To: 5.1.2e)[5.1.2e @umcutrecht.nl]; 5.1.2e)[5.1.2e @umcutrecht.nl]; 5.1.2e 5.1.2e [5.1.2e @erasmusmc.nl]; 5.1.2e [5.1.2e @rivm.nl]; 5.1.2e [5.1.2e @minvws.nl]; 5.1.2e '[5.1.2e @rotterdam.nl]; 5.1.2e '[5.1.2e @rotterdam.nl]; 5.1.2e '[5.1.2e @ggdhvb.nl]; 5.1.2e [5.1.2e @rivm.nl]; 5.1.2e . (5.1.2e)[5.1.2e @umcutrecht.nl]; 5.1.2e [5.1.2e @rivm.nl]; 5.1.2e (5.1.2e)[5.1.2e @umcutrecht.nl]; 5.1.2e '[5.1.2e @amphia.nl]; 5.1.2e 5.1.2e [5.1.2e @nmsba.com]
From: 5.1.2e
Sent: Mon 11/15/2021 2:41:15 PM
Subject: RE: saliva test kit and IFU_analytical results
Received: Mon 11/15/2021 2:42:12 PM
analytical evaluation_Nov 2021.xlsx
Verwachte_resultaten_LEQA1_Antigeen sneltesten_final_2.pdf

Dear All,

Attached you will find the results of a quick analytical testing we have done with an EQA panel from the RIVM using the nasal and the saliva test.
The results are surprisingly good which left us with 2 things we could think of:

- The test is good but not suitable for saliva sample specifically. The other test we have used had a specific buffer composition, different from what you use for NP.
- The EQA panel is from before delta variant so could be that however it is less likely as the nasal test performed similarly. We can still perform an analytical testing on the delta variant but I won't have time to do that before December.

5.1.2e will join the meeting tomorrow, I have unfortunately other arrangements.

Best wishes,
5.1.2e

Yours sincerely,

5.1.2e 5.1.2e

5.1.2e

Erasmus MC
University Medical Center Rotterdam

P.O. Box 2040, 3000 CA Rotterdam, The Netherlands, internal postal address Doctor Molewaterplein 40, 3015 GD Rotterdam

Visiting address: 5.1.2e Dr.Molewaterplein 40, 3015 GD Rotterdam, The Netherlands

Email 5.1.2e@erasmusmc.nl | Telephone 5.1.2e

www.erasmusmc.nl

From: 5.1.2e) < 5.1.2e @umcutrecht.nl>
Sent: 05 November 2021 10:57
To: 5.1.2e) < 5.1.2e @umcutrecht.nl>; 5.1.2e < 5.1.2e @erasmusmc.nl>; 5.1.2e < 5.1.2e @erasmusmc.nl>; 5.1.2e < 5.1.2e @rivm.nl>; 5.1.2e < 5.1.2e @minvws.nl>; 5.1.2e < 5.1.2e @rotterdam.nl>; 5.1.2e 5.1.2e @rotterdam.nl> 5.1.2e < 5.1.2e @ggdhvb.nl>; 5.1.2e < 5.1.2e @rivm.nl>; 5.1.2e) < 5.1.2e @umcutrecht.nl>; 5.1.2e < 5.1.2e @rivm.nl>; 5.1.2e) < 5.1.2e @umcutrecht.nl> 5.1.2e < 5.1.2e @amphia.nl>
Subject: Re: saliva test kit and IFU

Hi all,

I just want to inform you that 5.1.2e will send 50 tests each to 5.1.2e today.

Best, 5.1.2e

Van: " 5.1.2e)" < 5.1.2e @umcutrecht.nl>
Datum: donderdag 4 november 2021 om 14:09
Aan: " 5.1.2e)" < 5.1.2e @umcutrecht.nl>, 5.1.2e < 5.1.2e @erasmusmc.nl>, 5.1.2e 5.1.2e @erasmusmc.nl> 5.1.2e < 5.1.2e @rivm.nl>, 5.1.2e < 5.1.2e @minvws.nl>, 5.1.2e < 5.1.2e @rotterdam.nl>, 5.1.2e < 5.1.2e @rotterdam.nl>, 5.1.2e < 5.1.2e @ggdhvb.nl>, 5.1.2e < 5.1.2e @rivm.nl>, " 5.1.2e . (5.1.2e)" < 5.1.2e @umcutrecht.nl>, 5.1.2e < 5.1.2e @rivm.nl>, " 5.1.2e)" < 5.1.2e @umcutrecht.nl> 5.1.2e 5.1.2e @amphia.nl>
Onderwerp: Re: saliva test kit and IFU

I just asked 5.1.2e whether there are any leftover kits for both tests used in the study. Will get back to you on this.

