

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.

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

- Measurement mode: Manual mode and automated sampler mode
- Aspirated volume:
  - RBC pack: 150 µL
  - PLT pack: 205 µL

The hourly throughput of one standalone XN-1000 analyser in Blood Bank mode varies depending on the profiles used.

<table>
<thead>
<tr>
<th>Blood pack</th>
<th>Residual cell counts</th>
<th>Throughput</th>
<th>Time per single measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBC pack</td>
<td>No</td>
<td>79 samples/h</td>
<td>Less than 1 minute</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>33 samples/h</td>
<td>Less than 2 minutes</td>
</tr>
<tr>
<td>PLT pack</td>
<td>No</td>
<td>62 samples/h</td>
<td>Approx. 1 minute</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>19 samples/h</td>
<td>Approx. 3 minutes</td>
</tr>
</tbody>
</table>

- Sample tube types
  - We recommend using the same EDTA tubes for the Blood Bank mode as used for whole blood analysis.

* research parameter