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TEST FOR THE HUMAN ERYTHROCYTES OSMOTIC FRAGILITY

Measurement of the resistance of erythrocytes to hemolysis
For professional use only
Single-use product
Medical device for in vitro diagnosis.

Intended purpose:
Collection and transport of blood for further testing of osmotic fragility.

Presentation:
Reference 802000 kit containing 2 sets of 12 tubes + 2 lithium heparin tubes.

Characteristics:
The test for erythrocyte osmotic fragility measures the resistance of these cells to haemolysis in hypotonic solutions with decreasing concentrations of sodium chloride. When erythrocytes are suspended in a hypotonic solution, they absorb water, form a sphere, swell to their maximum volume and eventually burst.

Cells which are naturally rather sphere-shaped, e.g. in inherited spherocytosis, have a reduced expansion capacity and burst as soon as they absorb water. This occurs in relatively high sodium chloride concentrations.

On the other hand thin cells as found in hypochromic anaemia increase to an optimum volume for lysis in lower sodium chloride concentrations. Osmotic fragility is high if there is haemolysis in concentrations of more than 0.5 % of sodium chloride. On the other hand, the osmotic fragility is low if haemolysis is not complete in 0.3 % sodium chloride. The Deltalab set contains 2 complete trays, each one composed of 12 tubes with stable and buffered solutions, where osmotic concentration is equivalent to the following concentrations of sodium chloride: 0.85 %, 0.75 %, 0.65 %, 0.60 %, 0.55 %, 0.50 %, 0.45%, 0.40 %, 0.35 %, 0.20 %, 0.10 % and 0.00 %. The set also includes two tubes which contain heparin for blood sample collection.

How to use:
Add 50 µl of heparinised blood to each of the 12 tubes in a set. The second set can be used as a check on the test, this time using normal blood (from a person whose osmotic fragility is normal). Mix well the contents of the tubes and leave the mixture to stand at room temperature for 20 minutes. Mix again and centrifuge at 2,000-3,000 rpm for 5 minutes.

The results indicate the concentration of sodium chloride, where there is some sign of lysis and where haemolysis is complete. A more precise way to present the results is to measure the haemolysis grade. To do this, the optical density of the supernatant is measured in a colorimeter using a green filter (520-540 nm). The results are expressed in lysis percentage of the supernatant of a given tube, using the tube of 0.85 % saline solution as a blank.

Depending on the instrument, it may be necessary to dilute supernatants, so that the readings can be done within the instrumental range. Storage: keep the product in a closed container at room temperature in a well-ventilated area away from any hot or ignition point.

HUMAN PLATELET COUNTING KIT

Visualization and differentiation of platelets by refringence.
For professional use only
Single-use product
Medical device for in vitro diagnosis.

Intended purpose:
Collection and transport of blood for subsequent qualitative and/or quantitative determination of platelets (thrombocytes) in a clinical sample, using manual, semi-automatic or automatic cell counting methods.

Presentation:
Reference 800000 case of 50 tubes.

Characteristics:
Platelets are the smallest elements present in blood, with a diameter ranging from 2 to 4 pm. They participate in the haemostasis and vascular integrity and contribute to blood coagulation. There are usually between 150,000 and 400,000 platelets per µl.

Platelets are hard to determine as they are small-sized and difficult to distinguish from other cell material. The Deltalab liquid for platelets counting has special optical characteristics providing a strong refractive power to platelets, this helping their visualisation and differentiation from other particles. It is a stable buffered medium which also contains substances preventing platelet aggregation and adhesion.

How to use:
Use recently collected blood from a capillary or better from a vein, stored in a PP tube containing EDTA. Put 20 µl of blood into one of the tubes (1.98 ml) to make a 1/100 dilution. This haemolyses the red cells and prevents thrombocyte adhesion/aggregation.

Place the dilution into a counting chamber and leave to stand for 15-20 minutes in a moist environment. Then place the counting chamber under a phase contrast microscope and count the platelets which are now refractive.

If a phase contrast microscope is not available, replace the blue filter of the microscope by a green one.

In a Neubauer chamber, the number of thrombocytes per µl is obtained by counting the erythrocytes found in the large 1 mm2 squares, multiplying the figure by 10 and then by the used dilution (usually 1/100).

In cases of thrombocytopenia, a lower dilution factor is required. This must be taken into account when counting the erythrocytes. For its storage, keep the product in a closed container at room temperature in a well-ventilated area away from any hot or ignition point.

Symbol glossary:

REF Catalogue number	LOT Batch code	Use-by-date	Consult instructions for use on the website *www.deltalab.es/eifus*
QTY Quantity	Do not re-use	Do not use if Package is damaged	
Manufacturer	CE marking	IVD In Vitro Diagnostic Medical Device	

In case of a serious incident* related to the product, notify to Deltalab, S.L. as well as the competent authority of the State in which the user is established. *A "serious incident" is understood as one that entails the death, or serious deterioration of the health of the patient or user or a serious threat to public health.

CE IVD

DELTALAB, S.L.
Plaza de La Verneda 1, Pol. Ind. La Llana,
08191 Rubí, Barcelona. España/Spain.
deltalab@deltalab.es - www.deltalab.es

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