SBIOCAT™
Column Agglutination Test

REF	90260250	90260500
Pack Size	250 ml	500 ml

Diluent 2- LISS

Store at 2-8°C	Manufacturer	IVD *In vitro* Diagnostic Medical Device	LOT Batch Number / Lot Number	Expiry date	LISS SBIOCAT™ Diluent 2- LISS
Consult Instructions for use	Date of Manufacture	REF Catalogue Number	This side up	Keep Away from Sunlight	

SUMMARY
The antigen-antibody interaction in blood group serology is dependant on antigen density, concentration of antibody, pH, ionic concentration of reaction medium and temperature. Reducing the ionic concentration of the reaction medium especially enhances the uptake of weak antibodies by the red blood cell antigens. Also, usage of LISS (Low Ionic Strength Solution) is helpful in detection of weak antibodies during cross match techniques, antibody screening and antibody identification.

REAGENTS
SBIOCAT™ Diluent-2 LISS is a buffered low ionic strength solution of appropriate sodium chloride molarity useful in serological applications.

STORAGE AND STABILITY
Store the reagent at 2-8°C. Do not freeze.
The shelf life of the reagent is according to the expiry date indicated on the label. Once opened the shelf life of the reagent is according to the expiry date indicated on the label provided it is not contaminated. Do not use beyond expiry date.

ADDITIONAL REAGENTS AND MATERIALS REQUIRED
1. Micropipette capable of delivering 5-50µl of specimen.
2. Bottle top dispenser.
3. Work station.
4. Incubator 37^0 C (if necessary).
5. Gel card centrifuge (85g).

PRINCIPLE
In blood group serology, the ionic concentration of reaction medium is largely dependant on the concentration of sodium and chloride ions contributed by isotonic saline. When optimum concentration of antibody is present, antigen-antibody interaction occurs even though the sodium and chloride ions are present in sufficient quantity. But when weak antibodies are present, sodium and chloride ions may interfere with binding of antibody to the antigens present on the red blood cell membrane. By lowering the ionic concentration of salt, the ionic strength is reduced which increases the rate of antibody uptake by red blood cells.

SAMPLE COLLECTION
No special preparation of the patient is required prior to sample collection by approved techniques. For optimal results, freshly collected sample should be used. Anticoagulants like EDTA, CPD-A and Citrate can be used

SAMPLE PREPARATION
A. **For ABO/Rho (D) Determination**
Prepare a 5% red blood cell suspension in SBIOCAT™ Diluent- 2 LISS as follows:
1. Bring the SBIOCAT™ Diluent- 2 LISS to room temperature before testing.
2. Dispense 0.5 ml of SBIOCAT™ Diluent- 2 LISS into a clean test tube.
3. Add 50µl of whole blood or 25µl packed red cells to SBIOCAT™ Diluent- 2 LISS collected in test tube and mix gently.
4. Red blood cell suspension so obtained should be used for testing.

B. **For Compatibility Test, Direct and Indirect Anti Globulin Test**
Prepare a 0.8% red cell suspension in SBIOCAT™ Diluent- 2 LISS as follows:
1. Bring the SBIOCAT™ Diluent -2 LISS to room temperature before use.
2. Dispense 1.0 ml of SBIOCAT™ Diluent -2 LISS into a clean test tube.
3. Add 10µl of packed red cells to SBIOCAT™ Diluent -2 LISS collected in a test tube and mix gently.
4. Red blood cell suspension so obtained should be used for testing.
   For further testing procedures refer package insert of respective SBIOCAT™ gel card.

PERFORMANCE
The performance of SBIOCAT™ Diluent-2 LISS was evaluated on over 100 samples (from donors, patients and neonates) drawn on recommended anticoagulants. The evaluation demonstrated 100% specificity and sensitivity of the reagent versus the expected results with common known ABO, Rhesus phenotypes, Cross match, DAT and Autocontrol.

NOTE

1. In vitro diagnostic reagent for laboratory and professional use only. Not for medicinal use.
2. The SBIOCAT™ Diluent -2 LISS contains sodium azide <0.1% as preservative. Avoid contact with skin and mucosa. On disposal flush with large quantity of water.
3. Do not freeze or expose the reagent to elevated temperatures. After usage immediately store the bottle at 2-8°C.
4. Fibrin or particulate matter if present in the sample may lead to erroneous results.
5. Use of red blood cells concentration/ volumes and reagents other than those described may lead to erroneous results. Follow the instructions carefully.
6. Aged or stored red blood cells may exhibit weaker reactivity than freshly collected cells.
7. Do not use hemolysed samples.
8. Bacterial or other contamination may cause false positive or negative results.
9. Turbidity may indicate reagent deterioration or contamination, such reagents should be discarded.
10. Red cell aggregation in the red blood cell suspension may interfere with the passage.

BIBLIOGRAPHY

1. Human Blood Groups by Geoff Daniels, 2nd Edition, Blackwell Science, Oxford 2002.
2. HMSO, Guidelines for Blood Transfusion Services, 2nd edition, 1993.
3. M.C.Z. Novaretti et. Al. Comparison of Tube and Gel Techniques for Antibody Identification, Immunohematology 2000; 16: 138-141.
4. D. Voak, New Developments in Blood Group Serology, Infusion Therapy Transfusion Medicine 1999; 26: 258-260.
5. Blood Transfusion in Clinical Medicine, P.L. Mollison, 10th Edition.
6. Data on file: Singapore Biosciences PTE Ltd.

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