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Testing the antibacterial efficacy of the Ding-Filter

Sender:

Test materials: -1- respiratory filter without copper coating
-2- respiratory filter with copper coating -Ding-Filter-
Test organisms: Escherichia coli (gram-negative bacterium)
Staphylococcus aureus (gram-positive bacterium)

Brief summary

Experiment 1

Inoculation of the test materials with a defined bacterial count of each test organism; determination of the bacterial count after a contact time of five minutes.

Bacterial count: 10^2 CFU + bacterial count: 10^4 CFU

Summary:

On test material 2 (with copper coating -Filter-), no bacteria of either bacterial strain were able to be detected after a contact time of 5 minutes.

Material 1 (without copper) showed **no antimicrobial effect**.

Experiment 2

Inoculation of culture media with a defined bacterial count (10^6 CFU/mL). Application onto 1 x 1 cm pieces of the respective test material. Defined contact times. Subsequent removal of the test materials and incubation of the culture media. Evaluation of the inhibitory effect / bacteria-free areola of the applied material.

Summary:

At this high level of inoculation, a contact time of at least 15 minutes was required for test material 2 -Ding-Filter- for complete inhibition; a bacteria-free areola for the test area was achieved after 30 minutes.

For test material 1 (without copper) there was **no reduction** to the bacterial count after 120 minutes.

Best regards

Prof. Dr. Dr. Dr. habil. Alexander Prange