



### Objective

Test Airfree (U.S. Patent 5,874,050) efficiency in airborne fungi and bacteria reduction at one of Laboratório Campana Bacteriology Room

### Room Characteristics

Dimensions: 8 x 3,5 x 2,8 m equivalent to 78.4 m<sup>3</sup>  
Air conditioned, no windows, 1 air exhauster, 1 door continuously open, ceramic floor.  
4 Employees  
Equipment is distributed close to all walls leaving one corridor at the middle.

### Method

On April 14<sup>th</sup>, 1999 several samples were collected prior to Airfree installation in the room, providing first set of readings.  
In that same day, after first readings, 2 Airfree units were plugged in over refrigerators at around 1.70m height from the floor.  
For 15 days Airfree units were on. Second readings were obtained on April 29<sup>th</sup>, 1999.

Agar & Brain Heart Infusion plaques were used during the test both for fungi and bacteria development. Plaques exposed for 24 hours in several points in the room and further incubated for a period of 24 hours.



## Results

	<b>Fungi</b>	<b>Bacteria</b>
	In u.f.c.	In u.f.c.
Prior to Airfree April 14, 1999	16	6
After installation of Airfree <b>April 29, 1999</b>	<b>0</b>	<b>1</b>

<b>Reduction</b>	<b>100% for Fungi</b>	<b>83% for Bacteria</b>
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Above data and charts confirm drastic reduction in airborne fungi and bacteria

Countless clinical tests are handled in tested room where low contamination level is a must for reliable culture of biologic material.



In tested room in addition to the steady 4 technicians there is a floating population contributing to continuous contamination from other areas in the Laboratory, aggravated by the air condition. Regardless of those circumstances there was a drastic microorganism reduction.

The advantages of airborne microorganisms reduction for a clinical test laboratory are:

***Ambiance contamination reduction resulting in advantages for the preparation of sterilized plaques for urine culture and coproculture and a higher incidence of usable sterilized plaques in the manufacturing process.***