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## Test-Report

### **AIRFREE EFFICIENCY TEST IN REDUCING INDOOR MICROBIAL POLLUTION (FUNGI AND BACTERIA) AT "ARQUIVO NACIONAL TORRE DO TOMBO", PORTUGUESE NATIONAL ARCHIVE OLD DOCUMENTS.**

#### **AIMS**

Test **AIRFREE RL60** efficiency in reducing airborne fungi and bacteria in closed environment work places. Study will measure airborne microbiologic charge before and after the use during 31 days of **AIRFREE RL60**.

#### **METHODOLOGY**

##### Test conditions

One 72 m<sup>2</sup> room was picked up where all kinds of bibliographic material such as files, dossiers and books are treated prior to filing. Three **AIRFREE RL60** units were plugged in.

Duration of test: 36 days from January 13<sup>th</sup> to February 18<sup>th</sup>, 1999. Samples were collected in January 13 and 18 (prior to install **AIRFREE RL60** units), and February 8<sup>th</sup> and 18<sup>th</sup>, 1999.

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January 13<sup>th</sup> and 18<sup>th</sup> represent the effective airborne microbiologic charge before **AIRFREE RL60** units installation. Petri dishes (9 cm diameter) exposed for one hour were used for microorganism count.

**Culture media used for airborne microbiologic count.**

**Fungi:** Malt Extract Agar (MEA) Difco  
**Bacteria:** Nutrient Agar (NA) Oxoid.

**Conditions of incubation:**

**Fungi:** 25°C 5 to 7 days  
**Bacteria:** 30°C 3 days

The results were expressed in c.f.u. (colony forming units) per dish. Each value representing arithmetic average of 6 Petri dishes, with same culture media, utilizes in the same exposure to the environment.

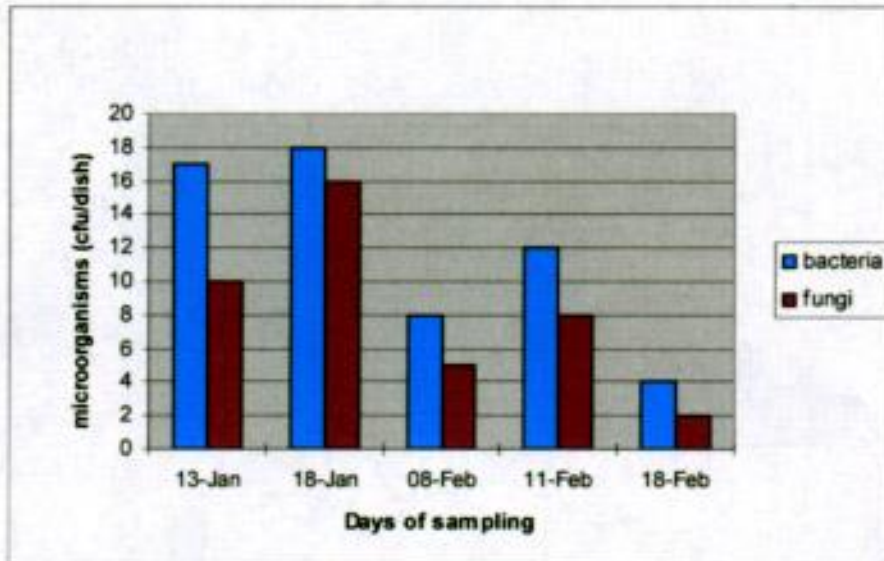
**RESULTS**

Fungi and bacteria results are shown in the chart of **Figure 1**.

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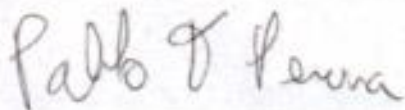


**FIGURE 1.** – Airfree effect on airborne microbiologic level (fungi and bacteria) level in Higienizing Room. Devices installed after January 18<sup>th</sup> sampling. Each point represents 6 count average.

Observing Figure 1 it can be seen that **AIRFREE RL60** reduced bacteria and fungi counts, showing its efficiency in reducing that type of airborne microorganisms in such type of room.

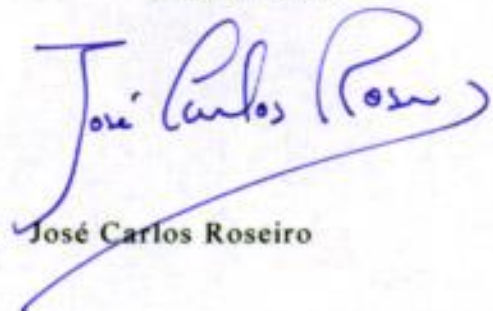
Lisbon, 26<sup>th</sup> February, 1999

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