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Ery-TIC®

Deviating Special Dilution 1:51 or 1:21 or 1:11

Supplement Information for Counting of Residual Cells in Platelet Concentrates and blood Plasma

Supplement product information for microscopic counting of very low numbers of red blood cells (RBCs) with Ery-TIC®. Ery-TIC® contains EryCount® solution (improved Hayem's reagent).

Principle

This product information relates to microscopic counting of extremely low numbers of red blood cells (RBCs), e.g. as done in transfusion medicine when counting residual cells in plasma. It supplements the standard product information. For further information see Ery-TIC® product information.

Attention!

This additional information is a supplement to the product information.
It is also important to observe the information in the product information!

Sample Material

See basic product information.
Using sample material, e.g. from thrombocyte concentrates or blood plasma, is possible.

Reference Ranges

Thrombocyte concentrate	
Erythrocytes	< 3.0×10^9/Unit 250 mL
	< 12.0×10^3/µL

For reference values of sample specimen please refer to the respective literature or regulations.

Procedure

Using capillary pipettes 20 µL (only with dilution A)

20 µL volume capillaries are not included in the kit, but are available separately.
Fill a 20 µL end-to-end volume capillary bubble-free with sample material from end to end. We recommend using a capillary holder for this (see ordering information). Remove sample material adhering to the outside with a lint-free tissue without sucking material from the capillary. Place filled volume capillary into the opened Ery-TIC® tube, close and shake vigorously until all sample material is flushed from the capillary. Leave capillary in the TIC tube.

Using automatic micropipette

Only appropriately trained laboratory staff should use this method!
Instead of end-to-end and chamber filling capillaries use an adequate automatic micropipette. Flush pipette tip sufficiently with the reagent solution. Shake the closed tube well.
To obtain discrete pipetting volumes, the dilution factors are decimal fractions. These enter into the specified calculation factor.

Dilution A (1:50.75):
20 µL Sample + 995 µL solution in Ery-TIC®

Dilution B (1:20.90):
50 µL Sample + 995 µL solution in Ery-TIC®

Dilution C (1:10.95):
100 µL Sample + 995 µL solution in Ery-TIC®

Loading the counting chamber

To make sure to count also RBCs (in transfusion concentrates) which were stressed during processing, immediate counting is recommended
Shake the Ery-TIC® tube once more before loading the counting chamber. Fill the chamber filling capillary about a quarter to half its length by capillary action and seal the upper end with your finger. Touch the tilted capillary (narrow angle) against the edge of the cover slip and load the counting chamber. Place chamber on horizontal surface and wait about 3 minutes for complete sedimentation of RBCs.

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Determination

For microscopic counting, use phase-contrast optics or bright field (lowered condenser) at 400× magnification.

Neubauer "improved" counting chamber:

Counting area = 1 mm^2. Depth = 0.100 mm. Counting volume = 0.1 µL.

Count the RBCs in all 25 group squares of the middle field (with 16 smallest squares each). In the border squares, count cells up to the center line.

Calculation

Dilution A (20 µL sample) 1 : 51

Counted cells × dilution factor / counting volume	= cells / µL
Counted cells × 507.5	= cells / µL
Counted cells × 0.1269	= cells × 10^9 / 250 mL

Dilution B (50 µL sample) 1 : 21

Counted cells × dilution factor / counting volume	= cells / µL
Counted cells × 209	= cells / µL
Counted cells × 0.0523	= cells × 10^9 / 250 mL

Dilution C (100 µL sample) 1 : 11

Counted cells × dilution factor / counting volume	= cells / µL
Counted cells × 109.5	= cells / µL
Counted cells × 0.0274	= cells × 10^9 / 250 mL

Other dilutions or use of different counting chambers is possible. Please request procedure instructions or dilution factors.

Notes

These instructions have been carefully prepared to the best of our knowledge.

Note that this is a preliminary recommendation for the specified process. It lacks final practical verification. Users need specifically to check usefulness and applicability for their purposes.

Support / Information service

For methodological and technical support, please contact us by E-Mail at support@bioanalytic.de.

Periodically check for updates of this product information on our website.

Feedback

Information from users can be reported to support@bioanalytic.de.

Suggestions for further developments will be considered.

If a serious incident has occurred during or as a result of use, please report it to the manufacturer and/or its authorized representative and to your national authority.

Waste Management

Please see basic product information.

Literature & Footnotes

Legends for the graphic symbols and tags used follow relevant norms or are available on our internet pages.

[1] DIN 58932

[2] Wintrobe, Clinical Hematology, S. 1795 (1974), Lea & Febiger Philadelphia.

[3] Rick, Klinische Chemie und Mikroskopie, 24 (1977), Springer Verlag Berlin.