Best, 5.1.2e

5.1.2e

5.1.2e Julius Center for Health Sciences and Primary Care | The Healthcare Innovation Center (THINC) | Cochrane Netherlands | University Medical Center Utrecht | 5.1.2e P.O. Box 85500 | 3508 GA UTRECHT 5.1.2e | www.umcutrecht.nl 5.1.2e

--

Van: " 5.1.2e)" < 5.1.2e @umcutrecht.nl>
Datum: donderdag 4 november 2021 om 14:00
Aan: 5.1.2e < 5.1.2e @erasmusmc.nl> 5.1.2e < 5.1.2e @erasmusmc.nl>, 5.1.2e < 5.1.2e @rivm.nl>, 5.1.2e < 5.1.2e @minvws.nl>, 5.1.2e < 5.1.2e @rotterdam.nl>, 5.1.2e < 5.1.2e @rotterdam.nl>, 5.1.2e < 5.1.2e @ggdhvb.nl>,

" 5.1.2e)" < 5.1.2e @umcutrecht.nl>, 5.1.2e < 5.1.2e @rivm.nl>, " 5.1.2e .
(5.1.2e)" < 5.1.2e @umcutrecht.nl>, 5.1.2e < 5.1.2e @rivm.nl>, " 5.1.2e)"
< 5.1.2e @umcutrecht.nl>; 5.1.2e < 5.1.2e @amphia.nl>
Onderwerp: RE: saliva test kit and IFU

I Agree

Van: 5.1.2e < 5.1.2e @erasmusmc.nl>
Verzonden: donderdag 4 november 2021 13:41
Aan 5.1.2e < 5.1.2e @erasmusmc.nl>; 5.1.2e < 5.1.2e @rivm.nl>; 5.1.2e
< 5.1.2e @minvws.nl>; 5.1.2e ' < 5.1.2e @rotterdam.nl> 5.1.2e < 5.1.2e @rotterdam.nl>; 5.1.2e
5.1.2e < 5.1.2e @ggdhvb.nl>; 5.1.2e) < 5.1.2e @umcutrecht.nl>; 5.1.2e)
< 5.1.2e @umcutrecht.nl>; 5.1.2e < 5.1.2e @rivm.nl>; 5.1.2e)
< 5.1.2e @umcutrecht.nl>; 5.1.2e < 5.1.2e @rivm.nl>; 5.1.2e)
< 5.1.2e @umcutrecht.nl>; 5.1.2e 5.1.2e @amphia.nl>
Onderwerp: RE: saliva test kit and IFU

Yes, would do both

So in principle 3 RDTs: Saliva vs Nose vs NPS

Were we expect Nose and NPS to have the same sensitivity (same manufacturer and basically identical teststrip)

R

Best regards,

5.1.2e 5.1.2e
5.1.2e
5.1.2e
5.1.2e

Erasmus MC
University Medical Center Rotterdam

P.O. Box 2040, 3000 CA Rotterdam, The Netherlands, internal postal address Wytemaweg 80, 3015 CN

Visiting address 5.1.2e Dr.Molewaterplein 40, 3015 GD Rotterdam, The Netherlands

Email 5.1.2e @erasmusmc.nl | Telephone 5.1.2e Telephone 5.1.2e

www.erasmusmc.nl

From 5.1.2e 5.1.2e @erasmusmc.nl>
Sent: donderdag 4 november 2021 13:26
To: 5.1.2e < 5.1.2e @rivm.nl>; 5.1.2e < 5.1.2e @minvws.nl>; 5.1.2e < 5.1.2e @rotterdam.nl>; 5.1.2e < 5.1.2e @rotterdam.nl>; 5.1.2e < 5.1.2e @ggdhvb.nl>; 5.1.2e (5.1.2e)' < 5.1.2e @umcutrecht.nl>; 5.1.2e < 5.1.2e @erasmusmc.nl>; 5.1.2e)' < 5.1.2e @umcutrecht.nl>; 5.1.2e < 5.1.2e @rivm.nl>; 5.1.2e)' < 5.1.2e @umcutrecht.nl>; 5.1.2e < 5.1.2e @rivm.nl>; 5.1.2e)' < 5.1.2e @umcutrecht.nl>; 5.1.2e < 5.1.2e @amphia.nl>
Subject: saliva test kit and IFU

Dear All,

I'm trying to arrange to test the analytical performance of the saliva test and for that I would need 1 box of test sent to Erasmus and also in advance if someone could send me the IFU of the test for volume planning purposes.
Not sure whether the nose test was evaluated before but might be a good idea if I did it parallel obviously this depends whether we have enough material.

