



Blood Transfusion Center

Bab-El-Oued University Hospital (Algeria)

Evaluation of the new blood grouping device ABD PAD®

M. Amouchas¹, B. Gourou², S. Iguerguaziz², G. Hariti²

¹DIAGAST, ²Bab-El-Oued University Hospital (Algeria)

Introduction

The confirmation of ABO/Rh blood group of donors and patients is a control testing performed at different steps of the transfusion chain. At the blood transfusion service of Bab-El-Oued University Hospital, this control is performed on the blood bags tubing segments and on the second patient specimen using liquid antisera and plates.

The new ABD PAD® device (DIAGAST, Loos, France), which is suitable for this application, was evaluated prior to its commercial launch and was compared to the routine method.

Materials and Methods

The evaluation focused on the comparison of biological results between the slide method associated with liquid antisera (SPINREACT, Barcelona, Spain) and the ABD PAD® method.

100 samples of red blood cell concentrate from tubing segments were tested to determine the presence of A (ABO1), B (ABO2) and D (RH1) antigens.



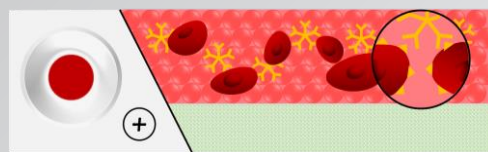
The ergonomics was assessed for the new ABD PAD® method. A survey with 22 questions was given to the lab technicians evaluating the satisfaction about the ease of use, the reading of the results, the safety of use and the device environment. For each question, a rating score was attributed from 1 (very unsatisfied) to 4 (very satisfied).

Conclusion

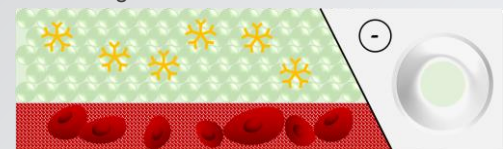
The ABD PAD® device demonstrated 100% concordance with regards to the expected results. It provides more safety compared to the routine method, enables the tests to be performed more easily and quickly. The device has shown its reliability for the blood group confirmation.

ABD PAD® device uses the M-TRAP® Technology based on the fixation of known antibodies covalently linked to a porous membrane.

When revealing the results, only the red blood cells having the corresponding antigen are trapped over the membrane. The positive reaction is a red layer.



When the red blood cells lack the corresponding antigen, they go down through the membrane to an absorbent.



Results

The results has shown 100% concordance between the slide method based on red cells agglutination and ABD PAD® based on the agglutination of red cells over a membrane.

The laboratory technicians have appreciated the ease of use thanks to use of only 2 materials and 3 steps to perform the tests that allow to save time and reagents. The users indicated that the method is clean and safe with no risk of contamination. The reading is very easy with clear reactions. The reading was difficult for some samples presenting a large amount of clots. The average satisfaction score for ergonomics was 3.7/4.

