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Erythrocytes Control

ERYTHROCYTES CONTROL REPORT

ERYTHROCYTES CONTROL GROUP
A1, A2, B, O

Serum or Plasma

Code: C15TR1001

9001, 13485, 15189, 17043
ISO

todylaboratories®
Erythrocytes Control

REAGENT RED BLOOD CELLS GROUP A_1, A_2, B, O

FOR THE DETERMINATION OF THE REVERSE BLOOD GROUP

Name	Product code	Packaging
A1 reagent red blood cells	C15TR1001	1x10 ml
A2 reagent red blood cells	C15TR1002	1x10 ml
B reagent red blood cells	C15TR1004	1x10 ml
O reagent red blood cells	C15TR1003	1x10 ml

INSTRUCTIONS FOR USE

Introduction

The principle of the test is the agglutination technique, which is based on antigen/antibody reaction. A1, A2, B and O reagents red blood cells are intended for conducting erythrotest; beside hemotest it is a unique test for ABO system blood grouping.
Person may carry one, both or neither antigen on erythrocytes, it depends on presence or absence of the corresponding antibod y in serum. Presence of anti-A or anti-B antibody is determined by testing with Reagent red blood cells A1 and B. Additional testing with Reagent red blood cells A2 and O may help detect and explain possible mismatch in hemotest and erythrotest test results.
Reagent red blood cells A1, A2, B and O are resuspended in modified iso-osmolar Alsever's solution. It contains neomycin sulfate (0.01%) and chloramphenicol (0.033%), and are added as preservatives.
Each bottle contains 3-5% erythrocyte suspension. It is not necessary to wash and resuspend test erythrocytes in saline before use, they can be used directly from the bottle.

Test procedures

Spin tube method
Tube requirements: round bottom glass tubes; size 75 x 10/12 mm
1. Gently shake the bottle containing Reagent red blood cells in order to achieve even suspension.
2. Add to the test tube:
   - 2 drops of the serum or plasma to be tested
   - 1 drop of Reagent red blood cells and mix well.
3. Centrifuge for 20 seconds at 1000 rcf or for a time appropriate to the calibration of the centrifuge.
4. Resuspend the cells by gentle agitation and read macroscopically for agglutination.

Interpretation of test results

POSITIVE TEST (+): presence of agglutination or hemolysis NEGATIVE TEST (-): no agglutination or hemolysis present EXPECTED RESULTS

Agglutination reactions in routine ABO grouping

Red cells + blood grouping reagent			Serum/plasma + reagent red blood cells		
anti-A	anti-B	anti-A,B	A1 cells	B cells	blood group (frequency)
0	0	0	+	+	O (46.7%)
+	0	+	0	+	A (41.7%)
0	+	+	+	0	B (8.6%)
+	+	+	0	0	AB (3.0%)

Note: Do not use Reagent red blood cells if visible contamination is present or if hemolysis before expiration date occurs. Do not freeze. Store at 2-8°C. Expiration date is printed on the product.

References

1. Race R.R. and Sanger R.; Blood groups in Man, 6th ed. Oxford Blackwell Scientific Publishers 1975.
2. Issitt P.D.; Applied Blood Group Serology, 3rd ed. Montgomery Scientific Publications, Miami, Florida, USA, 1985.
3. Daniels G.; Human Blood Groups. Blackwell Science Ltd. 1995.
4. Mollison P.L. et al.; Blood Transfusion In Clinical Medicine, 9th ed. Blackwell, Oxford, 1993.

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SC Tody Laboratories INT. SRL
Address: Vadul Moldovei Street, no 22, Sector 1, Bucharest, Romania
Tel.: +4021 269 00 00 Fax: +4021 269 06 41
www.todylaboratories.com