Thank you,
5.1.2e

Yours sincerely,

5.1.2e 5.1.2e
5.1.2e
5.1.2e

P.O. Box 2040, 3000 CA Rotterdam, The Netherlands, internal postal address Doctor Molewaterplein 40, 3015 GD Rotterdam

Visiting address: 5.1.2e Dr.Molewaterplein 40, 3015 GD Rotterdam, The Netherlands

Email 5.1.2e@erasmusmc.nl | Telephone 5.1.2e

www.erasmusmc.nl

From: 5.1.2e < 5.1.2e @rivm.nl>
Sent: 02 November 2021 17:56
To: 5.1.2e < 5.1.2e @minvws.nl>; 5.1.2e < 5.1.2e @rotterdam.nl>; 5.1.2e < 5.1.2e @rotterdam.nl>; 5.1.2e < 5.1.2e @ggdhvb.nl>; 5.1.2e)' < 5.1.2e @umcutrecht.nl>; 5.1.2e < 5.1.2e @erasmusmc.nl>; 5.1.2e)' < 5.1.2e @umcutrecht.nl>; 5.1.2e < 5.1.2e @rivm.nl>; 5.1.2e)' < 5.1.2e @umcutrecht.nl>; 5.1.2e < 5.1.2e @rivm.nl>; 5.1.2e)' < 5.1.2e @umcutrecht.nl>; 5.1.2e

< 5.1.2e @amphia.nl> 5.1.2e 5.1.2e @erasmusmc.nl>
Subject: nog een stukje uit de discussie

Based on our results, we have to strongly disagree with the widespread policy that all CE-certified antigen tests have the same validity, and this is especially true of the tests that have not been independently evaluated. All tests evaluated in our study were CE-certified and their reported sensitivities were over 89%, most of them over 95%, thus allegedly meeting the criteria set by ECDC and WHO. Only the NPS test met the criteria with its 91.2% sensitivity, 98.5% specificity, 96.2% PPV and 96.6% NPV after correction for the presence of viable virus, which is (i) in accordance with the declared values and (ii) comparable to the better performing NPS RATs evaluated using the same method; see our previous work comparing five NPS tests [8]. In that study, some tests provided excellent results (up to >96% sensitivity when compared with PCR and corrected for viability), while others failed to meet the criteria. This variability within the same sampling design also means that well-performing tests from saliva or ANT can exist; in our study, however, none of such tests met the WHO criteria when used in a high capacity setting. It is also worth noting that one of the saliva-based tests that performed poorly in this study is produced by the same manufacturer as an NPS test performing very well in the previous study [8]. This only further supports the notion that poor performance of saliva-based tests is rather associated with the type of the sample than with a poor manufacturing process.

From: 5.1.2e
Sent: dinsdag 2 november 2021 17:49
To: 5.1.5 < 5.1.2e @umcutrecht.nl> 5.1.2e 5.1.2e @ggdwestbrabant.nl>; 5.1.2e < 5.1.2e @minvws.nl> 5.1.2e 5.1.2e @rotterdam.nl>; 5.1.2e 5.1.2e @ggdwestbrabant.nl>; 5.1.2e 5.1.2e @ggdwestbrabant.nl>; 5.1.2e) < 5.1.2e @umcutrecht.nl> 5.1.2e < 5.1.2e @rotterdam.nl>; 5.1.2e < 5.1.2e @gmail.com>; 5.1.2e 5.1.2e @minvws.nl>; 5.1.2e 5.1.2e < 5.1.2e @minvws.nl>; 5.1.2e < 5.1.2e @ggdhvb.nl>; 5.1.2e) < 5.1.2e @umcutrecht.nl>; 5.1.2e < 5.1.2e @erasmusmc.nl>; 5.1.2e . 5.1.2e < 5.1.2e @umcutrecht.nl>; 5.1.2e) < 5.1.2e @umcutrecht.nl>; 5.1.2e < 5.1.2e @rivm.nl>; 5.1.2e) < 5.1.2e @umcutrecht.nl>; 5.1.2e < 5.1.2e @rivm.nl>; 5.1.2e) < 5.1.2e @umcutrecht.nl> 5.1.2e 5.1.2e @amphia.nl> 5.1.2e < 5.1.2e @erasmusmc.nl>
Subject: Paper performance saliva antigen tests

Hoi,

Deze paper vond ik waar 4 verschillende saliva antigen tests zijn meegenomen.
https://www.mdpi.com/2075-4418/11/9/1567/htm

