

Memorandum

To
5.1.2e
iGC international

From
5.1.2e

Copy to
5.1.2e

Subject
Comparative test filter efficacy of mouth masks material

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Date
1 May 2020

Our reference
MSB-2020-100332200-MHe

At the request iGC international TNO has assessed the barrier properties of mouth masks material applied to an aerosol of nebulised saline (0.02% NaCl).

Method

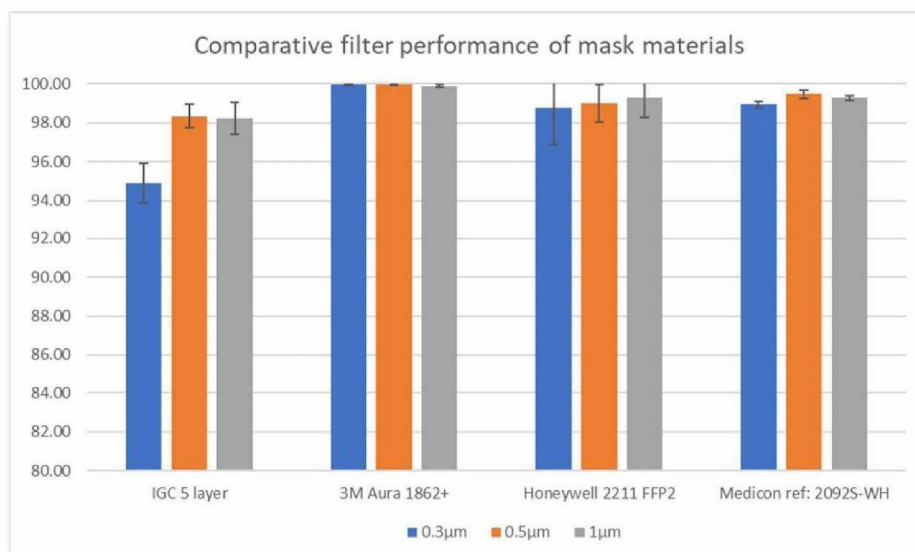
TNO has set up a test system in which mouth masks can be tested comparatively for filtering functionality in a conditioned cabinet of 1 m³. In this conditioned space, nebulised particles are measured after suction at 28L / min through 2 channels: 1) containing the mouth mask material and 2) reference without filter. Subsequently, the particles of 0.3 micro meters (µm), 0.5 µm and 1 µm in each channel are counted by individual laser particle counters (Lighthouse Solair). The better the mouth mask material functions, the more particles are retained. The difference from the reference (without filter) can then be expressed in the percentage that is blocked by the filter.

Results

The filter efficiency results of the FFP2 mouth masks IGC 5 layer from iGC international have been compared with FFP2 reference mouth masks 3M Aura 1862+ FFP2, Honeywell 2211 FFP2 and Medicon ref: 20925-WH. The results are shown in Figure 1.

Conclusion

In conclusion, the results show that the IGC 5 layer masks from iGC perform nearly close to the FFP2 reference masks 3M Aura 1862+ FFP2, Honeywell 2211 FFP2 and Medicon ref: 20925-WH in terms of permeability of the filter material.



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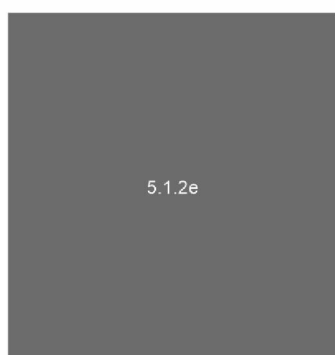
Figure 1. Filter efficiency of different types of mouth masks.

The results related to the FFP2 types of masks only give an indication of the quality of the filter material compared to the available reference material. TNO has neither examined nor tested the fit according to NEN EN standard 149; 2001 + A1: 2009. The result of the measurement cannot be used for certification purposes.

If you have any questions regarding the results of the test, please contact the undersigned.

We hope to have informed you sufficiently.

Sincerely,



Microbiology & Systems Biology