



# COVID-19 home test

## **PRODUCT OVERVIEW FOR HEALTHCARE PROFESSIONALS**

This test has not been FDA cleared or approved. In USA - For use under an Emergency Use Authorization (EUA) only.

www.ellumecovidtest.com



No test component to be used in size a body except the Nasal Swab as directed. No test component to be used inside the

#### Intended Use

The Ellume COVID-19 Home Test is a rapid, lateral flow immunoassay intended for the qualitative detection of SARS-CoV-2 nucleocapsid antigens.

This test is authorized for non-prescription home use with self-collected direct mid-turbinate nasal swab specimens from individuals aged 16 years or older with symptoms of COVID-19 within the first 7 days of symptom onset. This test is also authorized for non-prescription home use with adult-collected mid-turbinate nasal swab specimens from individuals aged 2 years or older with symptoms of COVID-19 within the first 7 days of symptom onset.

This test is also authorized for non-prescription home use with self-collected mid-turbinate nasal swab specimens from individuals aged 16 years or older, or adult-collected mid-turbinate nasal swab specimens from individuals aged 2 years or older, with or without symptoms or other epidemiological reasons to suspect COVID-19 when tested twice over two to three days with at least 24 hours (and no more than 48 hours) between tests.

The Ellume COVID-19 Home Test does not differentiate between SARS-CoV and SARS-CoV-2.

Results are for the identification of the SARS-CoV-2 nucleocapsid protein antigen. The antigen is generally detectable in mid-turbinate nasal swab specimens during the acute phase of infection. Positive results indicate the presence of viral antigens, but the clinical correlation with past medical history and other diagnostic information is necessary to determine infection status.

Positive results do not rule out a bacterial infection or co-infection with other viruses. The agent detected may not be the definite cause of disease. Individuals who test positive with the Ellume COVID-19 Home Test should self-isolate and seek follow up care with their physician or healthcare provider as additional testing may be necessary.

Negative results are presumptive and confirmation with a molecular assay, if necessary for patient management, may be performed. Negative results do not rule out SARS-CoV-2 infection and should not be used as the sole basis for treatment or management decisions for the individual, including infection control decisions. Negative results should be considered in the context of an individual's recent exposures, history and the presence of clinical signs and symptoms consistent with COVID-19.

For serial testing programs, additional confirmatory testing with a molecular test for negative results may be necessary, if there is a high likelihood of SARS-CoV-2 infection, such as in an individual with a close contact with COVID-19 or with suspected exposure to COVID-19 or in communities with high prevalence of infection. Additional confirmatory testing with a molecular test for positive results may also be necessary, if there is a low likelihood of SARS-CoV-2 infection, such as in individuals without known exposures to COVID-19 or residing in communities with low prevalence of infection.

Test results will be reported to relevant public health authorities in accordance with local, state, and federal requirements, using appropriate LOINC and SNOMED codes, as defined by the Laboratory In Vitro Diagnostics (LIVD) Test Code Mapping for SARS-CoV-2 Tests provided by the CDC. Automatic test result reporting occurs via the Ellume COVID-19 Home Test software application.

The Ellume COVID-19 Home Test is only for use under the Food and Drug Administration's Emergency Use Authorization. The Ellume COVID-19 Home Test Letter of Authorization, the authorized Fact Sheet for Healthcare Professionals and the authorized labeling are available on the FDA website: https://www.fda.gov/medical-devices/coronavirus-disease-2019-covid-19-emergency-use-authorizations-medical-devices/in-vitro-diagnostics-euas.

## **General Description**

The Ellume COVID-19 Home Test requires 3 core elements for operation:

- a smartphone (supplied by the user); see www.ellumecovidtest.com for compatible smartphones
- · a single use Analyzer;
- a single use sampling and processing system that includes a sterile Nasal Swab, Processing Fluid, and a Dropper.

