Public health, country knowledge, crisis management **Health Security**

EU health preparedness:

A common list of COVID-19 rapid antigen tests and a common standardised set of data to be included in COVID-19 test result certificates

Agreed by the Health Security Committee

This document was agreed by the HSC on 17 February 2021

Annex I Common list of COVID-19 rapid antigen tests

A first update was agreed by the HSC on 10 May 2021; A second update was agreed by the HSC on 16 June 2021; A third update was agreed by the HSC on 7 July 2021; A fourth update was agreed by the HSC on 14 July 2021; A fifth update was agreed by the HSC on 23 July 2021.

IMPORTANT: A (interim) grace period of 8 weeks applies whenever updates are made to Annex I, the common list of COVID-19 rapid antigen tests

Annex II

Common standardised data set to be included in COVID-19 test result certificates

An update to Annex II was agreed by the HSC on 19 March 2021

I. Introduction

Robust testing strategies are an essential aspect of preparedness and response to the COVID-19 pandemic, allowing for early detection of potentially infectious individuals and providing visibility on infection rates and transmission within communities. Moreover, they are a prerequisite to adequate contact tracing to limit the spread through prompt isolation. Also in the context of the circulation of SARS-CoV-2 variants of concern, surge testing in addition to existing testing deployment has proven to be key for controlling and suppressing further spread of the virus.

While the reverse transcription real-time polymerase chain reaction (RT-PCR) assay, which is a nucleic acid amplification test (NAAT), remains the 'gold standard' for COVID-19 diagnosis, rapid antigen tests, which detect the presence of viral proteins (antigens), are increasingly being used by Member States as a way of further strengthening countries' overall testing capacity, particularly in case of limited NAAT capacities or where prolonged testing turnaround times results in no clinical utility.

The Health Security Committee agreed on 17 September 2020 on Recommendations for a common EU testing approach for COVID-19¹, setting out various actions for consideration by countries when updating or adapting their testing strategies. The Recommendations included Member States' first experiences with rapid antigen tests and their deliberations concerning the settings and situations in which these tests should be used. Since then, the Committee has been discussing the use and application of rapid antigen tests in great depth, and has brought together a wealth of (technical) information on the types of tests used in European countries and the conditions applied.

On 21 January 2021, Member States unanimously agreed on a Council Recommendation setting a common framework for the use of rapid antigen tests and the mutual recognition of COVID-19 test results across the EU². The Council Recommendation called on Member States to agree on three concrete deliverables:

- 1. **A common list of COVID-19 rapid antigen tests** that are considered appropriate for use in the context of the situations described in the Council Recommendation, that are in line with countries' testing strategies and that:
 - a. carry CE marking;
 - b. meet the minimum performance requirements of $\geq 90\%$ sensitivity and $\geq 97\%$ specificity; and
 - c. have been validated by at least one Member State as being appropriate for their use in the context of COVID-19, providing details on the methodology and results of such studies, such as the sample type used for validation, the setting in which the use of the test was assessed, and whether any difficulties occurred as regards the required sensitivity criteria or other performance elements.

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 $^{^1\} https://ec.europa.eu/health/sites/health/files/preparedness_response/docs/common_testingapproach_covid-19_en.pdf$

² https://data.consilium.europa.eu/doc/document/ST-5451-2021-INIT/en/pdf

- 2. A selection of rapid antigen tests of which Member States will **mutually recognise** the test results for public health measures.
- 3. A common standardised set of data to be included in COVID-19 test result certificates, further facilitating the mutual recognition of COVID-19 test results.

Based on the information collected by the Health Security Committee (HSC), and taking into consideration the current epidemiological situation and the testing strategies and approaches that have been put in place across the EU, this document sets out the deliverables as agreed by Member States. Its content is prepared based on the criteria set out in the Council Recommendation and further criteria agreed by Member States, and considers the relevant recommendations published by the Commission³ as well as technical guidance issued the European Centre for Disease Prevention and Control (ECDC)⁴ and the World Health Organization (WHO)⁵.

II. Annex I: Common list of rapid antigen tests

Point 11 of the Council Recommendation of 21 January 2021, calls on Member States to, without prejudice to Directive 98/79/EC, agree on and maintain a common and updated list of COVID-19 rapid antigen tests that are considered appropriate for use in the context of the situations described under point 6 and are in line with countries' testing strategies. Moreover, the antigen tests included in the list should meet the three performance criteria as outlined in section I of this document.

This list should be shared with ECDC and the Commission to prevent duplication of work and to feed into ongoing initiatives, particularly the "COVID-19 In Vitro Diagnostic Devices and Test Methods Database⁶, hosted by the Joint Research Centre (JRC). Annex I to this document sets out a common list of rapid antigen tests that meet the criteria as specified by the Council. This list has been incorporated by the JRC in its COVID-19 In Vitro Diagnostic Devices and Test Methods Database.

A first update to Annex I was agreed by the Health Security Committee on 10 May 2021, a second update on 16 June 2021, a third update on 7 July 2021, a fourth update on 14 July 2021, and a fifth update on 23 July 2021.

The common list of rapid antigen tests is regularly being reviewed by Member States, and, if necessary, be updated in line with new results from independent validation studies becoming available and new tests entering the markets. These updates are also taking into account how mutations of the SARS-CoV-2 virus may affect the efficacy of any particular rapid antigen tests, allowing for the removal of tests no longer deemed effective. The effect of mutations of

 $^{^3}$ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32020H1595 and https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020H1743&from=EN

⁴ https://www.ecdc.europa.eu/en/publications-data/options-use-rapid-antigen-tests-covid-19-eueea-and-uk

⁵ https://www.who.int/publications/i/item/9789240017740

⁶ https://covid-19-diagnostics.jrc.ec.europa.eu/devices

the SARS-CoV-2 virus on the efficacy of NAAT, in particular RT-PCR assays, will also be kept under review.

On 7 July 2021, the HSC agreed that a (interim) grace period of 8 weeks applies whenever updates are made to Annex I, the common list of COVID-19 rapid antigen tests. The grace period, which will be further discussed by the HSC during summer 2021 and for which a new duration may be set in the future, applies to both the inclusion of new devices as well as the removal of rapid antigen tests that are included in the list.

As stipulated in point 15 of the Council Recommendation of 21 January 2021, Member States will agree on a selection of rapid antigen tests of which they will mutually recognise the test results for public health measures. The Health Security Committee agrees that, considering that *all* of the rapid antigen tests included in the EU common list are eligible for a test certificate issued as part of the EU Digital COVID Certificate⁷, the entire list is considered to consist of rapid antigen tests of which Member States mutually recognise the test results for public health measures.

III. HSC Technical Working Group on COVID-19 Diagnostic Tests

Based on the increasing political and commercial interest in the HSC agreed common list of rapid antigen tests, particularly in the context of the EU Digital COVID Certificate⁸, there is a need to put in place a more structured, coherent and swift procedure for updating the common list of rapid antigen tests. As a first step, since 10 May 2021, it is now possible for manufacturers to submit data and information concerning rapid antigen tests that they believe should be considered for inclusion in the HSC agreed common list. This information will thus be reviewed and considered alongside the proposals put forward by EU Member States.

Secondly, a HSC Technical Working Group on COVID-19 Diagnostic Tests was set up. This Working Group, consisting of technical experts from EU and EEA Member States, will be responsible for reviewing the information submitted by countries and manufacturers, taking into account the latest result of independent validation studies and country practices and experiences. Based on this, the technical working group will present proposals to the HSC for further updates to the common list of rapid antigen tests. The HSC will thus remain the platform where agreement between Member States is reached for updates to the list.

On 29 June 2021, the experts of the Technical Working Group agreed on (interim) definitions and criteria that should be considered for independent validation studies assessing the clinical performance of rapid antigen tests for COVID-19 diagnosis. There was a strong need to set these further criteria in addition to the ones presented in Council Recommendation 2021/24/01 for the accurate assessment of proposals put forward. As of 29 June, the following additional criteria have been taken into account by the Technical Working Group during their review process, and will stay in place until further notice:

8 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R0953&from=EN.

⁷ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R0953

Agreed (interim) definition of an independent validation study:

• A study that may involve collaborations with or that may involve funding by private entities, however, there is always a public body involved and the study is performed objectively and in the public interest.

