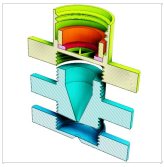

Version 4

Sep 11, 2020

covid 19 indirect detection thru rise of 100nm filter fluid resistance V.4

Ladislav Nevery

In Development dx.doi.org/10.17504/protocols.io.bmazk2f6

Coronavirus Method Development Community | XPRIZE Rapid Covid Testing | 1 more workspace

Ladislav Nevery

ABSTRACT

By passing saliva sample thru 150nm filter to remove particles larger than avg 125nm sized covid 19 virus particles and concentrating resulting fluid to very small 1 mm2 area of 110nm filter. Pores in this small area should be clogged up fast raising filter air/fluid resistance. Due to high virus density 5.2 log10 ml saliva of infected person should clogg filter much faster than healthy person. Test is setup in such way that we let gravity pass 2l of fluid thru clogged filter and record rate of drops from its bottom as audio on mobile phone placed bellow glass cup. rate of drops thru clogged filter should be measurably slower than clean filter.

THIS PROTOCOL ACCOMPANIES THE FOLLOWING PUBLICATION

dx.doi.org/10.17504/protocols.io.bkznkx5e

ATTACHMENTS

DropRateV2.zip

DOI

dx.doi.org/10.17504/protocols.io.bmazk2f6

PROTOCOL CITATION

Ladislav Nevery 2020. covid 19 indirect detection thru rise of 100nm filter fluid resistance. **protocols.io** https://dx.doi.org/10.17504/protocols.io.bmazk2f6
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PROTOCOL INTEGER ID

42041

MATERIALS

NAME	CATALOG #	VENDOR

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NAME	CATALOG #	VENDOR
pragopor 9		
pragopor 10		
120nm nanoparticles		
25mm x2 rubber gasket		

STEPS MATERIALS

NAME	CATALOG #	VENDOR
3d print filament 8m		
pragopor 10		pragochema
2l soda bottle		
glass cup		
mobile phone		
120nm nanoparticles		
pragopor 9		
25mm x2 rubber gasket		

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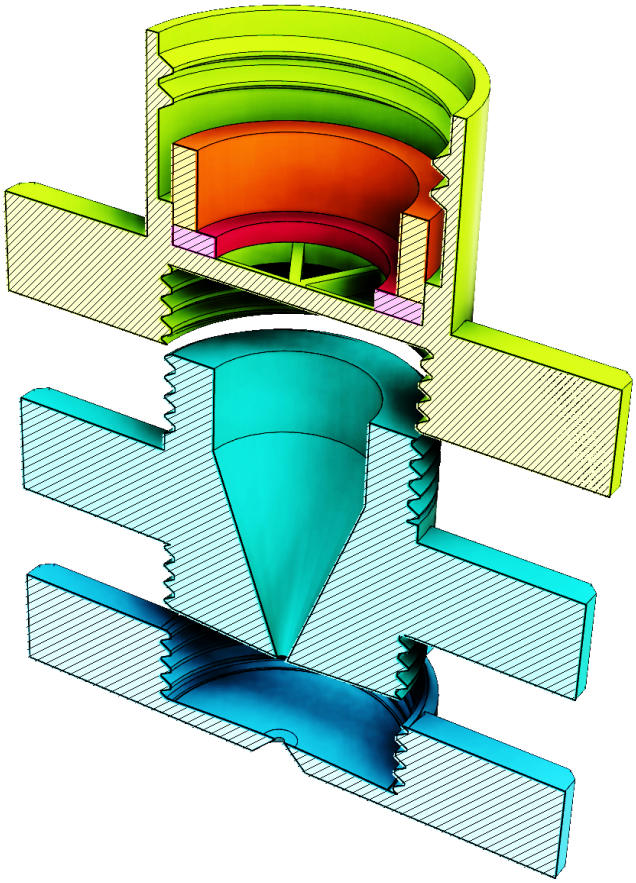

3d print all required parts

3d print filament 8m

2 place 25mm ideally 110nm pc or nylon membrane filter between blue parts. I used what I had

pragopor 10
by pragochema
View

0.24eur piece

3 place 25mm ideally 150nm membrane filter in green saliva holder bellow red rubber gasket. I used what I had

pragopor 9

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25mm x2 rubber gasket

0.24eur piece

4 .attach empty 2L soda bottle and squeze until all saliva passes thru both filters

2l soda bottle

5 remove green part remove red parts and filter. clean green part

6 fill and reinstall bottle with 2l of clean fluid

7 place whole assembly with bottle on top over any glass cup capable of holding blue part

glass cup

. place mobile phone bellow glass cup and start audio recording to count and record sounds of drops.

mobile phone

8 stop audio recording. fill sample holder in step 4 with

120nm nanoparticles

fludid containin 120nm test nanoparticles in concentration resembling covid19 as
5.2log10ml and repeat whole process once more with new filters and clean parts **go to step #2**

9 compare distance between drop sounds in all recordings.

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drop frequency with 120nm nanoparticle clogged filter should be measurably different

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