

Genomic surveillance of SARS-CoV-2 in Belgium

Report of the National Reference Laboratory (UZ Leuven & KU Leuven)

Situation update – 17th of August 2021
(report 2021_41)

Executive summary

37,703 Belgian sequences of SARS-CoV-2 are now publicly available on GISAID.

Among these, 889 sequences of positive SARS-CoV-2 samples collected between 2nd and 15th of August were reported in the context of baseline surveillance,

- B.1.617.2 (*Delta*) represented 98.9% (compared to 95.7% in the last report) ↗

Other variants currently represent less than 2% of the circulating strains.

Other points of attention:

- The NRC performed 3546 tests among departing travellers and 1765 tests among returning travellers during the week of August 9. The positivity rate among returning travellers was 3.0 times higher compared to departing travellers (2.4% against 0.8%). This difference highlights the risk of infection associated with travels and the potential benefits of extending testing criteria among returning travellers. The current restrictive testing indications and financial barriers for testing could contribute to a continuous importation of undetected infections associated with secondary clusters.

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Previous reports can be downloaded using the following link:

<https://www.uzleuven.be/nl/laboratoriumgeneeskunde/genomic-surveillance-sars-cov-2-belgium>

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1. Monitoring of VOCs in Belgium

While first identified on 6 April 2021 in Belgium, the B.1.617.2 Variant of Concern (Delta) is now the dominant lineage in the country.

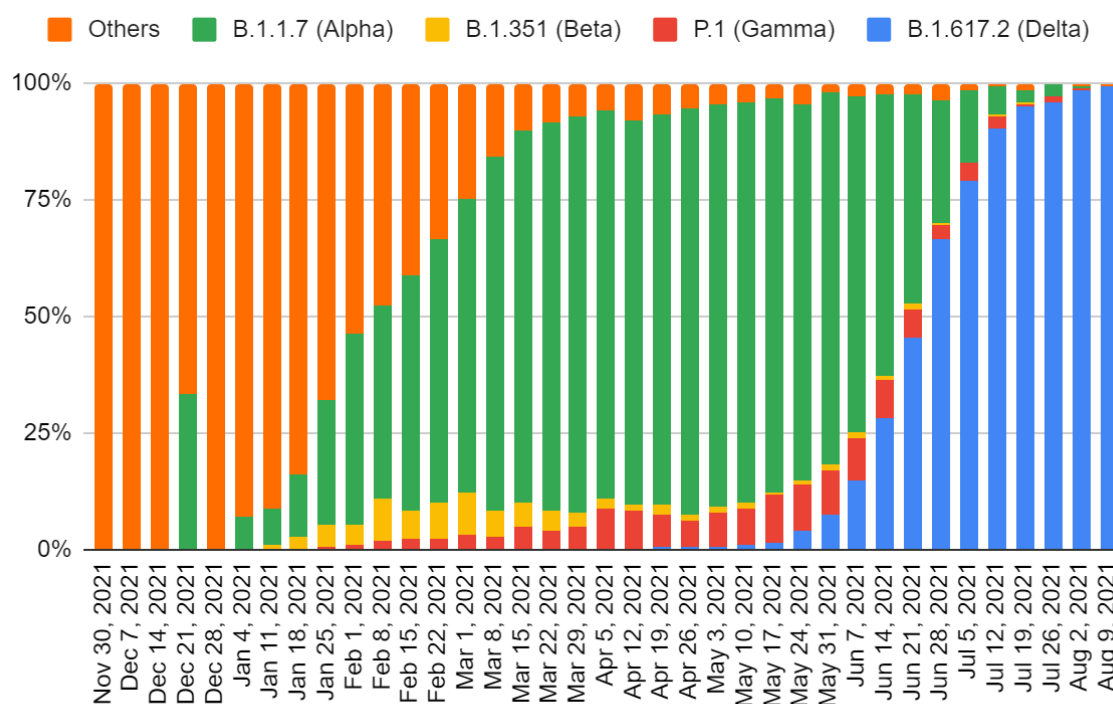


Figure 1: Weekly evolution of the frequency of variants of concern reported by the baseline surveillance network using a whole genome sequencing (WGS) approach.

In a recent publication in the highly regarded journal Nature Biotechnology, the lag in SARS-CoV-2 genome submissions to GISAID was evaluated, ranking Belgium as second country, after the UK, based on median collection to submission time, stressing the efficient genomic surveillance program that is in place in our country (<https://www.nature.com/articles/s41587-021-01040-0.pdf>). For the moment, 37,703 Belgian sequences of SARS-CoV-2 are publicly available on GISAID (see Table 1).

Lineage	Number of Belgian cases reported on GISAID	First reported
B.1.1.7 (Alpha) and Alpha + E484K	20,715	30/11/2020
B.1.351 (Beta) and B.1.351.2/3	1119	20/12/2020
P.1 (Gamma) and P.1.1/2	1981	29/1/2021
B.1.617.2 (Delta) and its 12 AY sublineages	5043	6/4/2021
B.1.621	19	24/6/2021
B1.621.1	12	22/5/2021
B.1.214.2	757	3/1/2021
A.27	19	11/1/2021
B.1.427 (Epsilon)	1	18/1/2021
B.1.525 (Eta)	84	19/1/2021
P.2 (Zeta)	2	9/2/2021
B.1.526 (Iota)	1	8/7/2021
B.1.1.318	53	22/2/2021
C.36.3	29	23/3/2021
B.1.617.1 (Kappa)	17	25/3/2021
B.1.619	124	23/1/2021
B.1.619.1	11	11/6/2021
B.1.620	41	31/3/2021
C.37 (Lambda)	4	20/6/2021
P.3 (Theta)	3	27/6/2021

Table 1: List of VOCs (red) and VOIs (orange) identified in Belgium to date and cumulative number of sequences available on GISAID (total of 37,703 sequences).

2. Testing of travellers

Departing travellers

During the last 7 full weeks (June 28 to August 15), the National Reference Center in Leuven has tested 45,957 departing travellers, among which 301 were tested positive (0.65%). The positivity rate increased from 0.28% during the first week to 0.82% during last week. The Delta variant represented 88% of the positive samples tested during the last week.

Returning travellers

For the last 7 full weeks (June 28 to August 15),

- Among the travellers returning from abroad to the region of Leuven, 4,402 people were tested, among which 135 were tested positive (3.1%). The Delta variant represented 92.9% of the positive samples tested during the last week.
- Among the travellers returning from abroad through the Brussels South (Charleroi) airport, the federal platform laboratory of U Namur/Mont-Godinne reported 345 positive samples out of 8.655 tests performed (positivity rate of 4.0%).