Instructions for use

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PeliCase 1	REF **K1386**
PeliCase 2	REF **K1387**
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Proficiency panels for blood group serology

General information
Sanquin PeliCase 1 and PeliCase 2 consist of vials with human serum and red cells, which can help the laboratory to develop and maintain skills on blood group serological procedures. Expected results are included so that immediate action may be taken if the laboratory's observed results do not coincide with expected results. The cases present a case-history in which a situation familiar to your own situation is described.

Precautions
PeliCase should be stored at 2–8°C. Cell suspensions should be at room temperature (18–25°C) prior to use and should be mixed well by carefully and repeatedly turning the closed vial. Leaking or damaged vials may not be used. PeliCase cells and sera should not be used beyond the expiration date which is printed on the label of the vial, or in the event of significant discoloration or hemolysis. Chloramphenicol 0.025%, neomycin sulphate 0.01% and gentamicin 0.005% are used as preservatives for the red cells; NaN_3 0.1% (w/v) has been added to the sera as preservative.

Although all blood products are tested for infectious diseases and found negative, the reagents cannot be assumed to be free from infectious agents. Care must be taken in the use and disposal of each container and its contents. If contamination or excessive hemolysis is evident, discard. Waste-disposal, after completion of the test, should be performed according to your laboratory regulations. As with all reagent red cells, the reactivity of the cells may decrease during the shelf life. The rate at which antigen reactivity (e.g. agglutinability) is lost is partially dependent upon individual donor characteristics that are neither controlled nor predicted by the manufacturer.

PeliCase components
The Pelicase panels consist of sufficient patient and/or donor material. The contents of each lot can vary, depending on the case which is described. Components of the panels are representatives of specimens encountered in compatibility testing, donor processing, hemolytic disease of the newborn or hemolytic anemia. PeliCase 2 may require special techniques familiar to the experienced laboratory or may represent an unusual case not frequently encountered in routine testing.

The PeliCase red cells are pre-washed, ready for use and are provided as a suspension in a preservation medium. The diluent will not interfere with complement-mediated hemolysis. The cell concentration is listed on the vial label. Cells labeled 'patient' are to be used as an auto-control during the examination of the serum.
In most cases, characterization of the cells will aid in eliminating the likelihood of serum antibodies to antigens found on the cells. Cells labeled 'donor' are to be used in compatibility procedures.

The PeliCase serum is to be treated as an antibody detection and/or identification problem such as might be encountered in any laboratory. The antibody may be reactive in normal saline and in the (indirect) antiglobulin test in combination with low ionic strength solutions, high protein media or polyethylene glycol (PEG); it may be enhanced or inhibited by enzyme treatment of test cells. A combination of techniques may be necessary and optimal temperatures for detection may vary. There may be a mixture of antibodies.

Proper use of these 'unknown' specimens will aid laboratory personnel in learning to recognize and solve problems involving unusual antigens and red cell antibodies.

Test procedure

Additional materials required
Reagents, materials and equipment normally found in blood group serological laboratories.

Performance of tests
The cells are to be tested for ABO, Rhesus blood groups and other blood groups as required by serum test results. Additional findings (such as weak reactivity, mixed field agglutination, or positive direct or indirect antiglobulin test results) may indicate the need for further testing. The serum is to be treated as an antibody detection and/or identification problem.
Refer to the appropriate package insert when using reagent red cells and blood grouping reagents.

Interpretation and results
Comparison of the expected results with the laboratory's observed results will aid in developing and maintaining skills on blood group serological procedures.

Limitations
The reactivity of some of the more labile antigens on the PeliCase red cells may diminish during the shelf life.
Contamination with micro-organisms or other blood or serum may cause false negative or false positive results.
These reagents are not intended for use in blood grouping or screening of patients or donors. PeliCase red cells and PeliCase serum are to be used for continuing education purpose only.

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. Reid M.E. and Lomas-Francis C.; The Blood Group Antigen Facts Book. Facts Book Series, 1997.
5. Mollison P.L. et al.; Blood Transfusion In Clinical Medicine, 9th edition, Blackwell, Oxford, 1993.

Sanquin products are guaranteed to perform as described in the original manufacturer's instructions for use.
Strict adherence to the procedures, test layouts and recommended reagents and equipment is essential. Sanquin declines all responsibility arising from any deviation thereof.