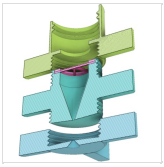


Version 2

Sep 11, 2020

covid 19 indirect detection thru rise of 100nm filter fluid resistance V.2

Ladislav Nevery

In Development dx.doi.org/10.17504/protocols.io.bmajk2cn

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

DropRate.zip

DOI

dx.doi.org/10.17504/protocols.io.bmajk2cn

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.bmajk2cn
Version created by Ladislav Nevery

MANUSCRIPT CITATION please remember to cite the following publication along with this protocol

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

CREATED

Sep 11, 2020

LAST MODIFIED

Sep 11, 2020

PROTOCOL INTEGER ID

42027

MATERIALS

NAME	CATALOG #	VENDOR

NAME	CATALOG #	VENDOR
pragopor 9		
pragopor 10		
120nm nanoparticles		

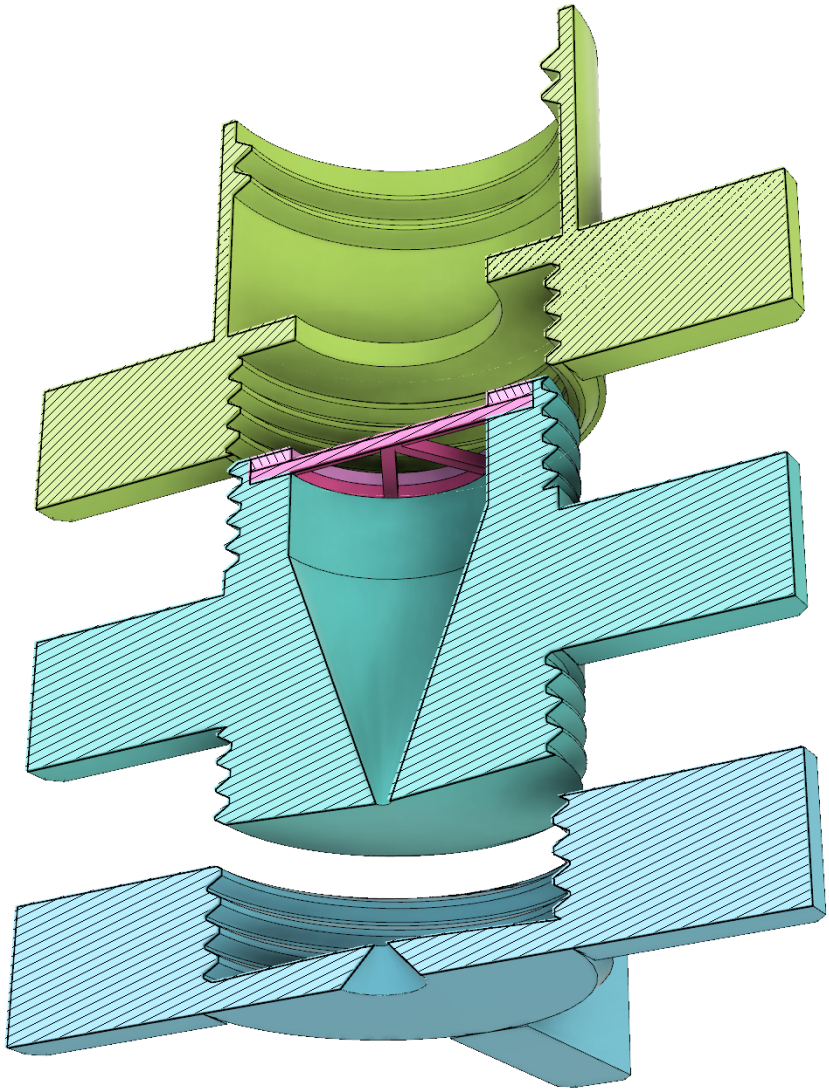
STEPS MATERIALS

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

DISCLAIMER:

Citation: Ladislav Nevery (09/11/2020). covid 19 indirect detection thru rise of 100nm filter fluid resistance. https://dx.doi.org/10.17504/protocols.io.bmajk2cn

1



3d print all required parts

3d print filament 8m

2 place 24mm ideally 110nm pc or nylon membrane filter between blue parts. I used what I had

pragopor 10
by pragochema
View

0.24eur piece

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3 place 34mm ideally 150nm membrane filter between red parts. I used what I had

pragopor 9

0.24eur piece

4 install green saliva holder

5 .attach

2l soda bottle

and squeze until all fluid passes thru both filters

6 remove 2l bottle remove red parts including filter.clean

7 fill 2l with clean fluid and reinstal it.

8 place whole assembly over glass cup

glass cup

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

mobile phone

9 fill sample holder in step 4 with fludid with

120nm nanoparticles

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in concentration resembling covid19 as
5.2log10ml and repeat whole process once more

10 compare three recordings.

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

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