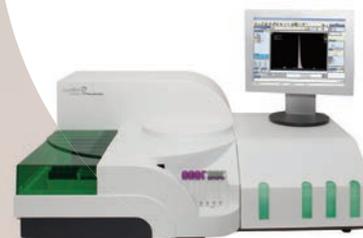


# Sebia Focus - N°15

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capillarys  
sebia flex piercing



## Capillarys 2 Flex Piercing: a shared instrument for several tests in a military hospital laboratory

**Doctor DELACOUR is a certified practitioner for the army; he is a biologist in the laboratory of HIA BEGIN Saint-Mandé, France.**

Dr DELACOUR, could you please present the Armies Instruction Hospital (HIA) of BEGIN and describe your activity?

The HIA Begin is one of three military hospitals close to Paris along with the HIA Percy and the Val de Grace Hospital. These three hospitals represent the military hospital platform of Ile-de-France (TDC IDF) in which we standardize certain activities. We actively participate of the public service health care by welcoming all patients within the coordinated health care route. Regarding the laboratory, we are seven biologists in the BEGIN hospital, which comprises 2 associate professors of the Army Health Service and five certified practitioners. We manage the entire activity of the laboratory of the HIA BEGIN which is divided into eight functional units: protein electrophoresis, immunotyping, HbA1c measurement and hemoglobin electrophoresis are integrated in the functional unit "specific proteins and hemoglobin". We carry approximately 2 000 protein electrophoresis per year, 270 immunotypings, 3 600 HbA1c assays and 680 hemoglobin electrophoresis.

Is SEBIA a historical partner for your laboratory? What tests do you use from SEBIA? On which system do you run them?

Indeed, we have known SEBIA for a long time.

Historically, we were doing protein electrophoresis and immunological characterization, at first in agarose gel initially on Hydrasys and then on CAPILLARYS 2 Flex Piercing. Regarding the hemoglobin disorders and the HbA1c measurement, we carry out the activity for the all of the military hospitals of Ile de France IDF. In March 2013, we started the hemoglobin electrophoresis activity using capillary technology and added the HbA1c assay in March 2014. Both tests were previously run by a HPLC technique.

To what extent is the versatility of the CAPILLARYS 2 Flex Piercing a major advantage to your organization? How do you manage your daily activity on this instrument?

The CAPILLARYS 2 Flex Piercing is actually a shared instrument in our laboratory. We provide the HbA1c measurement 5 days per week, Monday to Friday, usually in the morning. Hemoglobin electrophoresis is performed once a week on Monday and serum protein electrophoresis and immunotyping are run on Tuesday.

Usually, the change of technique is performed by the technician just before the lunch break. Having a multiparametric system has many benefits in terms of training and the grade of staff needed to run the process; only one interface has to be mastered for many activities. This contributes to optimizing our organization:



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*Laboratory of HIA Begin, Saint-Mandé France.*

one technician is dedicated to the activities of electrophoresis on the CAPILLARYS 2 Flex Piercing Monday and Tuesday, the other days of the week, the CAPILLARYS workstation is used for other work. We have a total of five technicians qualified for this instrument including a supervisor.

Recently you have implemented the HbA1c measurement on your CAPILLARYS 2 Flex Piercing. In your opinion, what distinguishes capillary electrophoresis from other conventional methods? What are the main advantages of this method compared to your previous method?

Capillary electrophoresis for HbA1c assay is now a popular technique, the growing number of peer groups that take part in the external quality controls, proves this. From my point of view, the main benefit of this technique lies primarily on the quality and the resolution of this technology. Indeed profiles are very clear, there is no noisy background, no additional peaks, the HbA1c measurement is accurate, and above, all the profiles are easy to interpret. In fact there are fewer criteria to check for validating a result compared to my previous HPLC technique. The friendly software via the curve mosaic and the color codes can easily discriminate a hemoglobin variant. Finally, the instrument CAPILLARYS 2 FLEX Piercing presents good working ergonomics.

Do you have more opportunities to alert the clinicians in case of a hemoglobin variant or an altered Hb A2? If so, is it appreciated by the prescribers?

The majority of the prescriptions for HbA1c measurement come from the endocrinology service. When a hemoglobin variant or an elevated Hb A2 or Hb F (> 5%) is fortuitously detected during an HbA1c assay, we check the patient history to determine if they are known. If it's not the case, we add a fructosamin assay and we initiate an abnormal hemoglobin investigation for hospitalized patients.

For outpatients, we mention via a suitable comment the abnormality and we suggest performing a hemoglobin electrophoresis. We have informed our clinicians of the technology switch; the strategy remains the same for us, considering the excellent correlation between the capillary electrophoresis and the HPLC technology. The innovation for us lies mainly on the possibility of indicating a suspicion of beta-thalassemia thanks to an alert on the Hb A2.

What is your strategy of investigating for hemoglobin variants?

Our requirements for hemoglobin disorders come from several services such as gynecology, maternity, the expert center of the seagoing personnel of the Percy hospital and also other clinical services in case of anemia, microcytosis or other clinical or biological signs. We use capillary electrophoresis as our first line screen and we use an HPLC technique for confirmation. We give results in case of S, C and E variants and beta-thalassemia. Profiles which show alpha-thalassemia or delta variants are also mentioned. For other rare variants, we send the samples for a molecular biology technique.

Finally, what is the major point for which you would recommend this organization to other laboratories?

The ability to run several tests on the CAPILLARYS 2 Flex Piercing allows for training to be simplified and empowers staff while optimizing the technical organization of the laboratory. Also, due to this, we plan to include this capillary electrophoresis activity in our scope of accreditation in 2016.