Figure 1 – Ellume COVID-19 Home Test Contents



A Product Information Leaflet and Quick Start Guide are also included in the test kit.

To use the product, the consumer must first download the free application for iOS or Android phones using a compatible smartphone. The user follows the instructions on the Quick Start Guide. The user views the information video, connects the Analyzer to their phone, and then follows the in-app self-paced, step-by-step instructions to complete the test.

When the test has completed analyzing, the user's smartphone will generate one of the following test results:

- "Negative for COVID-19"
- · "Positive for COVID-19"
- · "Invalid Result"

## **Principle of Operation**

The Ellume COVID-19 Home Test involves the pre-mixing and binding of fluorophore specific to SARS-CoV-2 with viral nucleocapsid protein present in a patient specimen. First, the Processing Fluid is added into the Dropper to release

the fluorophore. After collecting a mid-turbinate nasal specimen, the Nasal Swab is locked into the Dropper to release the viral antigens from the specimen, which are then bound by the fluorophore. An aliquot of the sample containing the fluorophore-labelled antigen complexes is dispensed into the Analyzer Sample Port. The deposited liquid wicks into the test strip by capillary action. The sample flows across a membrane and traverses a series of discrete capture zones, consisting of immobilized complementary antibodies to SARS-CoV-2 viral nucleoprotein. Fluorescence signals at the two test zones are detected using a sensitive single-use optoelectronics reader system, housed within the Analyzer. The tests and controls are interpreted according to thresholds set within the microprocessor contained in the Analyzer. The computed result is communicated to the smartphone application and displayed on the user's smartphone. The time from activation to result is 15 minutes.

## **Internal Control Assays**

- The test contains an internal control immunoassay that detects the presence or absence of an endogenous human marker that is ubiquitously found in nasal specimens. An 'Invalid Result' will be received by the user rather than a false negative result if no or too little sample is applied to the test.
- The test contains a second internal control immunoassay whose biological reagents will fail and will trigger an 'Invalid Result' (rather than a false negative result) if the product is exposed to extreme temperature and humidity that could be damaging to the test reagents, and therefore mitigates the user from receiving a false negative result.

#### Other failure alert and failsafe controls

- The test also incorporates failure alert and failsafe controls that ensures the user receives an 'Invalid Result' outcome (rather than a false result), in the event of:
- · The user attempting to use an expired test kit;
- The user attempting to re-use a test; or
- Technical issue encountered with the optoelectronics of the Analyzer or with sample fluid flow through the test strip.

## **Warnings & Precautions**

- · For in vitro diagnostic use only.
- · Keep out of reach of children.
- Follow the App's instructions carefully. Incorrect use or use in the wrong order may result in an inaccurate test results or technical problem.
- · Do not use on anyone under 2 years of age.
- Do not use on anyone prone to nose bleeds or who has had facial or head injury/surgery in the last 6 months.

- Children aged 2-12 years must be swabbed with the child adapter in place.
- · Children aged 2-15 years must be tested by an adult.
- Wear a face mask when collecting a specimen from another individual.
- · Do not touch Swab tip.
- Do not use the test kit contents beyond the expiration date printed on the outside of the box.
- Do not use if the any of the test components' packaging is opened or damaged.
- · All test components are single-use. Do not re-use.
- Do not use the test if it has been exposed to household cleaning products (especially bleach).
- When collecting a mid-turbinate nasal swab specimen, use only the Nasal Swab supplied in the kit.
- False negative results may occur if a specimen is improperly collected or handled and retesting with a new test may be required.
- Test devices that contain patient specimens should be handled as though they could transmit disease. Follow universal precautions when handling specimens, this kit, and its contents. Wear appropriate personal protective equipment (PPE) including gloves when running the test and handling a patient's test device. Change gloves between tests.
- Keep testing kit and kit components away from children and pets before and after use. The Processing Fluid contains a harmful chemical as shown in below table.
   Avoid contact of Processing Fluid with your skin, eyes, nose or mouth. Do not ingest any kit components.
   If contact with the Processing Fluid occurs, immediately flush with copious amounts of running water.
   If irritation persists, please seek medical advice at: https://www.poison.org/contact-us or 1-800-222-1222.

