**INTRODUCTION**

The MN status of red blood cells is defined by the amino acid sequence of the major red cell sialoglycoprotein, glycophorin A. Anti-M and anti-N react with their respective antigens on glycophorin A, causing agglutination of the red cells and classifying these cells into three distinct phenotypes: M+N-, M+N+ and M-N+. Additionally, irrespective of the MN status of their major glycoprotein, almost all human red cells carry N-antigen on a minor red cell sialoglycoprotein, glycophorin B. The presence of this antigen will not lead to agglutination of their major glycoprotein, almost all human red cells carry N-

**REAGENT DESCRIPTION**

The main component of this reagent is derived from the in vitro culture of the immunoglobulin secreting mouse hybridoma LN3. The formulation consists of culture supernatant containing 1g/l sodium azide. The volume delivered by the reagent dropper bottle is approximately 40µl; bearing this in mind, care should be taken to ensure that appropriate serum:cell ratios are maintained in all test systems. This reagent complies with the requirements of Directive 98/79/EC on in vitro Diagnostic Medical Devices and the recommendations contained in the Guidelines for Blood Transfusion Services in the United Kingdom.

**STORAGE CONDITIONS**

The reagent should be stored at 2°C - 8°C. Do not use if turbid. Do not dilute The reagent is stable until the expiry date stated on the product label.

**INTERPRETATION OF RESULTS**

<table>
<thead>
<tr>
<th>Agglutination</th>
<th>positive test result</th>
</tr>
</thead>
<tbody>
<tr>
<td>No agglutination</td>
<td>negative test result</td>
</tr>
</tbody>
</table>

**QUALITY CONTROL**

Quality control of reagents is essential and should be performed with each batch of tests and with single tests. Anti-N should be controlled with known M+N-, M+N+, M-N+ cells.
PERFORMANCE LIMITATIONS

Suspension of red cells in LISS may result in weaker reactions.

Cells modified by proteolytic enzymes must not be used, as N antigens may be destroyed.

Do not examine tests microscopically.

Tests should be read by a 'tip and roll' procedure. Excessive agitation may disrupt weak agglutination and produce false negative results.

It is important to use the recommended g force during centrifugation as excessive centrifugation can lead to difficulty in resuspending the cell button, while inadequate centrifugation may result in agglutinates that are easily dispersed.

The expression of certain red cell antigens may diminish in strength during storage, particularly in EDTA and clotted samples. Better results will be obtained with fresh samples.

False positive or false negative results can occur due to contamination of test materials, improper reaction temperature, improper storage of materials, omission of test reagents and certain disease states.

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