Agreed (interim) clinical performance criteria for independent validation studies:

- In independent evaluations of unselected participants, assays should have a sensitivity of 90% or greater for subjects with a Ct ≤ 25, in symptomatic people (positive samples from early infection within the first 7 days after symptom onset).
- When this data is not yet available, for an interim period, a sensitivity of over 80% when testing unselected symptomatic participants, where the diagnosis is confirmed by PCR in independent field studies, will be accepted.
- Target population considered in the context of an independent validation study should be based on at least 100 positive samples and at least 100 negative samples.
- In all cases: assays should have a specificity of at least 98%.
- In all cases: samples should have been compared against PCR/NP swab (gold standard).

As a wide range of different methodologies and protocols are being applied in countries, discussions on further criteria and definitions will continue, with the overall goal to agree on and develop an EU harmonised approach for validation studies assessing the clinical performance of COVID-19 rapid antigen tests. This guidance is expected to be agreed in the course of summer 2021, also taking into account the ongoing work by the In Vitro Diagnostics Working Group of the Medical Device Coordination Group (MDCG IVD WG) regarding guidance on the performance of COVID-19 tests in the context of CE-marking and common specifications under Article 9 of Regulation (EU) 2017/746⁹.

Moreover, on 6 July 2021, the experts of the Technical Working Group agreed that:

- At the moment, the HSC agreed that the common list of rapid antigen tests only includes rapid antigen tests for which their clinical performance was measured based on samples collected from nasal, oropharyngeal or nasopharyngeal specimens.
- Rapid antigen tests that are based on other samples, such as saliva, sputum and/or faeces, are not included.
- ➤ The Technical Working Group will continue to monitor the development of these tests and will, if deemed necessary, consider their inclusion once relevant evidence and data has become available.
- > Similarly, at the moment, the HSC agreed that the common list of rapid antigen tests only includes those tests that are **conducted by trained healthcare personnel or**

⁹ The Medical Device Coordination Group is set up according to Art. 103 of Regulation (EU) 2017/745 and Art. 98 of Regulation (EU) 2017/746. This group is also responsible for overseeing the implementation of Directive 98/79/EC. See also Register of Commission Expert Groups and Other Similar Entities, code number X03565, and its subgroups.

trained operators where appropriate (in line with Commission Recommendation (EU) 2020/1743 of 18 November 2020).

- Rapid antigen self-tests are not included.
- > The Technical Working Group will continue to monitor the development of rapid antigen self-tests and will, if deemed necessary, consider their inclusion once relevant evidence and data has become available.
- ➤ Laboratory-based antigenic assays (e.g. enzyme immunoassays such as ELISA or automated tests) should also be reviewed by the HSC technical working group on COVID-19 diagnostic tests.
- As of 8 July 2021, it is possible for manufacturers and countries to put forward proposals for lab-based antigenic assays for review.
- As of September 2021, the technical working group will start reviewing the proposals and initiate discussions on these assays. The proposals will, in first instance, be assessed against the same criteria as described by Council Recommendation 2021/24/01 and as agreed by the experts of the Technical Working Group on 29 June 2021. Further criteria for lab-based antigenic assays may be defined at a later stage.

IV. Annex II: Common standardised set of data for COVID-19 test certificates

In order to facilitate in practice the mutual recognition of results of rapid antigen tests as well as NAAT, including RT-PCR assays, point 18 of Council Recommendation 2020/1475 defines that Member States should agree on a common standardised set of data to be included in the form for test result certificates.

Based on information that was submitted by members of the Health Security Committee in response to a survey on mutual recognition on COVID-19 test results and further discussions that took place in the context of the Health Security Committee, Member States agree on the common standardised set of data for COVID-19 test result certificates as presented in Annex II. Member States agree that COVID-19 test results should be made available in the national language(s) of the country where the test was taken, as well as English.

An update to this Annex was agreed by the Health Security Committee on 19 March 2021, addressing input received from the eHealth Network and in particular the Semantic Subgroup and based on discussions that took place in the context of the EU Digital COVID Certificate.

The Health Security Committee will discuss, whenever relevant, possible updates to the agreed common standardised set of data for COVID-19 test certificates, and publish, if necessary, an updated agreed document.

ANNEX I: Common list of rapid antigen tests¹⁰

As agreed by Member States on 23 July 2021

Disclaimer: This list was agreed by the HSC based on a proposal by the Technical Working Group on COVID-19 Diagnostic Tests. Experts participating in the Technical Working Group strongly recommend that use of rapid antigen tests is primarily intended for preliminary testing for SARS-CoV-2 infection in symptomatic patients, and note that rapid antigen tests should in particular be used in the specific contexts and circumstances referred to by the Commission Recommendation (EU) 2020/1743 of 18

November 2020 and the technical guidance by ECDC on 19 November 2020. The content of the common list is based on the clinical performance data and information that is available at this moment in time. The common list of rapid antigen tests does not include rapid antigen self-tests nor rapid antigen tests that are based on samples other than those collected from nasal, oropharyngeal or nasopharyngeal specimens. Updates to the common list are based on the criteria as described in Council Recommendation 2021/C 24/01 as well as the additional criteria and definitions agreed by the Technical Working Group on 29 June 2021. Discussions on criteria and definitions will continue during summer 2021, also taking into consideration the work carried out by the In Vitro Diagnostics Working Group of the Medical Device Coordination Group⁹ on guidance on the performance of COVID-19 tests in the context of CE-marking and common specifications under Article 9 of Regulation (EU) 2017/746.

| Manufacturer | RAT commercial name | CE marking | Clinical performance Data by manufacturer | Clinical performance Data used in MS | FIND evaluation studies | EU Member States using in practice | Other countries using in practice | Completed validation studies | MS currently validating | Device ID # in JRC database ¹¹ | Included in Common list of RATs as of: |
|-----------------------------|--|---------------|---|---|---|---|-----------------------------------|---|-------------------------------|---|--|
| AAZ-LMB | COVID-VIRO® Rapid antigen test COVID-19 | Yes | 96.6% sensitivity 100% specificity | BE: 96.6% sensitivity, 100% specificity, NP swab FR: >95%% sensitivity, 100% specificity SI: 96.6% sensitivity, 100% specificity, NP swab | | BE, FR, SI | СН | FR CH | | 1833 | 10 May 2021 |
| Abbott Rapid Diagnostics | Panbio™ COVID-19 Ag Rapid Test | Yes | 91.4% sensitivity 99.8% specificity NP swab (Ct ≤ 33) 98.1% sensitivity 99.8% specificity Nasal swab (Ct ≤ 33) | BE ^[6] : Small-scale head-to-head comparison of 5 RATs in Belgian hospital lab. Panbio overall sensitivity (Ct range 14,6 − 35,5): 45/57 samples (79%). Sensitivity for Ct≤25: 17/18 samples. Overall specificity 100%. DE: 91.4% sensitivity 99.8% specificity, NP swab; 98.1% sensitivity, 99,8 specificity, Nasal swab | - Days ≤ 7: 90.8%; - Ct ≤ 33: 88.3%; - Ct ≤ 25: 95.8%; Clinical specificity: 99.9% | AT, BE, BG, CY, CZ, DE ^[2] , DK, EE, EL, ES, FR ^[1] , HR, IT, LT, LV, MT, NL ^[5] , PL, PT, RO, SE, SK | I (H I\/I E I\/I K | DE ^[2] , ES, FI, NL ^[5] , PT CH, NO | CY, ES, HR, HU, IE, LU, SE | 1232 | 17 February 2021 |

¹⁰ This is the list of rapid antigen tests as referred to in Article 3 of the Regulation (EU) 2021/953 of the European Parliament and of the Council of 14 June 2021 on a framework for the issuance, verification and acceptance of interoperable COVID-19 vaccination, test and recovery certificates (EU Digital COVID Certificate) to facilitate free movement during the COVID-19 pandemic, OJ L 211, 15.6.2021, p. 1–22.