Chemical Name	GHS Codes	Concentration (%weight/weight)
mixture of 5-Chloro-2- methyl-4- isothiazolin- 3-one & 2-Methyl-4- isothiazolin- 3-one (3:1) (ProClin™ 300)	H301: Toxic if swallowed H311: Toxic in contact with skin H331: Toxic if inhaled H314: Causes severe skin burns and eye damage H317: May cause an allergic skin reaction H400: Very toxic to aquatic life H410: Very toxic to aquatic life with long-lasting effects	0.002 – 0.005

- In the USA, this product has not been FDA cleared or approved; but has been authorized by FDA under an EUA.
- This product has been authorized only for the detection of proteins from SARS-CoV-2, not for any other viruses or pathogens; and,
- The emergency use of this product is only authorized for the duration of the declaration that circumstances exist

- justifying the authorization of emergency use of in vitro diagnostics for detection and/or diagnosis of COVID-19 under Section 564(b)(1) of the Federal Food, Drug and Cosmetic Act, 21 U.S.C. § 360bbb-3(b)(1), unless the declaration is terminated, or authorization is revoked sooner.
- Do not open any of the packaging until you are ready to begin your test.
- Do not perform the test in unstable (changing) light conditions.
- Avoid performing the test in a very dry environment (very low humidity).
- · Do not drop the Analyzer. Handle with care.
- Keep the Analyzer on a flat surface until the result is available.
- If you are operating multiple tests, connect one Analyzer to the smartphone and wait 30 secs before you connect another Analyzer to the second smartphone.
- Add exactly five (5) drops of the sample fluid into the Analyzer. Adding more or less than 5 drops of sample fluid may cause inaccurate results.

## **Storage and Stability**

- Store in a dry location between 36-86°F (2-30°C).
- Ensure the test is at room temperature 59-77°F (15-25°C) prior to testing.
- Kit components in the Ellume COVID-19 Home Test are stable until the expiration date printed on the label.
- The Test components must remain in the sealed foil pouches until use. Once the pouches have been opened, the test should be used within 60 minutes.
- Specimens should be added to the Analyzer port when instructed by the App. Do not delay, otherwise the test may produce an invalid result.

## Disposal

- Before disposal of the Analyzer, we recommend removing the battery using the following steps:
  - Locate the gap at the end (short side) close to power button.
  - Place a coin in the gap.
  - Twist the coin to break off the bottom end of the Analyzer along the perforation in the plastic.
  - Remove the battery from the plastic clips of the Analyzer.
  - Keep the battery out of reach of children.
  - Do not incinerate.
  - Dispose of the battery and the remainder of the test in general waste unless otherwise indicated by local regulations.

#### Limitations

- This test does not differentiate between SARS-CoV and SARS-CoV-2.
- The test detects both viable and nonviable SARS-CoV-2 viral antigens and may yield a positive result in the absence of living microorganisms. Test performance depends on the amount of virus in the sample and may or may not correlate with viral culture results performed on the same sample.
- Failure of the user to follow the test procedure correctly may adversely affect the test performance and/or invalidate the test result.
- False positive results may occur, particularly in individuals without COVID-19 symptoms and/or individuals who live in areas with low numbers of COVID-19 infections and without known exposure to COVID-19.
- Negative results do not rule out COVID-19, should be treated as presumptive, and confirmed with an FDAauthorized molecular assay, if necessary for clinical management.
- Positive test results do not exclude co-infection with other pathogens.
- Negative test results are not indicative of the presence/ absence of other viral or bacterial pathogens.
- Performance of this test in individuals without symptoms or other epidemiological reasons to suspect COVID-19 infection or for serial screening, when tested twice over two to three days with at least 24 but no more than 48 hours between tests has not yet been determined; a study to support use will be completed.
- Testing for asymptomatic individuals should be performed at least twice over two to three days, with at least 24 hours and no more than 48 hours between tests. You may need to purchase additional tests to perform this serial (repeat) testing.
- There is a higher chance of false negative results with antigen tests than with laboratory-based molecular tests.
   This means that there is a higher chance this test will give a negative result in an individual with COVID-19 as compared to a molecular test.
- Serial testing (i.e., testing every day or every other day)
  is more likely to detect COVID-19, especially in individuals
  that do not have any symptoms.
- If the differentiation of specific SARS viruses and strains is needed, additional testing, in consultation with state or local public health departments, is required.
- Positive and negative predictive values are highly dependent on COVID-19 prevalence. False negative test results are more likely during peak activity when prevalence of disease is high. False positive test results are more likely during periods of low activity when prevalence is moderate to low.

