

What does my variant of concern (VOC) result mean?

Variants are viruses that have changed or mutated over time. They become a variant of concern (VOC) when they:

- Spread more easily or cause people to become more sick
- and/or**
- Make treatments or vaccines less effective, or make it harder to test for the virus

All variants are given a name by the World Health Organization based on which part of the virus has changed (called “gene mutations;” see table on pages 2 and 3 for more details). At this time, most COVID-19 infections in Ontario and Quebec involve a VOC.

Most labs now include two pieces of information on your COVID-19 test result:

1. Your first **COVID-19 test result** reports if you have tested positive or negative for COVID-19.
2. If you tested positive for COVID-19, your sample will be **tested again for known variants of concern** (also called a VOC screen). The result of your VOC screen will be reported on your hospital record as an update (amendment) to the original positive result.

What does my COVID-19 test result mean?

If your result is “Detected” or “Positive”:

- You tested positive for COVID-19. Your sample will be further tested to determine if it is a VOC.
- You must remain in isolation until a staff member at the testing centre or Ottawa Public Health contacts you to explain the next steps.
- Your household contacts must isolate themselves for 10 days after their last contact with you and:
 - **If they have symptoms**, they should get tested immediately. If they are tested prior to day 7 and the result is negative, they should test again on or after day 10.
 - **If they do not have symptoms**, they should get tested on or after day 7. (If tested prior to day 7 and result is negative, they should test again on or after day 10.)
 - **Note: The day you developed symptoms or the day you were tested is DAY ZERO.**
- If your household contacts cannot break contact with you (e.g. a young child), then they must self-isolate for an additional 10 days after you complete your 10-day isolation.
- Please contact all other people you were in close contact with during the 48 hours before you developed symptoms OR, if you do not have symptoms, 48 hours before you were tested, up until the time you began to self-isolate.
 - They must now isolate for 10 days from their last contact with you.
 - They are advised to get tested immediately if they develop symptoms. If they continue to have no symptoms, they should be tested at least 7 days after the last contact with you. If tested prior to day 7 and their result is negative, it is recommended to test again on or after day 10.

If your result is **“Not Detected”** or **“Negative”**:

- You tested negative for COVID-19.
 - If you have **no known exposure to COVID-19** and you are **not required to self-isolate due to recent travel outside of Canada**, you can end self-isolation if you remain asymptomatic (you have no symptoms), or when symptoms have improved for at least 24 hours without fever-reducing medications.
 - If you have a **known exposure to COVID-19**, you can end self-isolation 10 days from your last exposure to the person who tested positive as long as you have remained asymptomatic (no symptoms) or your symptoms have improved for at least 24 hours without fever-reducing medication.
 - If you have **recently travelled outside of Canada and are required to self-isolate**, as per the *Federal Quarantine Act*, you can end self-isolation 14 days from your return to Canada.
- If your symptoms included vomiting or diarrhea, these symptoms must be resolved for 48 hours prior to returning to school, childcare, or work.
- If you develop new symptoms, or have ongoing or worsening of symptoms, you should be re-tested.

If your result is **“Not performed”** or **“Invalid sample”**:

- The lab couldn't process your test and no results are available.
- Please return to the assessment centre to be tested again as soon as possible – no appointment is necessary.
- You must remain in self-isolation if your reason for testing required you to isolate (e.g. you have symptoms of COVID-19).

If your result is **“Indeterminate”**:

- Your test result is in the range where it is difficult to confirm or rule out COVID-19.
- You must remain in isolation until a staff member at a testing centre or Ottawa Public Health contacts you to explain the next steps.

What does the VOC screening section mean?

If your COVID-19 test result is **“Detected”** or **“Positive”**, then the VOC screening test should be reported in the next 3 to 4 days.

If your “VOC SG” Record is **“Detected”**, then the follow results apply:

If your report is “Detected” for COVID-19 or SARS-CoV-2 and “Not Detected” in any other fields.	You tested positive for COVID-19 and no VOC was detected. Your infection is with the original version of the SARS-CoV-2 virus.
If your report is “Detected” for N501Y and “Not Detected” for E484K .	You likely tested positive for the Alpha variant.
If your report is “Detected” for N501Y and “Detected” for E484K .	You likely tested positive for either the Beta variant or the Gamma variant, as these VOCs carry both mutations.

If your report is “ Detected ” for E484K and “ Not Detected ” for any other records.	You tested negative for the Alpha, Beta, Gamma and Delta VOCs; however, you may have a different variant that is not known to be a concern at this time.
If your report is “ Not Detected ” for N501Y and E484K.	You tested negative for the Alpha, Beta and Gamma variants; you may have the Delta variant.
If your report is “ Detected ” for L452R.	You likely tested positive for the Delta variant.
If your report is “ Unable to complete ” or “ INVALID ”.	The VOC test was incomplete, and your VOC status will remain unknown. This could be due to low viral quantity in the sample. This does not change the fact the you tested positive for COVID-19.

Real examples of the above results can be found on pages 4-6 of this document.

NOTE: Testing negative for a VOC does NOT mean that you have tested negative for COVID-19. Your VOC screen result may state that “COVID-19 was not detected,” which means that it was not detected during the VOC screening phase only. This happens because the VOC screen is not as sensitive as the original COVID-19 test that is used to analyze all samples for COVID-19.

I tested positive for a VOC. What does that mean?