¹¹ See: https://covid-19-diagnostics.jrc.ec.europa.eu/.

| Manufacturer | RAT commercial name | CE marking | Clinical performance Data by manufacturer | Clinical performance Data used in MS | FIND evaluation studies | EU Member States using in practice | Other countries using in practice | Completed validation studies | MS currently validating | Device ID # in JRC database ¹¹ | Included in Common list of RATs as of: |
|--|---|---------------|---|---|---|---|-----------------------------------|------------------------------|-------------------------|---|--|
| | | | | FI: Validated in several laboratories (studies not published), meeting criteria. | Clinical sensitivities: - Days ≤ 7: 85.6%; - Ct ≤ 33: 89.7%; - Ct ≤ 25: 96.8%; Clinical specificity: 100% | | | | | | |
| | | | | | India (25 June 2021) 526 samples, NP swab Clinical sensitivities: - Days ≤7: 61.3%-100%; - Ct ≤33: 74.2%-86.7%; - Ct ≤ 25: 91.9%-100%; Clinical specificity: 100% | | | | | | |
| Acon Biotech (Hangzhou) Co., Ltd | SARS-CoV-2 Antigen Rapid Test | Yes | 96.9% sensitivity Nasal swab | DE : Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 94,1% at <ct25) +<br="">Manufacturer specificity: 99.54%xx%</ct25)> | | DE ^[2] , FR, PT | | DE ^[2] | | 1457 | 14 July 2021 |
| ACON Laboratories, Inc. | Flowflex SARS-CoV-2 Antigen Rapid Test | Yes | 96.9% sensitivity Nasal swab | BE: 96.9% sensitivity, 99.5% specificity, NP swab DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 94,1% at <ct25) +="" 98,7%<="" manufacturer="" specificity:="" td=""><td>CH (9 June 2021) 279 samples, nasal swab Clinical sensitivities: - Days ≤7: 92.2%; - Ct ≤33: 98.3%; - Ct ≤ 25: 100%; Clinical specificity: 99.5%</td><td>AT, BE, DE^[2], LT, LV, SI</td><td></td><td>DE^[2]</td><td></td><td>1468</td><td>10 May 2021</td></ct25)> | CH (9 June 2021) 279 samples, nasal swab Clinical sensitivities: - Days ≤7: 92.2%; - Ct ≤33: 98.3%; - Ct ≤ 25: 100%; Clinical specificity: 99.5% | AT, BE, DE ^[2] , LT, LV, SI | | DE ^[2] | | 1468 | 10 May 2021 |
| AESKU.DIAGNOS TICS GmbH & Co, KG | AESKU.RAPID SARS-CoV- 2 | Yes | 96% sensitivity 98% specificity NP swab | DE: 96% sensitivity, 98% specificity SI: 96% sensitivity, 98% specificity, Nasal swab | | AT, DE ^[2] , SI | | DE ^[2] | | 2108 | 10 May 2021 |
| Affimedix Inc. | TestNOW® - COVID-19 Antigen Test | Yes | 96.1% sensitivity 99.4% specificity NP swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +<br="">Manufacturer specificity: 99,4%</ct25)> | | DE ^[2] | | DE ^[2] | | 2130 | 10 May 2021 |
| AMEDA Labordiagnostik GmbH | AMP Rapid Test SARS- CoV-2 Ag | Yes | 97.3% sensitivity NP swab 97.3% sensitivity Nasal swab 100% specificity | BE: 97.3% sensitivity, 100% specificity, NP swab DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" 100%<="" manufacturer="" specificity:="" td=""><td></td><td>AT, BG, DE^[2] HR, SI</td><td>CH, UA</td><td>DE^[2] CH</td><td>HR</td><td>1304</td><td>17 February 2021</td></ct25)> | | AT, BG, DE ^[2] HR, SI | CH, UA | DE ^[2] CH | HR | 1304 | 17 February 2021 |

| Manufacturer | RAT commercial name | CE marking | Clinical performance Data by manufacturer | Clinical performance Data used in MS | FIND evaluation studies | EU Member States using in practice | Other countries using in practice | Completed validation studies | MS currently validating | Device ID # in JRC database ¹¹ | Included in Common list of RATs as of: |
|--|---|---------------|--|---|-------------------------|--|-----------------------------------|------------------------------|-------------------------|---|--|
| | | | | SI: 97.3% sensitivity, 100% specificity, NP swab | | | | | | | |
| Anbio (Xiamen) Biotechnology Co., Ltd | Rapid COVID-19 Antigen-Test (colloidal Gold) | Yes | | DE: 99.27% sensitivity, 100% specificity | | AT, DE ^[2] | | DE ^[2] | | 1822 | 10 May 2021 |
| Anhui Deep Blue Medical Technology Co., Ltd | COVID-19 (SARS-CoV-2) Antigen Test Kit (Colloidal Gold) | Yes | Nasal swab: 96,4% sensitivity, 99,8% specificity NP swab: 95,7% sensitivity, 99,3% specificity OP swab: 96,4% sensitivity, 99,8% specificity | BE: 95% sensitivity, 99% specificity, NP/OP swab DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" manufacturer="" specificity:="">99%</ct25)> | | BE, DE ^[2] | UK | DE ^[2] | | 1736 | 10 May 2021 |
| Anhui Deep Blue Medical Technology Co., Ltd | COVID-19 (SARS-CoV-2) Antigen Test Kit (Colloidal Gold) – Nasal swab | Yes | 96.4 % sensitivity 99.8 % specificity Nasal swab | DE: 96,4 % sensitivity, 99,8 % specificity | | DE ^[2] | | DE ^[2] | | 1815 | 10 May 2021 |
| ArcDia International Ltd | mariPOC SARS-CoV-2 | Yes | 92% sensitivity 100% specificity | FI: Meets the minimum performance requirements – see the report for details. | | FI | | <u>FI</u> | | 768 | 10 May 2021 |
| ArcDia International Oy Ltd | mariPOC Respi+ | Yes | 100 % sensitivity 100 % specificity NP swab | FI: Validated in several laboratories (studies not published), meeting criteria. | | FI, PT | | FI | | 2078 | 14 July 2021 |
| ArcDia International Oy Ltd | mariPOC Quick Flu+ | Yes | 100 % sensitivity 100 % specificity NP swab | FI: Validated in several laboratories (studies not published), meeting criteria. | | FI, PT | | FI | | 2079 | 14 July 2021 |
| Artron Laboratories Inc. | Artron COVID-19 Antigen Test | Yes | 96.67% (Nasal)sensitivity 91.67% (NP) sensitivity 100 % specificity Nasal/NP swab | DE : Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" 100%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>1618</td><td>14 July 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | 1618 | 14 July 2021 |
| Asan Pharmaceutical Co., Ltd | Asan Easy Test COVID- 19 Ag | Yes | | DE : 94.67% sensitivity, 97.71% specificity | | DE ^[2] | | DE ^[2] | | 1654 | 10 May 2021 |
| Assure Tech. (Hangzhou) Co., Ltd. | ECOTEST COVID-19 Antigen Rapid Test Device | Yes | 92.5 % sensitivity 99.2 % specificity Nasal/NP/ OP swab | DE : Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 95% at <ct25) +="" 99.2%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>770</td><td>14 July 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | 770 | 14 July 2021 |