- Clinical performance of the test has not been established with subsequent variants of COVID-19 including the Delta and Omicron variants.
- The performance of this test was established based on the evaluation of a limited number of clinical specimens.
   Clinical performance has not been established with all circulating variants but is anticipated to be reflective of the prevalent variants in circulation at the time and location of the clinical evaluation. Performance at the time of testing may vary depending on the variants circulating, including newly emerging strains of SARS-CoV-2 and their prevalence, which change over time.

## **Expected Values**

The Ellume COVID-19 Home Test incorporates a qualitative assay for the detection of SARS-CoV-2 viral nucleoprotein in mid-turbinate nasal specimens. Healthy normal patients would not have SARS-CoV-2 viral nucleoprotein in their mid-turbinate nasal specimens and would be expected to return a negative result.

Not all patients exhibiting COVID-like-illness symptoms will have SARS-CoV-2 viral nucleoprotein in their mid-turbinate nasal specimens as other viruses/bacteria may cause COVID-like-illness symptoms.

## **Interpretation of Results**

#### Positive result:

A positive test result for COVID-19 indicates that antigens from SARS-CoV-2 were detected, and therefore the patient is very likely infected with the virus and presumed to be contagious. Test results should always be considered in the context of clinical observations and epidemiological data (such as local prevalence rates and current outbreak/epicenter locations) in making a final diagnosis and patient management decisions. Patient management should follow current CDC guidelines.

## **Negative result:**

A Negative test means that antigen from the virus that causes COVID-19 is not detected in the sample.

#### Negative results do not rule out SARS-CoV-2 infection.

Individuals without symptoms that test negative should be tested with a second test taken at least 24 hours and no more than 48 hours between tests. All negative results are considered presumptive, and confirmation with a molecular assay, if necessary for patient management, may be performed. Negative results should be considered in the context of an individual's recent exposures, history, and the presence of clinical signs and symptoms consistent with COVID-19.

#### **Clinical Performance**

A performance evaluation was conducted from 29 October 2020 to 17 November 2020 at five (5) geographically diverse study sites in the USA. Subjects self-sampled and self-tested using the Ellume COVID-19 Home Test in a simulated home setting utilizing only the labelling provided with the test. The study was designed as an all-comers study where subjects (both symptomatic and asymptomatic) over the age of 2 years, presenting to the site seeking COVID-19 testing for any reason, were eligible to enroll if they met all inclusion criteria and did not meet any of the exclusion criteria.

All subjects also had a nasal swab sample collected by clinical study site staff for testing at a reference laboratory with an EUA high sensitivity molecular SARS-CoV-2 assay. Any specimens for which the Ellume COVID-19 Home Test result and the EUA high sensitivity molecular SARS-CoV-2 assay result did not agree were tested with a second, high sensitivity molecular SARS-CoV-2 assay.

A total of 198 subjects were evaluated in this study. Sixty-four (64) were symptomatic and one-hundred and thirty-four (134) were asymptomatic at time of presentation. Symptomatic subjects were defined as those exhibiting at least one of the following signs and symptoms on day of presentation: Fever, cough, shortness of breath, difficulty breathing, muscle pain, headache, sore throat, chills, repeated shaking with chills, new loss of taste or smell, congestion or runny nose, diarrhea, nausea, or vomiting.

## **Patient Demographics**

Age and gender distribution of the 198 evaluable subjects is presented in Table 1 along with the positive rate per age group. Overall positive rate for the study was 20.2%. Ages of subjects ranged from 2 years to 82 years.

Table 1: Age and gender distribution and positive rate (by Ellume COVID-19 Home Test) per age group (evaluable subjects)

Age Group (years)	Female	Male	Positivity Rate % (total positive/total tested)
2 to 13	12	16	10.7% (3/28)
14 to 24	20	16	22.2% (8/36)
25 to 64	87	36	22.0% (27/123)
≥65	6	5	18.2% (2/11)
Total	125	73	20.2% (40/198)

The following tables summarize the Positive Percent Agreement (PPA) and Negative Percent Agreement (NPA) for the Ellume COVID-19 Home Test when compared with an FDA EUA high sensitivity molecular SARS-CoV-2 assay, for all subjects (Table 2) and for symptomatic subjects only (Table 3).

Table 2: Performance of the Ellume COVID-19 Home Test in ALL subjects

Ellume COVID-19 Home Test	RT-PCR (Laboratory)		
Eliume COVID-13 Home Test	Positive	Negative	Total
Positive	35	5 <sup>b</sup>	40
Negative	2ª	156	158
Total	37	161	198

<sup>a</sup> Of the 2 false negative specimens, both were positive on a second FDA EUA high sensitivity molecular SARS-CoV-2 assay.

<sup>b</sup> Of the 5 false positive specimens, all were negative on a second FDA EUA high sensitivity molecular SARS-CoV-2 assay.

PPA: **95%** [95% CI 82% - 99%] NPA: **97%** [95% CI 93% - 99%]

CI = Confidence Interval

Table 3: Performance of the Ellume COVID-19 Home Test in SYMPTOMATIC subjects

Ellume COVID-19 Home Test	RT-PCR (Laboratory)		
Elidine COVID-19 Home Test	Positive	Negative	Total
Positive	25	0	25
Negative	1	38	39
Total	26	38	64

PPA: 96% [95% CI 81% - 99%] NPA: 100% [95% CI 91% - 100%]

Table 4: PPA and NPA stratified by days since onset of symptoms

Group	PPA (95% CI)	NPA (95% CI)
0 to 1 day	100% (7/7) (95% CI:65%-100%)	100% (9/9) (95% CI:70%-100%)
0 to 2 days	100% (13/13) (95% CI:77%-100%)	100% (17/17) (95% CI:82%-100%)
0 to 3 days	100% (18/18) (95% CI:82%-100%)	100% (26/26) (95% CI:87%-100%)
0 to 4 days	100% (21/21) (95% CI:85%-100%)	100% (29/29) (95% CI:88%-100%)
0 to 5 days	100% (22/22) (95% CI:85%-100%)	100% (32/32) (95% CI:89%-100%)
0 to 6 days	100% (25/25) (95% CI:87%-100%)	100% (33/33) (95% CI:90%-100%)
0 to 7 days	96% (25/26) (95% CI:81%-99%)	100% (34/34) (95% CI:90%-100%)

#### **Invalid Test Rate**

The overall invalid result rate on first test for the 209 subjects that performed testing in a clinical study in October and November 2020 was 8% (17/209). Nine (9) of the seventeen (17) invalid results recorded were generated by the Analyzer as a failsafe control to indicate to the user that insufficient sample had been collected for the test to give a valid result. All 9 were generated by asymptomatic subjects. It is therefore very important that a user with no symptoms pays close attention to sampling technique to avoid having to retest with a new test.

