

Supplementary figures belonging to:

“Efficacy assessment of newly-designed filtering facemasks during the SARS-CoV-2 pandemic”

Fig. S1. Experimental setup of the NaCl particle penetration test

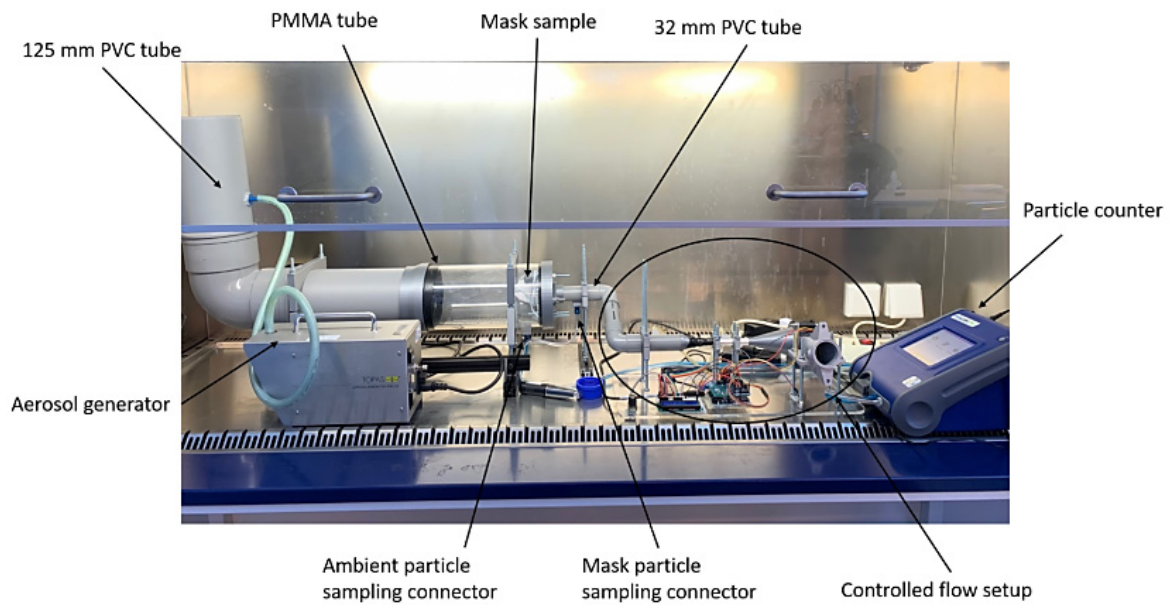


Fig. S2 The sample holder



Fig S3. Experimental setup of the breathing resistance test

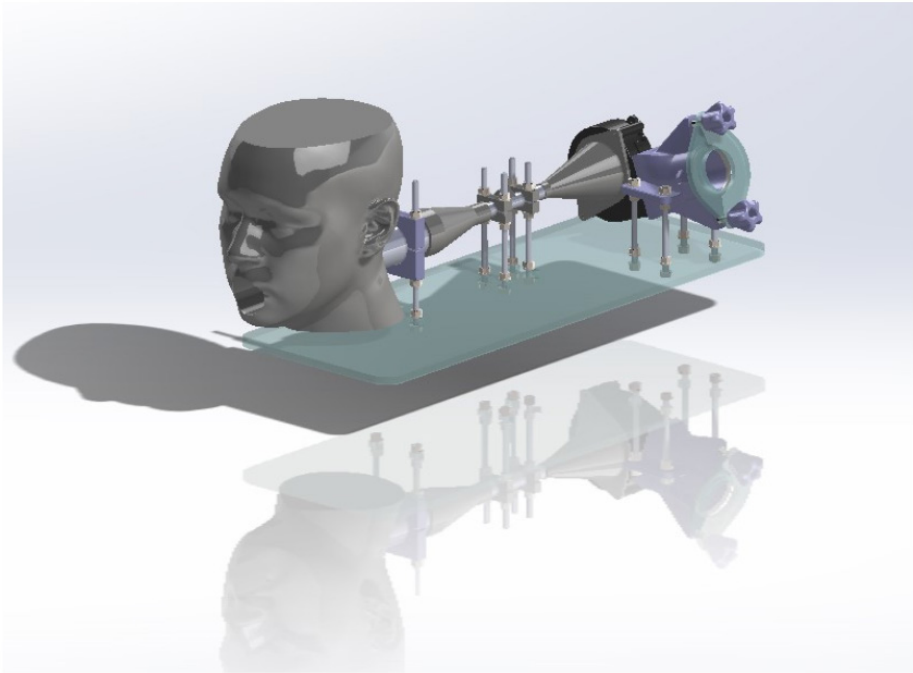


Fig. S4. Experimental setup of the virus filtration test

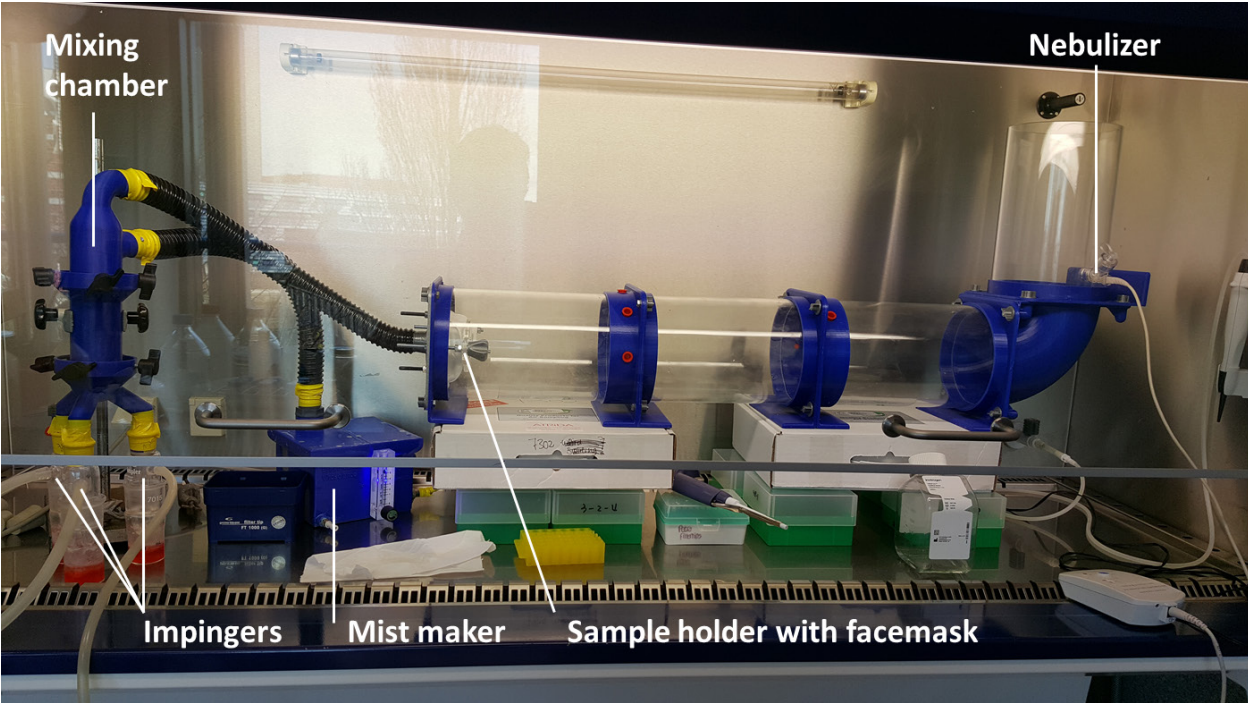


Fig. S5. NaCl penetration in mask Reinier-0.1 measured by Proquaris according to NEN149

Sample code ProQares	Description by customer
20 PQA 0681	Filtering facepiece; masker; wit; trapeze vorm (extra tape op zij-naad)

Sample code	Penetration Sodium chloride (%)	Total loading (mg)
20 PQA 0681 – 1	2.4	30
20 PQA 0681 – 2	2.4	30
20 PQA 0681 – 3	2.5	120
Requirement FFP1	<20%	
Requirement FFP2	<6.0%	
Requirement FFP3	<1.0%	

The requirement for the Sodium chloride efficiency is met for claiming FFP2 classification, this is the material classification in the as received state only.

Overall conclusion: the filtering face piece meet the requirements for the particle efficiency regarding Sodium chloride in the as received state, to be classified as FFP2 according to requirements stated by EN149, it does not classify the system as FFP2 (several additional experiments are needed).

Fig. S6. NaCl penetration in mask DSM-1.0 measured by Proquaris according to NEN149

Sample code ProQares	Description by customer
20 PQA 0682	Filtering facepiece; masker; blauw; trapeze vorm

Sample code	Penetration Sodium chloride (%)	Total loading (mg)
20 PQA 0682 – 1	1.1	30
20 PQA 0682 – 2	1.5	30
20 PQA 0682 – 3	0.7	120
Requirement FFP1	<20%	
Requirement FFP2	<6.0%	
Requirement FFP3	<1.0%	

The requirement for the Sodium chloride efficiency is met for claiming FFP2 classification, this is the material classification in the as received state only.

Overall conclusion: the filtering face piece meet the requirements for the particle efficiency regarding Sodium chloride in the as received state, to be classified as FFP2 according to requirements stated by EN149, it does not classify the system as FFP2 (several additional experiments are needed).