| Manufacturer | RAT commercial name | CE marking | Clinical performance Data by manufacturer | Clinical performance Data used in MS | FIND evaluation studies | EU Member States using in practice | Other countries using in practice | Completed validation studies | MS currently validating | Device ID # in JRC database ¹¹ | Included in Common list of RATs as of: |
|--|---|---------------|--|---|-------------------------|--|-----------------------------------|------------------------------|-------------------------|---|--|
| Assure Tech. (Hangzhou) Co., Ltd. | ECOTEST COVID-19 Antigen Rapid Test Device | Yes | Sensitivity: 97.7%, Specificity: 99.1% NP and OP swab | DE : Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 95% at <ct25) +="" 99.1%<="" manufacturer="" specificity:="" td=""><td></td><td>CZ, DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>2350</td><td>23 July 2021</td></ct25)> | | CZ, DE ^[2] | | DE ^[2] | | 2350 | 23 July 2021 |
| Atlas Link Technology Co. Ltd. | NOVA Test ® SARS-CoV- 2 Antigen Rapid Test Kit (Colloidal Gold Immunochromatograph y) | Yes | 98.5 % sensitivity 99.4 % specificity Nasal/OP swab | DE: 97.6% sensitivity, 99.2% specificity | | AT, DE ^[2] , SI | СН | DE ^[2] CH | | 2010 | 10 May 2021 |
| Avalun | Ksmart® SARS-COV2 Antigen Rapid Test | Yes | Clinical Sensitivity: 93.18 % Clinical Specificity: 99.32 % NP swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 94,1% at <ct25) +<br="">Manufacturer specificity: 99,32%</ct25)> | | DE ^[2] | | DE ^[2] | | 1800 | 7 July 2021 |
| AXIOM Gesellschaft für Diagnostica und Biochemica mbH | COVID-19 Antigen Rapid Test | Yes | 98% sensitivity 100% specificity NP/Nasal swab | DE: 98.1% sensitivity, 100% specificity | | DE ^[2] | | DE ^[2] | | 2101 | 10 May 2021 |
| Azure Biotech, Inc. | COVID-19 Antigen Rapid Test Device | Yes | 95% sensitivity 99.2% specificity NP swab | DE: 94.3% sensitivity, 99.1% specificity | | DE ^[2] | | DE ^[2] | | 1906 | 10 May 2021 |
| Becton Dickinson | BD Veritor™ System for Rapid Detection of SARS CoV 2 | Yes | Clinical Sensitivity: 91.1 % Clinical Specificity: 99.6 % Nasal swab | NL: Independent field study in symptomatic individuals - sampling was Nasal midturbinate and OP swab. Sensitivity overall: 79.5% - Sensitivity Ct<30: 93.2% - Specificity overall: 99.8% | | NL | | NL | | 1065 | 7 July 2021 |
| Beijing Hotgen Biotech Co., Ltd | Novel Coronavirus 2019-nCoV Antigen Test (Colloidal Gold) | Yes | 97.1% sensitivity 99.76% specificity | BE: 98.6% sensitivity, 100% specificity, NP Swab 97.3% sensitivity, 99.2% specificity. OP swab DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" 96.6%="" 99.76%="" 99.8%="" manufacturer="" np="" sensitivity,="" si:="" specificity,="" specificity:="" swab<="" td=""><td>Ongoing</td><td>AT, BE, DE^[2], RO, SI</td><td></td><td>DE^[2]</td><td></td><td>1870</td><td>10 May 2021</td></ct25)> | Ongoing | AT, BE, DE ^[2] , RO, SI | | DE ^[2] | | 1870 | 10 May 2021 |

| Manufacturer | RAT commercial name | CE marking | Clinical performance Data by manufacturer | Clinical performance Data used in MS | FIND evaluation studies | EU Member States using in practice | Other countries using in practice | Completed validation studies | MS currently validating | Device ID # in JRC database ¹¹ | Included in Common list of RATs as of: |
|--|---|---------------|--|---|--|--|-----------------------------------|------------------------------|-------------------------|---|--|
| Beijing Jinwofu Bioengineering Technology Co.,Ltd. | Novel Coronavirus (SARS-CoV-2) Antigen Rapid Test Kit | Yes | 96.88 % sensitivity 100 % specificity Nasal/ NP/ OP swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" 100%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>2072</td><td>14 July 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | 2072 | 14 July 2021 |
| Beijing Lepu Medical Technology Co., Ltd | SARS-CoV-2 Antigen Rapid Test Kit | Yes | 92% sensitivity Nasal swab | BE: 92% sensitivity, 99.3% specificity, Nasal DE: 92.0% sensitivity, 99.26% specificity SI: 92% sensitivity, 99.2% specificity, NP | | AT, BE, DE ^[2] , SI, RO | UA | DE ^[2] | | 1331 | 17 February 2021 |
| Beijing Wantai Biological Pharmacy Enterprise Co., Ltd | Wantai SARS-CoV-2 Ag Rapid Test (FIA) | Yes | 96.6% sensitivity, Nasal swab | DE : 96.6% sensitivity, 96.9% specificity | | DE ^[2] | | DE ^[2] | | 1484 | 17 February 2021 |
| Beijing Wantai Biological Pharmacy Enterprise Co., Ltd | Wantai SARS-CoV-2 Ag Rapid Test (colloidal gold) | Yes | 96.1 % sensitivity 99% specificity Nasal swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +<br="">Manufacturer specificity: 99%</ct25)> | | DE ^[2] | | DE ^[2] | | 1485 | 14 July 2021 |
| BioGnost Ltd | CoviGnost AG Test Device 1x20 | Yes | Sensitivity: 96%, Specificity: 99% NP swab | HR: 300 NP samples (retrospective), symptomatic (<7 dps): 200 PCR+ samples (range Ct 16-30), Ct<30: sensitivity 96.5% 100 PCR- samples: specificity 100% | | HR | | HR | | 2247 | 23 July 2021 |
| BIOHIT HealthCcare (Hefei) Co., Ltd. | SARS-CoV-2 Antigen Rapid Test Kit (Fluorescence Immunochromato- graphy) | Yes | Sensitivity: 96.77% Specificity: 98.9% NP/OP swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +<br="">Manufacturer specificity: 98.9%</ct25)> | | DE ^[2] | | DE ^[2] | | Yes (1286) | 23 July 2021 |
| BioMaxima SA | SARS-CoV-2 Ag Rapid Test | Yes | Sensitivity: 95% Specificity: 99% NP Swab | PL: Diagnostic sensitivity: 93.43% (95% CI: 91.61%~97.19%); diagnostic specificity: 97.75%, manufacturer specificity: 99.1% | | PL | | PL | | Yes (2035) | 23 July 2021 |
| Biomerica Inc. | Biomerica COVID-19 Antigen Rapid Test (nasopharyngeal swab) | Yes | Clinical Sensitivity: 94.7 % Nasal/NP swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" 99,7%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>1599</td><td>7 July 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | 1599 | 7 July 2021 |
| BIONOTE | NowCheck COVID-19 Ag Test | Yes | Clinical Sensitivity: 90.91 % Clinical Specificity: 99.43 % | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +<br="">Manufacturer specificity: 98,6%</ct25)> | Brazil (20 April 2021) 400 samples, NP swab Clinical sensitivities: - Days < 7: 92.2%; - Ct < 33: 91.4%; | DE ^[2] | | DE ^[2] | | 1242 | 7 July 2021 |

| Manufacturer | RAT commercial name | CE marking | Clinical performance Data by manufacturer | Clinical performance Data used in MS | FIND evaluation studies | EU Member States using in practice | Other countries using in practice | Completed validation studies | MS currently validating | Device ID # in JRC database ¹¹ | Included in Common list of RATs as of: |
|---------------|---------------------------------------|---------------|--|--|---|--|-----------------------------------|---|-------------------------|---|--|
| | | | | | - Ct ≤ 25: 94.8%; Clinical specificity: 97.3% Brazil (30 March 2021) 218 samples, Nasal/NP swab. Clinical sensitivities: - Days ≤ 7: 92.5% (N/NP); - Ct ≤ 33: 97.2% (N/NP); - Ct ≤ 25: 100% (N/NP); Clinical specificity: 98.6% | | | | | | |
| BIO-RAD | CORONAVIRUS AG RAPID TEST CASSETTE | Yes | 98,32% / Nasal Swab: 97,25%) Clinical Specificity: 99 % (NP Swab: 99,6% / Nasal Swab: 100%) | PS: NP swab: sensitivity 98,3%; specificity 99,6% (119 positive samples, 746 negative samples) Nasal swab: sensitivity 97,2%; specificity 100% (109 positive samples, 128 negative samples) | | ES | | ES | | 2031 | 7 July 2021 |
| BIOSYNEX S.A. | BIOSYNEX COVID-19 Ag BSS | Yes | 96% sensitivity, 100% specificity, NP swab | BE ^[6] : Small-scale head-to-head comparison of 5 RATs in Belgian hospital lab. Biosynex overall sensitivity (Ct range 14,6 − 35,5): 52/58 samples (89,7%). Sensitivity for Ct≤25: 18/18 samples. Overall specificity only 46,2%, but this is probably linked to the use of transport medium instead of the swab included in the kit. DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" 100%="" 100%<="" 96.0%;="" ct≤30:="" field="" independent="" individuals,="" mainly="" manufacturer="" nl:="" overall:="" sensitivity="" specificity="" specificity:="" study,="" symptomatic="" td=""><td></td><td>AT, BE, DE^[2], DK,FR, NL^[5], PT</td><td>СН</td><td>DE^[2], NL^[5], CH</td><td>DK</td><td>1223</td><td>17 February 2021</td></ct25)> | | AT, BE, DE ^[2] , DK,FR, NL ^[5] , PT | СН | DE ^[2] , NL ^[5] , CH | DK | 1223 | 17 February 2021 |
| BIOSYNEX SA | BIOSYNEX COVID-19 Ag+ BSS | Yes | Clinical Sensitivity: 97.5 % | FR: Validation study data: 125 positive and 118 negative samples; sensitivity 96%, specificity: 99% | | FR | | FR | | 1494 | 7 July 2021 |

