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Test-Report

AIRFREE EFFICIENCY TEST IN REDUCING AIRBORNE MICROBIAL CHARGE (FUNGI AND BACTERIA) AT PORTUGUESE RADIO TV (RTP) AUDIOVISUAL ROOM.

AIM

Test **AIRFREE RL60** efficiency in reducing airborne fungi and bacteria in working places characterized as partially closed environments. Study compares airborne microbiologic charges in 2 rooms, before and after **AIRFREE RL60** installation. Study compares airborne microbial charges in 2 rooms before and after **AIRFREE RL60** installation.

METHODOLOGY

Test conditions

Test was performed in two rooms at RTP building in Lisbon. Two rooms were tested. Room A is an audiovisual file room, with approximately 70 m^2 where 5 **AIRFREE RL60** devices were installed. Room B is an audiovisual room filled with audio and video equipment, with approximately 20 m^2 where just one **AIRFREE RL60** device was installed.

A 43 day test was performed from May 7th to June 18th , 1999. Samples were taken in May 7th , 12th , June 1^{rt} , 8th , 15th and 18th . May 7th and 12th samples represent fungi and bacteria level prior to **AIRFREE RL60** installation.

AIRFREE RL60 effect period: May 13th to June 18th , 1999 – 37 days.

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Airborne microorganisms count was obtained through Petri dishes (9 cm diameter) exposure to the ambiance in rooms A and B for 30 minutes.

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

RESULTS

Expressed in c.f.u. (colony forming units) per dish. For room A, each value represents the arithmetic average count of eight dishes with same means of culture. Results expressed for room B are the arithmetic average of two samples.

Figure 1 and **2** show results for both rooms, respectively.

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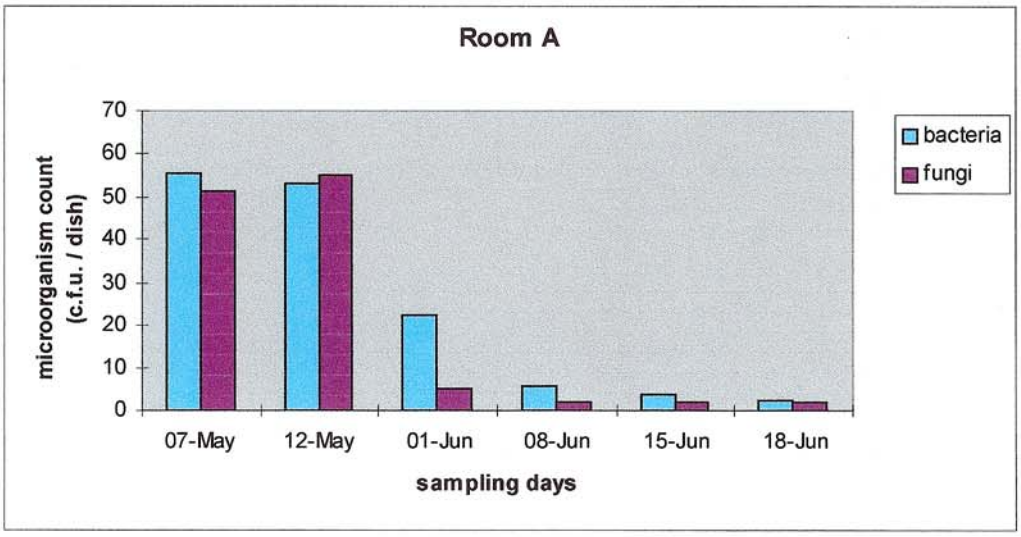

FIGURE 1. – Airfree RL60 effect in maintaining fungi and bacteria levels in Room A. Airfree devices were installed after May 12th samples were taken. Each point represents average of 8 readings.

Figure 1 show that **AIRFREE RL 60** effectiveness in reducing airborne fungi and bacteria. It is more effective for fungi when seeing reduction from May 12th to June 1st . From June 15th on airborne microorganisms were kept under 5 cfu/dish.

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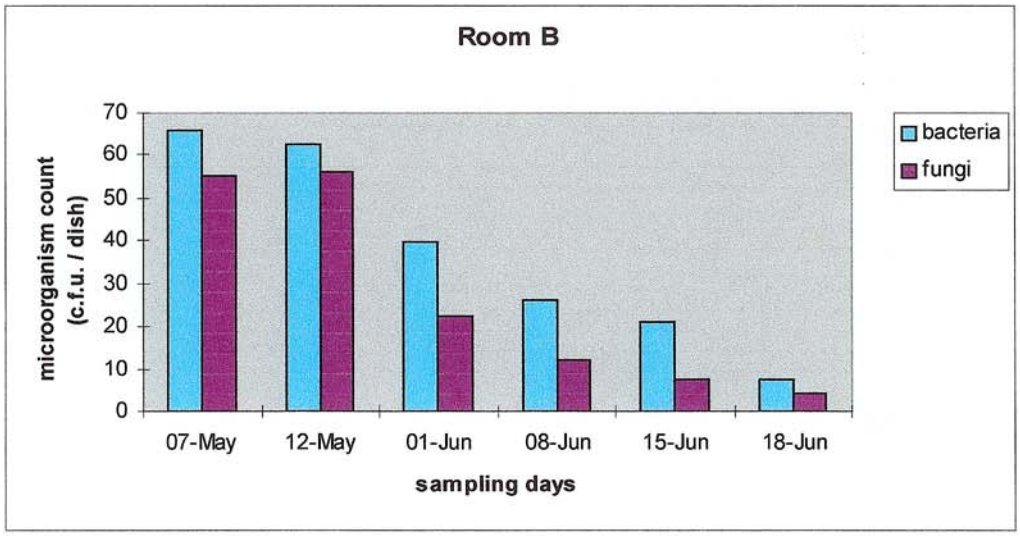

FIGURE 2. – Airfree RL60 effect in maintaining airborne fungi and bacteria in Room B. Airfree devices were intalled after May 12th samples were taken. Each point represents average of two readings.

Figure 1 show that **AIRFREE RL 60** reduced bacteria and fungi counts but it was less effective than in Room A. Reduction was more effective for fungi. It is noted continuous reduction in airborne microorganism level both fungi and bacteria, indicating final level was not reached.

Lisbon, 29th June, 1999

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