



ASPERGILLUS DETECTION IN HEALTHCARE ESTABLISHMENTS*

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/ CONTEXT

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.

/ MATERIALS

- 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

/ CONCLUSION

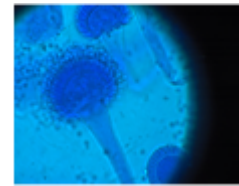
The cyclonic technology offers an **efficiency comparable to impaction** for *Aspergillus* collection. Thanks to a **representative** air sample, **sensitive** results can be obtained in a **shorter time**.

Furthermore, the sample is compatible with a **PCR analysis** for a higher specificity and rapid result in a few hours.

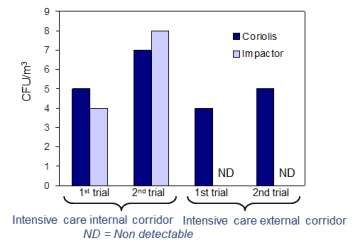
/ RESULTS

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

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



Aspergillus fumigatus®



* « 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