| Manufacturer | RAT commercial name | CE marking | Clinical performance Data by manufacturer | Clinical performance Data used in MS | FIND evaluation studies | EU Member States using in practice | Other countries using in practice | Completed validation studies | MS currently validating | Device ID # in JRC database ¹¹ | Included in Common list of RATs as of: |
|---|---|---------------|---|--|-------------------------|--|-----------------------------------|------------------------------|-------------------------|---|--|
| BIOTEKE CORPORATION (WUXI) CO., LTD | SARS-CoV-2 Antigen Test Kit (colloidal gold method) | Yes | 96.49 % sensitivity 99.28 % specificity OP/NP swab | DE : Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 95% at <ct25) +="" 99.28%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>2067</td><td>14 July 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | 2067 | 14 July 2021 |
| Biotical Health S.L.U.BIOTICAL HEALTH S.L.U | biotical SARS-CoV-2 Ag Card | Yes | Sensitivity: 96%, Specificity: 99% NP swab | BE: Validation study 1: sensitivity 91.7% for Ct≤25; Validation study 2: 94% for Ct≤25. Manufacturer specificity: 99% | | BE | | BE | | Yes (2013) | 23 July 2021 |
| Boditech Med Inc | AFIAS COVID-19 Ag | Yes | Sensitivity: 91.7%, Specificity: 98.7% NP swab | NL: Independent field study in mild symptomatic (n= 427); overall sensitivity: 81.1% (106 PCR+), Ct <30: 96.4% (85 PCR+), PCR on NP+OP, Target antigen = nucleoprotein | | FR, NL | | NL | | Yes (1989) | 23 July 2021 |
| BTNX Inc | Rapid Response COVID- 19 Antigen Rapid Test | Yes | | DE: 94.55% sensitivity, 100% specificity | | AT, DE ^[2] , ES, SI | | DE ^[2] | | 1236 | 10 May 2021 |
| CerTest Biotec | CerTest SARS-CoV-2 Card test | Yes | 92.9% sensitivity 99.6% specificity NP swab | ES: Ct ≤ 25, sensitivity: 94,0%; sensitivity for samples within the first 5 days after symptom onset: 84,8% | | ES, PT, SI | | DE ^[2] , ES | | 1173 | 17 February 2021 |
| Core Technology Co., Ltd | Coretests COVID-19 Ag Test | Yes | 98.1% sensitivity 99.6% specificity NP swab | DE : 98.1% sensitivity, 99.6% specificity | | AT, DE ^[2] , RO | | DE ^[2] | | 1919 | 10 May 2021 |
| CTK Biotech, Inc | OnSite COVID-19 Ag Rapid Test | Yes | Clinical Sensitivity: 92.3 % Clinical Specificity: 100 % Nasal, NP swab | ES: 219 samples; Nasal swab - Clinical sensitivity 86% (90%: Ct <30) Specificity: 100% (Method B) DK: 107 samples; Nasal swab - clinical sensitivity 86%; (from asymptomatic and mild symptomatic individuals), Clinical specificity: 100% | To start | DK | | DK, ES | | 1581 | 7 July 2021 |
| DDS DIAGNOSTIC | Test Rapid Covid-19 Antigen (tampon nazofaringian) | Yes | 98.77% sensitivity 99.03% specificity Nasal swab | RO: Meets the minimum performance requirements. | | RO | | RO China | RO | 1225 | 10 May 2021 |
| DIALAB GmbH | DIAQUICK COVID -19 Ag Cassette | Yes | | BE: Z20401CE: 93.2% sensitivity, 100% specificity, NP swab | | AT, BE, DE ^[2] | | DE ^[2] | | 1375 | 10 May 2021 |

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|-------------------------------|--|---------------|--|---|---|--|-----------------------------------|------------------------------|-------------------------|---|--|
| | | | | Z20601CE: 96.4% sensitivity, 99.2% specificity, NP swab | | | | | | | |
| | | | | DE : 97.3% sensitivity, 100% specificity | | | | | | | |
| DNA Diagnostic | COVID-19 Antigen Detection Kit | Yes | Sensitivity: 93.8%, Specificity: 99.6% Nasal swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" 99.56%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>Yes (2242)</td><td>23 July 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | Yes (2242) | 23 July 2021 |
| Edinburgh Genetics Limited | Edinburgh Genetics ActivXpress+ COVID-19 Antigen Complete Testing Kit | Yes | | DE: Positive evaluation by Paul-Ehrlich-Institut (Sensitivity of 100% at <ct25) +="" 99,24%<="" manufacturer="" specificity:="" td=""><td>Peru (26 April 2021) 120 samples, NP swab Clinical sensitivities: - Days ≤ 7: 62%; - Ct ≤ 33: 75%; - Ct ≤ 25: 100%; Clinical specificity: 100%</td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>1243</td><td>14 July 2021</td></ct25)> | Peru (26 April 2021) 120 samples, NP swab Clinical sensitivities: - Days ≤ 7: 62%; - Ct ≤ 33: 75%; - Ct ≤ 25: 100%; Clinical specificity: 100% | DE ^[2] | | DE ^[2] | | 1243 | 14 July 2021 |
| Eurobio Scientific | EBS SARS-CoV-2 Ag Rapid Test | Yes | Clinical Sensitivity: 95.7 % Nasal swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 94,1% at <ct25) +="" 119="" 125="" 93%,="" 99%<="" 99,1%="" and="" data:="" fr:="" manufacturer="" negative="" positive="" samples;="" sensitivity="" specificity:="" study="" td="" validation=""><td></td><td>DE^[2], FR</td><td></td><td>DE^[2], FR</td><td></td><td>1739</td><td>7 July 2021</td></ct25)> | | DE ^[2] , FR | | DE ^[2] , FR | | 1739 | 7 July 2021 |
| Fujirebio | ESPLINE SARS-CoV-2 | Yes | Clinical Sensitivity: 87.8 % ((n=98, Ct<33)) Clinical Specificity: 100 % NP swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 94,1% at <ct25) +="" 99,13%<="" manufacturer="" specificity:="" td=""><td>DE (29 March 2021) 723 samples, NP swab Clinical sensitivities: - Days ≤ 7: 88.5%; - Ct ≤ 33: 87.8%; - Ct ≤ 25: 92.4%; Clinical specificity: 100%</td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>2147</td><td>7 July 2021</td></ct25)> | DE (29 March 2021) 723 samples, NP swab Clinical sensitivities: - Days ≤ 7: 88.5%; - Ct ≤ 33: 87.8%; - Ct ≤ 25: 92.4%; Clinical specificity: 100% | DE ^[2] | | DE ^[2] | | 2147 | 7 July 2021 |
| GA Generic Assays GmbH | GA CoV-2 Antigen Rapid Test | Yes | Sensitivity: 97.059%, Specificity: 99.2% NP swab | DE : Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" 99.2%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>Yes (1855)</td><td>23 July 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | Yes (1855) | 23 July 2021 |
| GenBody Inc | Genbody COVID-19 Ag Test | Yes | 90% sensitivity 98% specificity NP/OP swab | DE : 90% sensitivity 98% specificity | Withdrawn | DE ^[2] | UA | DE ^[2] | | 1244 | 17 February 2021 |
| Genrui Biotech Inc | SARS-CoV-2 Antigen Test Kit (Colloidal Gold) | Yes | Sensitivity: 91.15% Specificity: 99.02% Nasal/NP/OP swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 94,1% at <ct25) +="" 99,02%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>2012</td><td>7 July 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | 2012 | 7 July 2021 |

