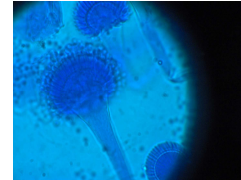




Aspergillus detection in healthcare establishments*

A.Trousseau teaching hospital, Paris



Aspergillus fumigatus®

Application

The monitoring of air contamination in healthcare establishments helps the prevention and the decrease of nosocomial infections. Airborne spores of pathogens microorganisms like *Aspergillus fumigatus* can be indeed responsible for severe diseases such as: the invasive aspergillosis. To get a reliable control, it has to be performed with a representative sample of the surrounding air and easily analysable by associated identification and measurement techniques.

Material

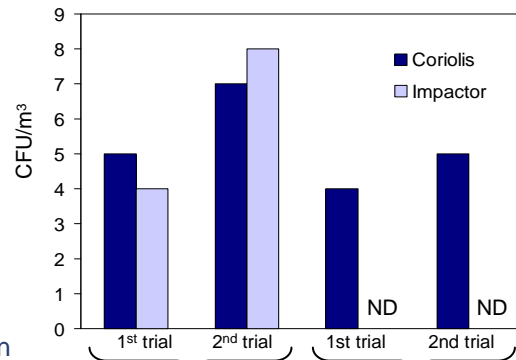
- Coriolis® + sterile cone
- Collection liquid: Braun Water + Triton-X 0.005%
- Membrane of filtration
- Petri dishes + Sabouraud medium

Protocol

- 1 m³ air sampling: 200 L/min during 5 minutes
- Sample filtration on membrane
- Filter deposit on Sabouraud agar plate
- Incubation 5 days at 37°C
- Identification by the Scotch® technique

Results

- Collection time: 2 times faster than impactor
- Sensible detection
- Better representivity



In low contaminated atmosphere: **Coriolis®** collection efficiency \geq **Traditional air sampler**

Intensive care internal corridor Intensive care external corridor
 ND = Non detectable

* « Contrôle de la contamination aéroportée à l'Hôpital : Comparaison d'un impacteur sur gélose et d'un biocollecteur en milieu liquide pour la détection d'*Aspergillus* ». H.Vu-Thien et al. HygièneS N°5, Vol.XVI, Déc.08



Conclusion

The cyclonic technology offers an **efficiency comparable to impaction** for *Aspergillus* collection. Thanks to a **representative** air sample, **sensitive** results can be obtained in a **shorter time**. Furthermore, the sample is compatible with a **PCR analysis** for a higher specificity and rapid result in a few hours.