

**FILTRATION EFFICENCY STUDY OF
METAL FILTERS AND FACE MASKS**

CLIENT:

FINPROJECT S.p.a.

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1. OBJECTIVE

The purpose of this test is evaluate the filtration efficiency of circular metal filters (FAG Plus) and face masks. The experiment has been conducted in a closed room

2. TOOLS

For the test it has been used a microbiological air sampler “SURFACE AIR SISTEM (SAS)” in order to measure the *Staphylococcus aureus* ATCC 6538

3. FUNCTION OF THE FILTER

The Fag Plus filter is made from a special anodised aluminium mesh, which is subsequently treated to chemically bind the oxide surface molecules to innovative compounds with silver ions that alter the structure, enabling the surface to trap the phospholipid membranes of the bacterial cells. Thanks to the strong bond with the aluminium oxide, this treatment remains effective over time and is highly effective against pathogens.



Fig.1: Filtro testato (filtro 001).



Fig.2: Mascherina testata (filtro 002).

Tab.1: First trial results with aerosol aspiration 0,05 m³

Sample	(UFC/m3) Count	Abatement %	Abatement Log
Starting point	28000	/	/
Filter 001	1240	95,6	1,35
Filter 002	60	99,8	2,67

Tab.2: Second trial results with aerosol aspiration 0,1 m³

Campione	Conta (UFC/m3)	Abbattimento %	Abbattimento Log
Starting point	59000	/	/
Filter 001	2440	95,9	1,38
Filter 002	160	99,7	2,57

4. CONCLUSIONS

The Filter and the facemask resulted to be able to reduce the bacterial counts by a range between 95% and 99%.

Il Technical Director

Dr. Matteo Sarzi Amade'

MANTOVA CHEMICAL DISTRICT A-218

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Sarzi Amade' Matteo	ArubaPEC S.p.a. NG CA 3	TINIT-SRZMTT76H22 A470F	IT	bject: C=IT	18996281	2021 Oct 8 23:59:59	2018 Oct 9 00:00:00 (UTC Time)