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|---|---|---------------|--|---|---|--|-----------------------------------|------------------------------|-------------------------|---|--|
| GenSure Biotech Inc | GenSure COVID-19 Antigen Rapid Test Kit | Yes | 96.86% sensitivity, 100% specificity Nasal swab | DE : Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 94,1% at <ct25) +="" 100%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>1253</td><td>10 May 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | 1253 | 10 May 2021 |
| Getein Biotech, Inc | SARS-CoV-2 Antigen (Colloidal Gold) | Yes | 97.06% sensitivity 98.71% specificity Nasal swab | DE : Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" 98.71%<="" manufacturer="" specificity:="" td=""><td></td><td>AT, DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>1820</td><td>14 July 2021</td></ct25)> | | AT, DE ^[2] | | DE ^[2] | | 1820 | 14 July 2021 |
| Getein Biotech, Inc. | One Step Test for SARS- CoV-2 Antigen (Colloidal Gold) | Yes | 97.06% sensitivity 98.71% specificity Nasal swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 90% at <ct30 100%="" <ct25)<="" and="" at="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>2183</td><td>16 June 2021</td></ct30> | | DE ^[2] | | DE ^[2] | | 2183 | 16 June 2021 |
| Goldsite Diagnostic Inc. | SARS-CoV-2 Antigen Kit (Colloidal Gold) | Yes | | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity 100% at <ct25)< td=""><td></td><td>BE, BG, CY, FR, RO, SI, ES</td><td>UK</td><td>FR, DE^[2], ES</td><td></td><td>1197</td><td>14 July 2021</td></ct25)<> | | BE, BG, CY, FR, RO, SI, ES | UK | FR, DE ^[2] , ES | | 1197 | 14 July 2021 |
| Green Cross Medical Science Corp. | GENEDIA W COVID-19 Ag | Yes | 100% sensitivity 90.1% sensitivity NP swab, Anterior nasal swab | BE: 90.2% sensitivity, 100% specificity, NP swab DE: 90.1% sensitivity, 100% specificity | | AT, BE, DE ^[2] | | DE ^[2] | | 1144 | 10 May 2021 |
| Guangdong Hecin Scientific, Inc. | 2019-nCoV Antigen Test Kit (colloidal gold method) | Yes | 96.23% sensitivity Nasal swab | DE : 96.6% sensitivity, 99.07% specificity | | AT, DE ^[2] | | DE ^[2] | | 1747 | 10 May 2021 |
| Guangdong Longsee Biomedical Co., Ltd. | COVID-2019-nCoV Ag Rapid TestDetection Kit(Immuno- Chromatography) | Yes | 99.72% specificity NP/OP swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" 99.5%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>1216</td><td>14 July 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | 1216 | 14 July 2021 |
| Guangdong Wesail Biotech Co. Ltd | COVID-19 Ag Test Kit | Yes | 90% sensitivity 98% specificity Nasal swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" 90%="" 98%="" manufacturer="" nasal="" np="" sensitivity,="" si:="" specificity,="" specificity:="" swab<="" td=""><td></td><td>DE^[2], SI</td><td></td><td>DE^[2]</td><td></td><td>1360</td><td>17 February 2021</td></ct25)> | | DE ^[2] , SI | | DE ^[2] | | 1360 | 17 February 2021 |
| Guangzhou Decheng Biotechnology CO., Ltd | V-CHEK, 2019-nCoV Ag Rapid Test Kit (Immunochromatograp hy) | Yes | Clinical Sensitivity: 96.67 % Nasal swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 94,1% at <ct25) +="" 99,5%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>1324</td><td>7 July 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | 1324 | 7 July 2021 |
| Guangzhou Wondfo Biotech Co., Ltd | Wondfo 2019-nCoV Antigen Test (Lateral Flow Method) | Yes | | BE: 96.2% sensitivity, 99.7% specificity, NP/OP swab DE: 96.18 % sensitivity, 99.72% specificity | CH (25 Feb 2020) 328 samples, NP swab Clinical sensitivities: - Days < 7: 85.7%; | AT, BE, BG, DE ^[2] , FR | СН | DE ^[2] | | 1437 | 10 May 2021 |

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|---|--|---------------|--|--|---|--|-----------------------------------|------------------------------|-------------------------|---|--|
| | | | | | - Ct < 33: 92.2%; - Ct ≤ 25: 100%; Clinical specificity: 100% | | | | | | |
| Hangzhou Lysun Biotechnology Co. Ltd | COVID-19 Antigen Rapid Test Device (Colloidal Gold) | Yes | 96.46% sensitivity 100% specificity Nasal swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" 100%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td>СН</td><td>DE^[2]</td><td></td><td>2139</td><td>10 May 2021</td></ct25)> | | DE ^[2] | СН | DE ^[2] | | 2139 | 10 May 2021 |
| Hangzhou AllTest Biotech Co., Ltd | COVID-19 Antigen Rapid Test | Yes | NP swab | DE: 93,40% sensitivity, 99,90% specificity | | AT, BE, BG, FR, SI, RO | СН | DE ^[2] | АТ | 1257 | 10 May 2021 |
| Hangzhou Clongene Biotech Co., Ltd | COVID-19 Antigen Rapid Test Casette | Yes | Clinical Sensitivity: 91.4 % Clinical Specificity: 100 % NP swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 94,4% at <ct25) +<br="">Manufacturer specificity: 100%</ct25)> | | DE ^[2] | | DE ^[2] | | 1610 | 7 July 2021 |
| Hangzhou Clongene Biotech Co., Ltd. | Covid-19 Antigen Rapid Test Kit | Yes | 98.5% (Ct<33) sensitivity Nasal swab | BE: 91.4% sensitivity, 100% specificity, NP/OP swab DE: 91.4% sensitivity, 99.4% specificity SI: 91.4% sensitivity, 100% specificity, NP/OP swab | | AT,BE, DE ^[2] , FR, SI | СН | DE ^[2] CH | HR | 1363 | 17 February 2021 |
| Hangzhou Clongene Biotech Co., Ltd. | COVID-19/Influenza A+B Antigen Combo Rapid Test | Yes | 91% sensitivity 100% specificity NP swab | DE : 97.7% sensitivity, 99.8% specificity | | DE ^[2] | | DE ^[2] | | 1365 | 10 May 2021 |
| Hangzhou Immuno Biotech Co., Ltd | Immunobio SARS-CoV-2 Antigen ANTERIOR NASAL Rapid Test Kit (minimal invasive) | Yes | 94% sensitivity 100% specificity Nasal swab, NP | DE : 94.39% sensitivity 97.67% specificity | | DE ^[2] | | DE ^[2] | | 1844 | 10 May 2021 |
| Hangzhou Immuno Biotech Co., Ltd | SARS-CoV2 Antigen Rapid Test | Yes | Clinical Sensitivity 98 % Clinical Specificity 100 % | DE: 95.6% sensitivity, 100% specificity | | AT, DE ^[2] | | DE ^[2] | | 2317 | 10 May 2021 |
| Hangzhou Laihe Biotech Co. | LYHER Novel Coronavirus (COVID-19) Antigen Test Kit (Colloidal Gold) | Yes | Clinical Sensitivity: 95.07% % Clinical Specificity: 99.74% Nasal swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 94,1% at <ct25) +="" 99,7%<="" manufacturer="" specificity:="" td=""><td></td><td>AT, DE^[2]</td><td>СН</td><td>DE^[2]</td><td></td><td>1215</td><td>10 May 2021</td></ct25)> | | AT, DE ^[2] | СН | DE ^[2] | | 1215 | 10 May 2021 |
| Hangzhou Testsea Biotechnology Co., Ltd. | Covid-19 Antigen Test Cassette | Yes | 92.1% sensitivity 98.1% specificity Nasal swab | DE : 97.6% sensitivity 98.4% specificity | | DE ^[2] | | DE ^[2] | | 1392 | 10 May 2021 |