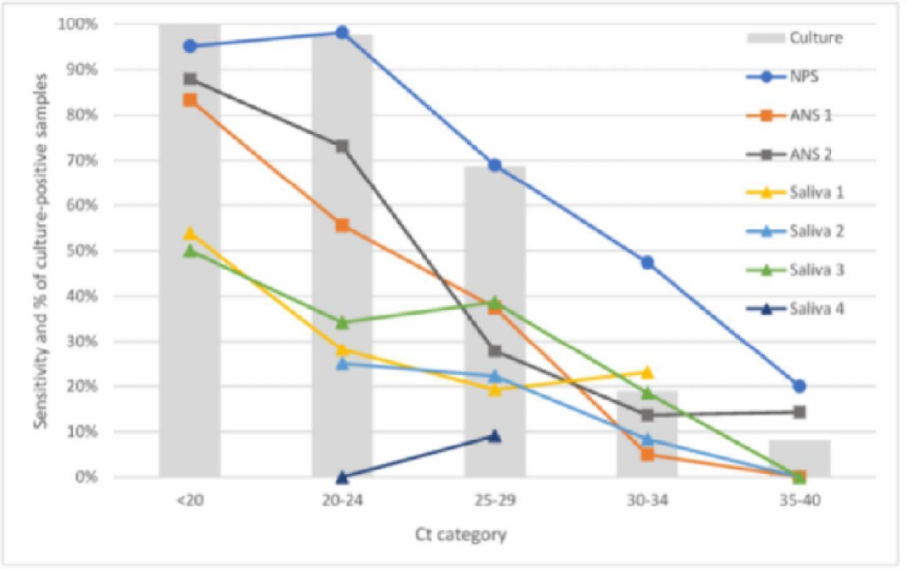
De study group:

The tests were performed in a setting of a high-capacity COVID testing center during the outbreak in February and March 2021 in Karvina (Czech Republic). All patients coming for the PCR test for SARS-CoV-2 were offered participation in the study. The inclusion criteria were: (i) asymptomatic patients with known contact with a SARS-CoV-2-positive patient or (ii) mildly symptomatic patients with symptoms consistent with COVID-19, as well as (iii) agreement with participation and (iv) signing an informed consent form. In addition, there were exclusion criteria for saliva-based tests, namely eating, drinking, smoking or chewing in the last 10 min to 2 h prior to saliva sampling (see more in the section on antigen testing).

In patients participating in the study, a nasopharyngeal swab was taken by trained medical personnel and placed into 2 mL of the transport medium (D-MEM, 0.5% bovine serum albumin) for qPCR and, if needed, virus culture. The medium was immediately put into a refrigerator operating at 2–4 °C. Sampling for the RAT (always one RAT per patient) was performed in accordance with manufacturers' instructions; for RATs utilizing ANS or NPS, these swabs were taken by trained personnel from the other nostril than the one for NPS for qPCR, and saliva tests were performed using self-sampling. The antigen test was performed immediately on site, and samples for qPCR were, still cooled, transported to the Public Health Institute Ostrava for analysis and analyzed within 24 h. The PCR sample was also used for viability testing on CV-1 cells (see below in the qPCR and virus culture section). If the cell culture could not be started within 24 h, the samples were frozen at −80 °C and thawed immediately before testing.

Results:

Figure 1. Sensitivities of individual tests calculated relative to qPCR as the gold standard, and presence of viable virus stratified by C_t cycles; note that cell culture was performed only in 488 samples where qPCR and RAT test results differed; where the respective category included fewer than 5 patients, data are not presented in the graph. NPS–nasopharyngeal swab; ANS–anterior nasal swab; C_t–Cycle threshold.



Uit de discussie:

As expected, the RATs performed the best at the lowest C_t cycles, which are associated with a higher viral load and, thus, with higher probability of triggering the test reaction. Below C_t 20 (i.e., 1.28 × 10^5 RNA copies/mL sample), tests using NPS as well as ANS had over 80% sensitivity, thus meeting the ECDC/WHO criterion for sensitivity. However, as soon as in the next category, i.e., C_t < 25, where the virus culture confirmed the presence of viable virus (i.e., infectiousness) in almost all samples, only the NPS test maintained a good sensitivity of well over 95%; the result dropped to 73% and 56% for the two ANS tests, respectively. Tests using saliva failed to produce meaningful results even in the categories with the strongest positivity. It is necessary to say that there were very few SARS-CoV-2-positive individuals in the C_t < 20 group when testing two of the saliva-based tests (four and two samples, respectively), so the results of the evaluation of these tests in this category are not very reliable; nevertheless, the fact alone that none of these six strongly positive patients were detected supports the conclusion that the performance of these tests is as poor in this category as it is in the others.

None of the saliva-based tests yielded results that could justify their use in practice. We have to acknowledge as a limitation of the study that we do not know whether the patients told the truth that they have not eaten or drunk for some time before the sampling. Nevertheless, from the perspective of the mass use of these self-tests at workplaces, at schools or at high-capacity testing points, a limitation such as not eating, drinking, chewing, smoking, brushing teeth or generally interfering with the oral cavity for 2 h prior to taking the test would render such a test unsuitable for large-scale use regardless of the test result (although 30 min required by some of the tests is perhaps achievable). Their use as self-tests in the morning upon waking, i.e., after a long period without interference with the oral cavity, could perhaps provide better results; nevertheless, in our high-throughput setting, the performance of saliva-based RATs was sadly lacking.