## **Analytical Sensitivity**

Invalid Test Rate

A dilution series of heat inactivated SARS-CoV-2 virus stock (USA-WAI/2020) was prepared in natural clinical matrix (pooled nasopharyngeal swab specimens eluted in VTM). Five (5) replicates were tested per dilution. The testing was performed as per the recommended instructions for use, with the virus in clinical matrix applied directly onto the swab until the saturation of the flocked tip.

The estimated LoD concentration for verification was selected as the concentration in between the dilution factor that returned 5/5 positive test outcomes (100%) and the next dilution factor that returned 0/5 positive (0%) based on the qualitative result. The quantitative signal value between these points, displayed by the firmware algorithm was also used to inform an estimated C95 (95% detection rate) concentration. The C95 was then verified by testing 20 replicates of virus, prepared at the estimated LoD concentration in natural clinical matrix.

The concentration of virus at which 19/20 replicates produced positive results (the LoD) was 6309 TCID<sub>50</sub>/mL. The performance of this test device in the detection of the Omicron variant of SARS-CoV-2 was evaluated in a dilution series of heat-inactivated clinical specimens which were positive for the Omicron variant (Table 5). This testing was conducted by the National Institutes of Health (NIH) as a component of the Rapid Acceleration of Diagnostics (RADx®) initiative. Compared to an EUA authorized RT-PCR method, the Ellume COVID-19 Home Test detected 100% of live-virus Omicron samples at a Ct-value of 23.6 (n=5). Testing was also compared to two additional EUAauthorized OTC antigen tests (Assay #1 and Assay #2). Omicron dilutions at lower viral concentrations (Ct-values greater than 23.6) were not detected by the Ellume COVID-19 Home Test in this study.

Table 5: Detection of an Omicron clinical sample pool by Ellume COVID-19 Home Test compared with two other EUA-authorized OTC antigen tests

Omicron Pool 2 – Live Omicron Clinical Samples	Average N2 Ct (n=9)	Assay #1 Percent Positive (n=5)	Assay #2 Percent Positive (n=5)	Ellume COVID-19 Home Test Percent Positive (n=5)
Omicron-Dilution 1	19.8	100	100	100
Omicron-Dilution 2	20.8	100	100	100
Omicron-Dilution 3	21.5	100	100	100
Omicron-Dilution 4	22.7	100	100	100
Omicron-Dilution 5	23.6	100	0	100
Omicron-Dilution 6	24.0	60	0	40
Omicron-Dilution 7	24.8	0	0	0
Omicron-Dilution 8	25.8	0	0	0
Omicron-Dilution 9	27.4	0	0	0
Omicron-Dilution 10	28.1	0	0	0
Omicron-Dilution 11	29.1	0	0	0

#### **Hook Effect**

No high dose hook effect was observed when the Ellume COVID-19 Home Test was tested with up to a concentration of  $10^{6.43}$  TCID<sub>50</sub>/mL of heat inactivated SARS-CoV-2 virus (USA-WA1/2020 Isolate).

## **Analytical Specificity**

Microbial Cross Reactivity and Interference

The Ellume COVID-19 Home Test was tested with 16 non-SARS-CoV-2 viral isolates at a concentration of  $1 \times 105 \, \text{TCID}_{50}/\text{mL}$ , 12 bacterial microorganisms at a concentration of  $1 \times 106 \, \text{CFU/mL}$  and pooled human nasal wash at a concentration of  $10\% \, \text{v/v}$  (Table 6). The micro-organisms and pooled nasal wash were evaluated in the absence of SARS-CoV-2 virus to assess potential cross-reactivity and also in the presence of SARS-CoV-2 virus at 3xLoD concentration to assess potential interference with the detection of SARS-CoV-2. No cross-reactivity was observed with the viral and bacterial pathogens tested nor with the pooled nasal wash.