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|--|--|---------------|---|--|---|---|-----------------------------------|---------------------------------------|-------------------------|---|--|
| Healgen Scientific | Coronavirus Ag Rapid Test Cassette | Yes | 80.6 % sensitivity 99.7% specificity NP swab | DE: 97.25% sensitivity, 100% specificity SI: 96.7% sensitivity, 99.2% specificity, NP/Nasal swab | | AT, DE ^[2] , NL ^[5] , SE, SI | СН | DE ^[2] , NL ^[5] | SE ^[3] | 1767 | 17 February 2021 |
| Hubei Jinjian Biology Co., Ltd | SARS-CoV-2 Antigen Test Kit | Yes | Sensitivity: 98.02% Nasal Swab | DE : Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) %<="" +="" 99.3="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>Yes (1759)</td><td>23 July 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | Yes (1759) | 23 July 2021 |
| Humasis | Humasis COVID-19 Ag Test | Yes | 95.3% sensitivity Nasal swab | BE: 95.5% sensitivity, 100% specificity, NP swab DE: 95.5% sensitivity, 100% specificity SI: 95.5% sensitivity, 100% specificity, NP swab | | AT, BE, BG, DE ^[2] , FR, HR, SE, SI | | DE ^[2] | HR, SE | 1263 | 10 May 2021 |
| Jiangsu Bioperfectus Technologies Co., Ltd. | Novel Corona Virus (SARS-CoV-2) Ag Rapid Test Kit | Yes | | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" 99.15%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>2107</td><td>14 July 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | 2107 | 14 July 2021 |
| Jiangsu Diagnostics Biotechnology Co., Ltd | COVID-19 Antigen Rapid Test Cassette (Colloidal Gold) | | 97.58 % sensitivity 100 % specificity Nasal/NP/ OP swab | DE : Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" 100%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>1920</td><td>14 July 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | 1920 | 14 July 2021 |
| Jiangsu Medomics medical technology Co.,Ltd. | SARS-CoV-2 antigen Test Kit (LFIA) | Yes | Clinical Sensitivity: 97.73 % Clinical Specificity: 99.51 % Anterior nasal swab, NP swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 94,1% at <ct25) +="" 99,51%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>2006</td><td>7 July 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | 2006 | 7 July 2021 |
| Joinstar Biomedical Technology Co. Ltd | COVID-19 Rapid Antigen Test (Colloidal Gold) | Yes | 96.1% sensitivity 98.1% specificity Nasal swab | DE: 96.1% sensitivity, 98.1% specificity SI: 96.1% sensitivity, 98.1% specificity, NP swab | | AT, DE ^[2] , PT, SI | | DE ^[2] | | 1333 | 17 February 2021 |
| JOYSBIO (Tianjin) Biotechnology Co., Ltd. | SARS-CoV-2 Antigen Rapid Test Kit (Colloidal Gold immunochromatograph y) | Yes | 98.13% sensitivity Nasal swab | CZ: Meets the minimum performance requirements – see <u>report</u> for details. | CH (11 Feb 2021) 265 samples, Nasal swab Clinical sensitivities: - Days ≤ 7: 74.2%; - Ct ≤ 33: 78.9%; - Ct ≤ 25: 91.3%; Clinical specificity: 99.1% | AT, CZ, SI | | CZ, DE ^[2] CH | | 1764 | 10 May 2021 |

| Manufacturer | RAT commercial name | CE marking | Clinical performance Data by manufacturer | Clinical performance Data used in MS | FIND evaluation studies | EU Member States using in practice | Other countries using in practice | Completed validation studies | MS currently validating | Device ID # in JRC database ¹¹ | Included in Common list of RATs as of: |
|---|--|---------------|--|--|-------------------------|--|-----------------------------------|--|-------------------------|---|--|
| Labnovation Technologies Inc. | SARS-CoV-2 Antigen Rapid Test Kit | Yes | NP/OP swab | DE: 96.3% sensitivity, 97.3% specificity SI: 96.3% sensitivity, 97.3% specificity, NP/OP swab | | DE ^[2] , IT, SI | | DE ^[2] | | 1266 | 10 May 2021 |
| Lumigenex (Suzhou) Co., Ltd | PocRoc® SARS-CoV-2 Antigen Rapid Test Kit (Colloidal Gold) | Yes | 93.33% sensitivity 99.16% specificity Nasal/NP/OP swab | DE : Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" 99,16%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>2128</td><td>10 May 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | 2128 | 10 May 2021 |
| LumiQuick Diagnostics Inc. | QuickProfile™ COVID-19 Antigen Test | Yes | | BE: 94% sensitivity, 99% specificity, NP swab DE: 93.7% sensitivity, 98.8% specificity SI: 93.7% sensitivity, 98.8% specificity, NP swab | | BE, DE ^[2] ,FR, SI, | | DE ^[2] | | 1267 | 10 May 2021 |
| LumiraDX | LumiraDx SARS-CoV-2 Ag Test | Yes | 97.6% sensitivity 96.6% specificity Nasal swab | DE: 93.8% sensitivity, 98.8% specificity SI: 97.6% sensitivity, 97.7% specificity, NP/Nasal swab SKUP/2021/124: 90% sensitivity, 97,8% specificity, NP swab | To start | DE ^[2] , ES, SI | СН | DE ^[2] , ES, SKUP – (Scandinavia n evaluation of laboratory equipment for point of care testing) CH | | 1268 | 17 February 2021 |
| MEDsan GmbH | MEDsan SARS-CoV-2 Antigen Rapid Test | Yes | 92.5% sensitivity 99.8% specificity NP/OP swab | BE: 92.5% sensitivity, 99.8% specificity, Nasal/OP swab DE: 92.5% sensitivity, 99.8% specificity | | AT, BE, DE ^[2] | СН | DE ^[2] CH | | 1180 | 17 February 2021 |
| Merlin Biomedical (Xiamen) Co., Ltd. | SARS-CoV-2 Antigen Rapid Test Cassette | Yes | 95.05% sensitivity 98.99% specificity Nasal/NP swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 90% at <ct30 100%="" <ct25)<="" and="" at="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>2029</td><td>16 June 2021</td></ct30> | | DE ^[2] | | DE ^[2] | | 2029 | 16 June 2021 |
| MEXACARE GmbH | MEXACARE COVID-19 Antigen Rapid Test | Yes | Clinical Sensitivity: 96.17 % Nasal swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" 99,1%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>1775</td><td>7 July 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | 1775 | 7 July 2021 |
| möLab | mö-screen Corona Antigen Test | Yes | NP swab | DE : 97.25% sensitivity , 99.99% specificity | | DE ^[2] , IE | | DE ^[2] , IE | | 1190 | 10 May 2021 |

| Manufacturer | RAT commercial name | CE marking | Clinical performance Data by manufacturer | Clinical performance Data used in MS | FIND evaluation studies | EU Member States using in practice | Other countries using in practice | Completed validation studies | MS currently validating | Device ID # in JRC database ¹¹ | Included in Common list of RATs as of: |
|--|--|---------------|---|---|--|--|-----------------------------------|---------------------------------|-------------------------|---|--|
| MP Biomedicals | Rapid SARS-CoV-2 Antigen Test Card | Yes | 96.17% sensitivity 99.16% specificity Nasal swab, Anterior nasal swab | BE: 96.4% sensitivity, 99% specificity, NP/OP swab DE: 96.39 % sensitivity, 99.03% specificity | | AT, BE, DE ^[2] | СН | DE ^[2] CH | | 1481 | 17 February 2021 |
| Nal von minden GmbH | NADAL COVID -19 Ag +Influenza A/B Test | Yes | 97% sensitivity 98% specificity NP swab | DE : 97.6% sensitivity, 99.9% specificity | | DE ^[2] | | DE ^[2] | | 2104 | 10 May 2021 |
| Nal von minden GmbH | NADAL COVID -19 Ag Test | Yes | 97.6% sensitivity 99.9% specificity Nasal swab | NP/OP swab DE:97.6% sensitivity, 99.9% specificity SI: 97.6% sensitivity, 99.9% specificity, NP/OP swab | CH (26 April 2021) 462 samples, NP swab Clinical sensitivities: - Days ≤ 7: 88.5%; - Ct ≤ 33: 92.4%; - Ct ≤ 25: 97.8%; Clinical specificity: 99.2% | AT, BE, CY DE ^[2] , FR, PT, SI | | DE ^[2] , FR China | HR, SKUP | 1162 | 17 February 2021 |
| NanoEntek | FREND COVID-19 Ag | Yes | 94.12% sensitivity 100% specificity NP swab | DE: 94.12% sensitivity , 100% specificity | | DE ^[2] | | DE ^[2] | | 1420 | 10 May 2021 |
| NanoRepro AG | NanoRepro SARS-CoV-2 Antigen Rapid Test | Yes | 97.2 % sensitivity 98.4% specificity Nasal/NP/OP swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 94,1% at <ct25) +="" 98.4%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>2200</td><td>14 July 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | 2200 | 14 July 2021 |
| NESAPOR EUROPA SL | MARESKIT COVID-19 ANTIGEN RAPID TEST KIT | Yes | Sensitivity: 95.24%, Specificity: 100% Nasal swab | ES: Independent validation study; Nasal test compared to nasal PCR. Sensitivity 95.24%, Specificity 100%. | | ES | | ES | | Yes (2241) | 23 July 2021 |
| New Gene (Hangzhou) Bioengineering Co., Ltd. | COVID-19 Antigen Detection Kit | Yes | 98% sensitivity Nasal swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 92,5% at <ct30 100%="" <ct25)<="" and="" at="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>1501</td><td>16 June 2021</td></ct30> | | DE ^[2] | | DE ^[2] | | 1501 | 16 June 2021 |
| Novatech | SARS-CoV-2 Antigen Rapid Test | Yes | 95 % sensitivity 100% specificity Nasal/ NP swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 94,1% at <ct25) +<br="">Manufacturer specificity: 100%</ct25)> | | DE ^[2] | | DE ^[2] | | 1762 | 14 July 2021 |
| Oncosem Onkolojik Sistemler San. ve Tic. A.S. | CAT | Yes | 93.75% sensitivity 98.04% specificity Nasal swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 94,1% at <ct25) +="" 98,04%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>1199</td><td>10 May 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | 1199 | 10 May 2021 |

