

Osmocells

Semi-Automated system for membrane osmotic fragility determination



SD Medical

Innovation

for Health

Systematize your hemolysis measurements with OSMOCELLS

Manual osmotic fragility test is used by hematology laboratories to check in vitro fragility of red blood cells by placing them in salt solution of gradually decreasing concentration.

Osmocells :

- Automates the manual technique
- Provides reproducible results
- Optimizes testing time

Only 2 minutes of manipulation for a result within 10 minutes !



Osmocells is an In Vitro Diagnostic Medical Device (IVDMD) for professional use.
Please read user manual and labeling of the device before use.

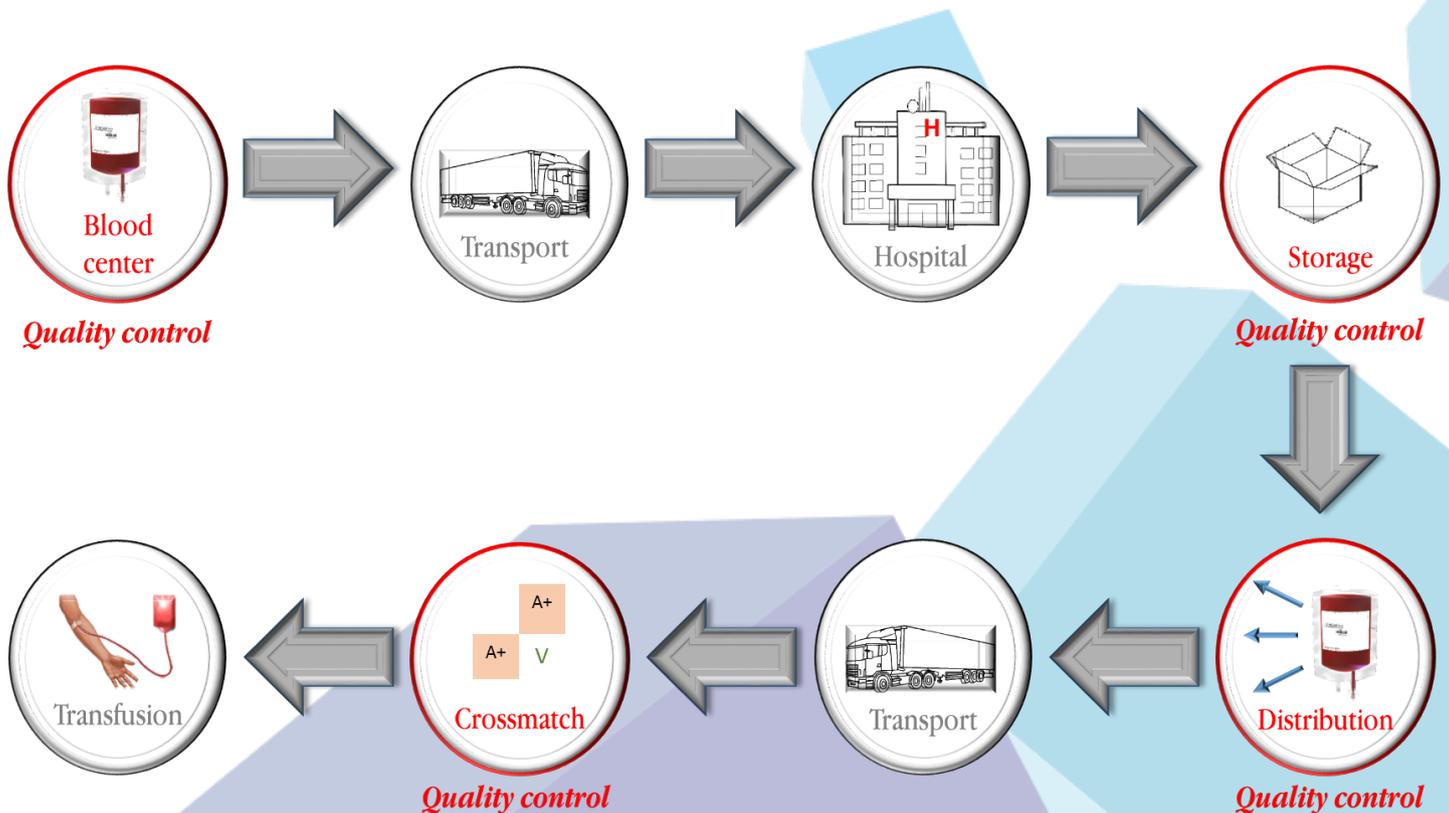


Device applications

Quality control of the red blood cell

Osmocells measures the membrane fragility through a continuous interpretation of the conductance and transmittance measurements of the analytical environment, reproducing results comparable to those obtained by the reference method. Through its two units of measure, Osmocells enables to study two samples simultaneously within 10 minutes with reliable and reproducible results.

In Europe, about 20 millions blood donations were collected during 2015, within 280 000 were thrown away. This number is increasing each year, that's why laboratories and transfusion centers need to improve their blood bags quality control.



Blood Bags Course and Quality Control.

The manual method allowing to appreciate the quality membrane of red blood cells has become a standard method for the measurement of hemolysis. However, it requires many operations before obtaining a result.

Very time-consuming, the end result is obtained as a result of manual interpretation on a curve based on few points, preventing the systematic analysis of blood bags.

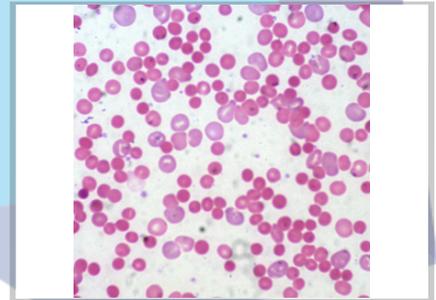


Diagnosis

Osmocells is an essential tool for the diagnosis of diseases of the red blood cells membrane and the hereditary

Diagnosis of Spherocytosis :

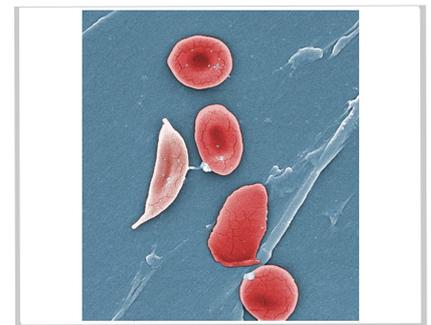
Spherocytosis, or Minkowski-Chauffard disease, is caused by an abnormality of the erythrocytes membrane. When one of the membrane component is altered, the cells are deformed gradually taking the form of small spheres called "spherocytes". The main characteristic of these cells used in diagnosis is a significant decrease of membrane resistance. So the red blood cells can stand less pressure



Spherocytes

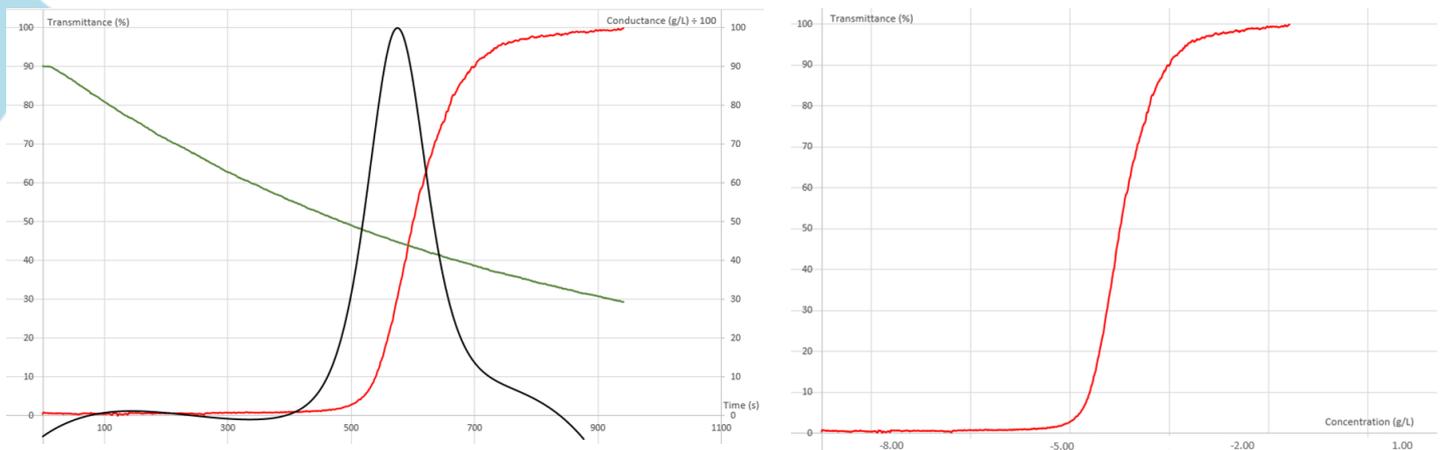
Diagnosis of the Sickle-cell disease :

The sickle cell disease or drepanocytosis is a genetic disorder of the hemoglobin protein where the beta chains causes abnormal accumulation in the red blood cells. This lead to a deformation of the cells when the oxygen is low (sickle cells). Red blood cells become more brittle and less flexible, preventing for example the transition into small capillaries.



Sickle cells

Results



These graphs show the lysis of red blood cells sample. These curves are significantly different according to the presence of red blood cells pathologies. Consequently, Osmocells is a very simple and efficient tool to help in diagnosis.

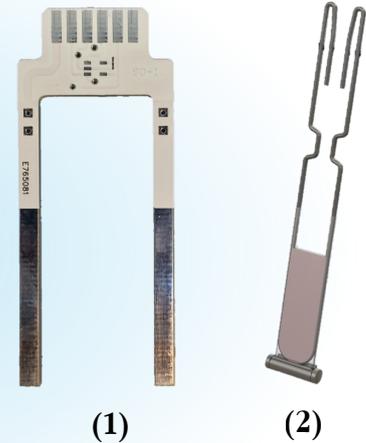


Consumables

For a better reliability and reproductibility

Osmocells proposes two types of consumables:

- Electrodes for measurement of saline concentration; (1)
- Semi-permeable membrane on his holder for the blood sample. (2)



With Osmocells, improve your performance, simplify drastically your handling and optimise your time for better results !

