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Technology and Engineering  
Lisbon/ Portugal

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reducing airborne mold and  
bacteria in a 645.8 sq. ft. room.

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Ministério da Economia e Inovação  
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**EFFICIENCY OF AIRFREE P AIR CLEANER ON THE REDUCTION OF  
AIRBORNE MICROORGANISMS IN CLOSED ENVIRONMENT.**

**AIM**

The main goal of this study was to verify an air cleaner (Airfree P) efficiency on the reduction of bacteria and fungi suspended in the air in closed environments. The study intended to analyze the airborne microbial charge in room 1070 of the Industrial Microbiology Laboratory of INETI, during the functioning period (36 days) of the referred device.

**METHODOLOGY**

**Protocol**

The device was installed in room 1070 of the Industrial Microbiology Laboratory (LMI) after 11 days of regular utilization without any kind of cleaning or disinfection. That room has an approximate area of 60 m<sup>2</sup> (645.8 sq ft) and is characterized as being a Molecular Biology laboratory. The average frequency to this room was 7 to 9 people per day.

The test had 54 days duration. The device was turned on November 4<sup>th</sup> 2005 and turned off December 9<sup>th</sup> 2005. The air sample collections were made all Monday and Friday.

One air sampler (Merck's MAS-100) was used for air sampling having samples been taken in 3 different points in the room. From each point, 100 liters of air were collected. The count of the microorganism in suspension in the air was done in 9 cm (3.5 ") diameter Petri dishes.