| Manufacturer | RAT commercial name | CE marking | Clinical performance Data by manufacturer | Clinical performance Data used in MS | FIND evaluation studies | EU Member States using in practice | Other countries using in practice | Completed validation studies | MS currently validating | Device ID # in JRC database ¹¹ | Included in Common list of RATs as of: |
|---|--|---------------|--|--|-------------------------|---|-----------------------------------|---|-------------------------|---|--|
| PCL Inc. | PCL COVID19 Ag Rapid FIA | Yes | | DE: 94,92 % sensitivity, 99,99 % specificity SI: 95.5% sensitivity, 98.6% specificity, NP/OP swab, sputum | | FR, DE ^[2] , RO, SI | | DE ^[2] | | 308 | 10 May 2021 |
| PCL Inc. | PCL COVID19 Ag Gold | Yes | | FR: Validation study data: 120 positive and 200 negative samples; sensitivity 92%, specificity: 100% | | FR, PT | | FR | | 2243 | 7 July 2021 |
| PerGrande Bio Tech Development Co., Ltd. | SARS-CoV-2 Antigen Detection Kit (Colloidal Gold Immunochromato- graphic Assay) | Yes | 94.28% sensitivity 99.11% specificity NP/Nasal/OP swab | DE : 94.28% sensitivity, 99.11% specificity | | AT, DE ^[2] | | DE ^[2] | | 2116 | 10 May 2021 |
| Precision Biosensor Inc. | Exdia COVI-19 Ag | Yes | 93.9% sensitivity 98% specificity NP swab | DE: 93.88% sensitivity , 98% specificity SI:93.9% sensitivity, 98% specificity, NP swab | | SI, DE ^[2] | СН | DE ^[2] CH | | 1271 | 17 February 2021 |
| Prognosis Biotech | Rapid Test Ag 2019- nCov | Yes | Clinical Sensitivity: 95.56 % Nasal swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 94,1% at <ct25) +="" 99,58%<="" manufacturer="" specificity:="" td=""><td></td><td>CY, DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>1495</td><td>7 July 2021</td></ct25)> | | CY, DE ^[2] | | DE ^[2] | | 1495 | 7 July 2021 |
| Qingdao Hightop Biotech Co. Ltd | SARS-CoV-2 Antigen Rapid Test (Immunochromatograp hy) | Yes | 95% sensitivity Nasal swab | DE : Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct30 100%="" <ct25)<="" and="" at="" td=""><td></td><td>AT, DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>1341</td><td>17 February 2021</td></ct30> | | AT, DE ^[2] | | DE ^[2] | | 1341 | 17 February 2021 |
| Quidel Corporation | Sofia SARS Antigen FIA | Yes | 96.7% sensitivity 100% specificity NP/Nasal swab | BE: 96.7% sensitivity, 100% specificity, NP/nasal swab DE: 96.7% sensitivity , 100% specificity SI: 96.7% sensitivity, 100% specificity, NP/Nasal swab | | AT, BE, DE ^[2] , FI, NL ^[5] , PT, SI | СН | DE ^[2] , NL ^[5] CH | SI | 1097 | 17 February 2021 |
| Rapid Pathogen Screening, Inc | LIAISON® Quick Detect Covid Ag Assay | Yes | Sensitivity: 96.1%, Specificity: 97% NP and Nasal swab | IT: Independent validation study, 100 pos. and 100 neg. samples; sensitivity: 92.7% with Ct<25; specificity: 100%. | | IT | | IT | | Yes (2290) | 23 July 2021 |

| Manufacturer | RAT commercial name | CE marking | Clinical performance Data by manufacturer | Clinical performance Data used in MS | FIND evaluation studies | EU Member States using in practice | Other countries using in practice | Completed validation studies | MS currently validating | Device ID # in JRC database ¹¹ | Included in Common list of RATs as of: |
|---|--|---------------|--|--|--|--|-----------------------------------|------------------------------|-------------------------|---|--|
| Roche (SD BIOSENSOR) | SARS-CoV-2 Rapid Antigen Test | Yes | 96.52% sensitivity 99.2% specificity NP swab | DE: 96.52% sensitivity, 99.68% specificity FI: Validated in several laboratories (studies not published), meeting criteria. | | AT, DE ^[2] , MT, NL, RO | CH, NO | DE ^[2] , FI | | 1604 | 10 May 2021 |
| Roche (SD BIOSENSOR) | SARS-CoV-2 Rapid Antigen Test Nasal | Yes | Clinical Sensitivity: 89.6 % ((Ct ≤ 30) 93.1 % (Ct ≤ 27) Clinical Specificity: 99.1 % Nasal swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 89.6% at <ct30)< td=""><td>DE (12 April 2021) 179 samples, nasal swab Clinical sensitivities: - Days \leq 7: 81.2%; - Ct \leq 33: 87.5%; - Ct \leq 25: 100%; Clinical specificity: 99.3% Brazil (12 April 2021) 214 samples, nasal swab Clinical sensitivities: - Days \leq 7: 81.2%; - Ct \leq 33: 91.7%; - Ct \leq 25: 100%; Clinical specificity: 99.3%</td><td>DK, SK</td><td>СН, ИК</td><td>DE^[2]</td><td></td><td>2228</td><td>7 July 2021</td></ct30)<> | DE (12 April 2021) 179 samples, nasal swab Clinical sensitivities: - Days \leq 7: 81.2%; - Ct \leq 33: 87.5%; - Ct \leq 25: 100%; Clinical specificity: 99.3% Brazil (12 April 2021) 214 samples, nasal swab Clinical sensitivities: - Days \leq 7: 81.2%; - Ct \leq 33: 91.7%; - Ct \leq 25: 100%; Clinical specificity: 99.3% | DK, SK | СН, ИК | DE ^[2] | | 2228 | 7 July 2021 |
| Safecare Biotech (Hangzhou) Co. Ltd | COVID-19 Antigen Rapid Test Kit (Swab) | Yes | 97.04% sensitivity Nasal swab | DE : 97.27 % sensitivity , 99.42% specificity | | AT, DE ^[2] , FR | СН | DE ^[2] | | 1489 | 17 February 2021 |
| Safecare Biotech (Hangzhou) Co. Ltd | Multi-Respiratory Virus Antigen Test Kit (Swab) (Influenza A+B/COVID- 19) | Yes | 97.04% sensitivity Nasal swab | DE : 97.04% sensitivity , 99.44% specificity | | DE ^[2] | | DE ^[2] | | 1490 | 10 May 2021 |
| ScheBo Biotech AG | ScheBo SARS CoV-2 Quick Antigen | Yes | 96.6% sensitivity (Ct ≤ 30) NP/ OP swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 95% at <ct30 100%="" <ct25)<="" and="" at="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>1201</td><td>16 June 2021</td></ct30> | | DE ^[2] | | DE ^[2] | | 1201 | 16 June 2021 |
| SD Biosensor Inc | STANDARD Q COVID-19 Ag Test Nasal | Yes | Clinical Sensitivity: 97.12 % Clinical Specificity: 100 % Nasal swab | FI: Validated in several laboratories (studies not published), meeting criteria. DE: Published study: https://www.medrxiv.org/content/10.110 1/2021.01.06.20249009v1 | DE (12 April 2021) 179 samples, nasal swab Clinical sensitivities: - Days ≤ 7: 81.2%; - Ct ≤ 33: 87.5%; - Ct ≤ 25: 100%; