

# **HYSAFE AIR DEVICE IN LABORATORY AIR CLEANING PRELIMINARY STUDY**

Dr. Fatma ATEŞ ALKAN<sup>1</sup>, Res.Ass. Dr. Nural PASTACI<sup>1</sup>, Dr. Elvin PAZAR YILDIRIM<sup>2</sup>,  
Prof. Dr. Ömer KÜÇÜKBASMACI<sup>2</sup>, Prof. Dr. Bora BARUTÇU<sup>1</sup>

<sup>1</sup>Istanbul University, Cerrahpaşa Medical Faculty, Biophysics Department

<sup>2</sup>Istanbul University, Cerrahpaşa Medical Faculty, Microbiology Department

Prevention of airway contaminants is one of the most important steps in the medical laboratory. Many methods are used for this purpose, especially in some sensitive laboratories. While surface cleaning and various disinfection applications are used for this purpose, it is important to effectively clean the air in medical laboratories with filters or other methods.

Besides the filters used for air purification purposes, effective use of ultraviolet lamps, the size of the laboratory and the input / output methods are also important.

We aimed to try Hysafe Air, a new combined air purifier with carbon filter and ultraviolet lamp in a medium intensity laboratory.

Hysafe Air is an air cleaning device that can clean microorganisms and dust, insects and other similar contaminants that can cause contaminations.

## **Materials and Methods**

Four laboratories and rooms were selected for sampling, their names are given in table 1.

Air samples were taken from selected units with an air test omega air sampling device.

For all sampling procedures, 5% sheep blood agar is mounted on the device.

The sampling was done twice before the hysafe air device was switched on and after the air cleaner was turned on overnight.

5% sheep blood petri dishes taken were incubated at 35 ° C in the incubator.

Colony count was done after 24 hours. Colony counts are expressed in cfu / m<sup>3</sup>.

All possible bacterial, yeast and mold colonies were included in the colony counts.

## Findings

The number of air sampling microorganisms taken as a result of air cleaning processes at the beginning and during the night with the Hysafe air device of the laboratories of various volumes are given below, with the number of cfu / m<sup>3</sup>.

<b>Working areas</b>	<b>Start (cfu / m<sup>3</sup>)</b>	<b>End (cfu / m<sup>3</sup>)</b>
Cell culture 2nd Chamber	16	1
Blood gas chamber	7	0
Hemoreology Lab.	3	1
Patch-Clamp room	35	3

## Results

According to the first findings we obtained, the hysafe air cleaning device effectively cleans the air of the laboratory environments.

It is clear that more efficient cleaning can be achieved by extending the air cleaning times in some units.