Testing positive for a VOC means that the COVID-19 virus that you are infected with has changed from its original form. Having a VOC does not affect your isolation dates nor the isolation dates of your close contacts.

Ottawa Public Health is tracking VOC spread in our community and the risk to the public. This will help determine what we need to do as a community to help stop the spread of COVID-19.

We are still learning how VOCs affect your health differently from the original COVID-19 virus. If you test positive for COVID-19, you may or may not screen positive for a VOC. Either way, your actions and response should remain the same:

- You must self-isolate immediately to protect those around you.
- Your contacts should continue to self-isolate and be tested, as outlined above.
- If your symptoms worsen, please contact your primary care provider, see a doctor at a COVID-19 Care Clinic, or present to the Emergency Department nearest you. If you have severe shortness of breath, have fainted, have chest pain, or any other symptom that prevents you from safely getting to care, please dial 9-1-1 for emergency services right away.

Follow Ottawa Public Health’s guidance and continue to be [SocialWise](#). For more information Visit www.OttawaPublicHealth.ca/TestedWhatNow or call Ottawa Public Health at 613-580-6744.

Example VOC test results

Ontario Laboratories Information System

Microbiology
Specimen Type: Other
Collection Date/Time: 2021-04-01 06:00:00 EDT
Specimen Collected By: The Ottawa Hospital - Civic Campus, Ottawa (Lab 4162)

Name Result Flag

2019 Novel Coronavirus PCR

Specimen source: Nose/Throat

COVID-19 Virus PCR Interpretation: **Detected** AA

Part 1: Initial COVID-19 test result

The patient has tested positive for COVID-19.

SARS-CoV-2 Variant Screen

SARS-CoV-2 E484K S Gene Mutation; NAA+probe: Detected

Ministry of Health and Long-Term Care
Ontario laboratories information system (OLIS)

SARS-CoV-2 N501Y S Gene Mutation; NAA+probe: Not Detected

SARS-CoV-2 S Gene Mutation Interpretation: SARS-CoV-2 E484K S gene mutation associated with Variants of Concern (VOCs) DETECTED. N501Y S gene mutation NOT DETECTED.

Part 2: VOC screen

The report is “**Detected**” for E484K and “**Not Detected**” for any other records.

RT-PCR testing performed at EORLA Regional Microbiology Reference laboratory, 501 Smyth Road, Ottawa, ON, K1S 2L6

The Ottawa Hospital - Civic Campus, Ottawa (Lab 4162)

SARS-CoV-2 S Gene Mutation; NAA+probe: Detected

The patient has tested negative for the Alpha, Beta, Gamma and Delta variants; they may have a different variant that is not known to be a VOC.

MyChart portal (The Ottawa Hospital)

Specimen Information: Nasopharyngeal Swab

Component	SARS-CoV-2	Detected
VOC S Gene Mutation by SNP RT-PCR		
N501Y S Gene Mutation		Detected
E484K S gene mutation		Not Detected

SARS-CoV-2 S gene mutation interpretation: SARS-CoV-2 N501Y S gene mutation associated with Variants of Concern (VOCs) DETECTED. E484K S gene mutation NOT DETECTED.

Comment: RT-PCR testing performed at EORLA Regional Microbiology Reference Laboratory, 501 Smyth Road, Ottawa, ON, K1H 8L6

Resulting Agency: EORLA

Part 1: Initial COVID-19 test result

The patient has tested positive for COVID-19.

Part 2: VOC screen

The report is “**Detected**” for N501Y and “**Not Detected**” for E484K.

The patient has likely tested positive for the Alpha variant.

MyChart portal (CHEO)

SARS COV-2 VOC RT PCR - Details

Details | Past Results | Graph of Past Results

Component	Your Value
SARS -CoV-2 VOC S Gene Mutation by SNP RT	Detected
N501Y S Gene Mutation	Detected
E484K G Gene Mutation	Not Detected

SARS-CoV-2 S Gene Mutation Interpretation: SARS-CoV-2 N501Y S gene mutation associated with Variants of Concern (VOCs) DETECTED. E484K S gene mutation NOT DETECTED.

RT-PCR testing performed at EORLA Regional Microbiology Reference Laboratory, 501 Smyth Road, Ottawa, ON, K1H 8L6

Part 2: VOC screen

The report is “**Detected**” for N501Y and “**Not Detected**” for E484K.

The patient has likely tested positive for the Alpha variant.

Meditech portal (Queensway Carleton Hospital)

Results	
Sort by Date	Sort by Test
Coronavirus 2019 Source	
Nasopharyngeal Swab	20/04/2021 12:23 pm
Coronavirus (COVID-19)(PCR)	
Detected (H)	20/04/2021 12:23 pm
SARS-CoV-2 N501Y S Gene Mutat (L)	
Unable to complete	20/04/2021 12:23 pm
SARS-CoV-2 S Gene Mut (SNP RT)	
Unable to complete	20/04/2021 12:23 pm
SARS-CoV-2 E484K S Gene Mut (LAB)	
Unable to complete	20/04/2021 12:23 pm
SARS-CoV-2 S Gene Mutation Interp	
See Note	20/04/2021 12:23 pm

Part 1: Initial COVID-19 test result

The patient has tested positive for COVID-19.

Part 2: VOC screen

The VOC scan was “**Unable to complete**”. This could be due to a low viral quantity in the sample.

While the result of the VOC screen is unknown, the patient’s test results remains **positive for COVID-19**.