

AIRFREE TEST

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CLIENT: AIRFREE, LDA.

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Serviços no âmbito da qualidade do ar interior, nomeadamente avaliações conforme legislação aplicável.

1. OBJECTIVE

The main objective of the test is to evaluate the efficiency of Airfree's patented TSS ceramic core in destroying microorganisms.

2. METHODOLOGY

The concept of the test is to measure the apparatus' efficiency in destroying airborne microorganisms directly at the ceramic core air outlet employing the manufacturer's TSS – Thermodynamic Sterilization System. The Airfree unit provided by the manufacturer was opened allowing direct access to the ceramic core. An upside-down Petri dish was inserted in a sterilized paper funnel which was attached to the working ceramic core for 120 minutes.

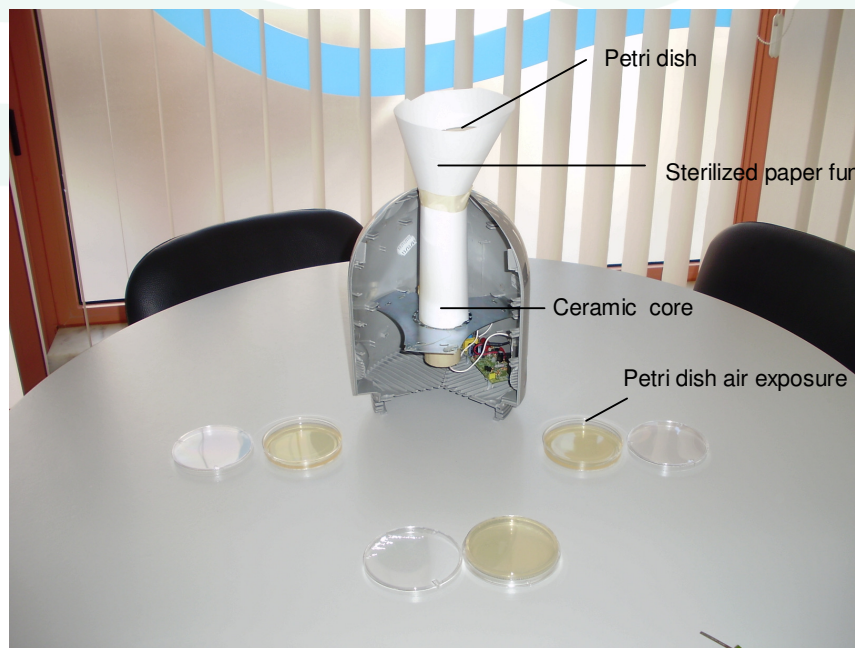


Fig.1- Apparatus

In order to perform the present study, the number of viable airborne bacteria was quantified in the room chosen by Ambientális, at Ramada, with the air sterilizer switched off. On June 18th two Petri dishes were exposed before the test start-up (Test 1), thereafter the apparatus was switched on (Test 2).

Tab.1- Equipment, incubation and sampling method

Parameter	Sampling method	Culture means	Incubation temperature/time
Total bacteria	Sedimentation	TSA (Tryptic Soy Agar)	36°C-2 days

Remarks: samples were duplicated. Result represents the arithmetic average of both readings.

3. RESULTS

3.1. MICROBIOLOGY

Tab.2- Total Bacteria in air

Test	Exposure time	Sampling date	Total bacteria (UFC/dish)
			Results
1 Air contamination in room before Airfree switched ON	2h	June 18, 2010	10
2 Air contamination measured at Airfree air outlet	2h	June 18, 2010	0

Remarks: Before the Airfree was switched on, air sampling was made nearby the apparatus air inlets. After the Airfree was switched on, the air sampling was taken at the ceramic core air outlet (inside the sterilized air paper funnel).

4. CONCLUSION

The performed test indicates a 100% reduction of airborne bacteria contamination, as described. We can therefore conclude that the TSS ceramic core was 100% efficient in destroying bacteria contamination.

Ramada, July 6 , 2010



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Translated by Airfree, Produtos Electrónicos Lda.