**S2 Table. SARS-Cov2 variants of concern (VOC) and interest (VOI).**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **WHO label** | **Pango lineage** | **GISAID clade/**  **lineage** | **Nextstrain**  **clade** | **Earliest documented**  **samples** | **Date of designation** | | **Notable mutation** | **Bio-sample** | **Information** | **Mutations found with ASPICov** |
| Variants of concern | Alpha | B.1.1.7 | GRY (formerly GR/501Y.V1) | 20I/S:501Y.V1 | UK, Sep-2020 | 18-Dec-2020 | 69–70del, N501Y, P681H | | SAMN18219363 | amplicon COVIDSeq / Illumina NovaSeq | Shape, arrow  Description automatically generated |
| Beta | B.1.351 | GH/501Y.V2 | 20H/S:501Y.V2 | South Africa, May-2020 | 18-Dec-2020 | K417N, E484K, N501Y | | SAMN17767551 | amplicon Artic / Illumina MiSeq | Shape, arrow  Description automatically generated |
| Gamma | P.1 | GR/501Y.V3 | 20J/S:501Y.V3 | Brazil, Nov-2020 | 11-Jan-2021 | K417T, E484K, N501Y | | SAMN18527803 | ? / Illumina MiSeq | Shape, arrow  Description automatically generated |
| Delta | B.1.617.2 | G/452R.V3 | 21A/S:478K | India, Oct-2020 | VOI: 4-Apr-2021  VOC: 11-May-2021 | L452R, T478K, P681R | | SAMN19157798 | artic Amplicon / Illumina | Shape, arrow  Description automatically generated |
| Variants of interest | Epsilon | B.1.427 / B.1.429 | GH/452R.V1 | 20C/S.452R | USA, Mar-2020 | 5-Mar-2021 | L452R | | SAMN19223936 | amplicon Artic / Illumina Nextera |  |
| Zeta | P.2 | GR | 20B/S.484K | Brazil, Apr-2020 | 17-Mar-2021 | E484K | | SAMN18606318 | amplicon Artic / Illumina NovaSeq |  |
| Eta | B.1.525 | G/484K.V3 | 20A/S484K | Multiple countries, Dec-2020 | 17-Mar-2021 | E484K, F888L | | SAMEA7763427 | amplicon / Illumina NovaSeq | Shape, arrow  Description automatically generated |
| Theta | P.3 | GR | 20B/S:265C | Philippines, Jan-2021 | 24-Mar-2021 | E484K, N501Y, D614G, P681H, E1092K, H1101Y, V1176F | | SAMEA9094797 | amplicon / Illumina NovaSeq | Shape, arrow  Description automatically generated |
| Iota | B.1.526 | GH | 20C/S:484K | USA, Nov-2020 | 24-Mar-2021 | E484K | | SAMN19009806 | amplicon Artic / Illumina NovaSeq | Shape, arrow  Description automatically generated |
| Kappa | B.1.617.1 | G/452R.V3 | 21A/S:154K | India, Oct-2020 | 4-Apr-2021 | L452R, E484Q, P681R | | SAMN19375761 | amplicon Thermo / S5 Iontorrent | Shape, arrow  Description automatically generated |
|  | Lambda | C.37 | GR/452Q.V1 | 20D | Peru, Aug-2020 | 14-June-2021 | L452Q | | SAMN19224075 | amplicon Artic / Illumina Nextera |  |
|  | Mu | B.1.621 | GH | 21H | Colombia, Jan-2021 | 30-Aug-2021 | T95I, Y144S, Y145N, R346K, E484K, N501Y, D614G, P681H, D950N | | SAMEA9083610 | Amplicon / Illumina MiSeq | Shape, arrow  Description automatically generated   |  | | --- | |  | |
| Other variant |  | B.1.1.207 |  |  | Nigeria, Aug-2020 | Aug 2020 | P681H | | SAMN17717137 | ? / Illumina TruSeq | Shape, arrow  Description automatically generated |

Samples from public databases have been tested using ASPICov workflow to see if the the pipeline can detect the VOI or VOC from various technologies. Updated on 17 september 2021. Sources : https://www.who.int/en/activities/tracking-SARS-CoV-2-variants/ and https://en.wikipedia.org/wiki/Variants\_of\_SARS-CoV-2