No interference was observed in the detection of SARS-CoV-2 virus with the viral and bacterial respiratory pathogens tested, nor with the pooled nasal wash.

Table 6 Microorganisms tested for cross reactivity in, and interference with, the Ellume COVID-19 Home Test (wet testing)

Viruses	Bacteria
Human coronavirus 229E	Haemophilus influenzae
Human coronavirus OC43	Streptococcus pneumoniae
Human coronavirus NL63	Streptococcus pyogenes
Adenovirus C1/71	Staphylococcus aureus
Human metapneumovirus (hMPV)	Staphylococcus epidermidis
Parainfluenza 1	Candida albicans
Parainfluenza 2	Bordetella pertussis
Parainfluenza 3	Mycoplasma pneumoniae
Parainfluenza 4	Chlamydia pneumoniae
Influenza A/Perth/16/2009	Legionella pneumophila
Influenza B/Phuket/3073/2013	Mycobacterium tuberculosis
Enterovirus	Pneumocystis jirovecii (PJP)
Respiratory syncytial virus A	
Respiratory syncytial virus B	
Rhinovirus	
MERS-Coronavirus	

An in-silico analysis was performed using the Basic Local Alignment Search Tool (BLASTp) managed by the National Center for Biotechnology Information (NCBI) for Human Coronavirus HKU1 and SARS-CoV-1. Human Coronavirus HKU1 showed 37% homology across 82% of the nucleocapsid sequence, which is relatively low. Crossreactivity is unlikely but possible. For SARS-CoV-1 there was 91% homology across 100% of the nucleocapsid sequence and therefore cross-reactivity is likely.

#### Interference

The effect of 17 substances commonly found in nasal aspirates, including blood and a selection of the active ingredients of over-the-counter (OTC) products and 6 common household chemicals (Table 7) were evaluated on the Ellume COVID-19 Home Test. The potentially interfering substances were evaluated in the absence of SARS-CoV-2 virus to assess potential cross-reactivity, and also in the presence of SARS-CoV-2 virus at 3xLoD concentration to assess potential interference with the detection of SARS-CoV-2.

Table 7: Potentially interfering substances tested on Ellume COVID-19 Home Test

Substance	Concentration
Whole Blood	4% v/v
Ricola (Menthol)	1.5mg/mL
Sucrets (Dyclonin/Menthol)	1.5mg/mL
Chloraseptic (Menthol/Benzocaine)	1.5mg/mL
Naso GEL (NeilMed)	5% v/v
CVS Nose Drops (Phenylephrine)	15% v/v
Afrin (Oxymetazoline)	15%v/v
NasalCrom (Cromolyn)	15%v/v
Zicam (with Oxymetazoline)	5% v/v
Homeopathic (Alkalol)	10% v/v
Fishermans Friend	1.5mg/mL
Sore Throat Phenol Spray	15% v/v
Mucin	0.5% v/v
Tobramycin	4µg/mL
Mupirocin	10mg/mL
Tamiflu (Oseltamivir Phosphate)	5mg/mL
Fluticasone Propionate	2.5mg/mL
Hand Sanitizer (Ethyl alcohol)	1% v/v
Hand Soap (Benzalkonium chloride)	1% v/v
Laundry Detergent (C12-15 pareth-7 and sodium laureth-12 sulfate)	1% v/v
Surface Sanitizer (Citric Acid)	1% v/v
Dish-washing Liquid (Sodium lauryl sulfate)	1% v/v
Bleach (Sodium Hypochlorite)	1%v/v

There was no interference of SARS-CoV-2 detection observed from any of the substances tested except for bleach which was shown to interfere at the initial concentration of 1% v/v tested. Further testing indicated that the highest bleach level the test system could tolerate was 0.2% v/v.

## **Customer Helpline**

If you have any questions about the Ellume COVID-19 Home Test or your patient's results, please contact Ellume's toll-free Customer Helpline on 1-888-885-6121 or visit www.ellumecovidtest.com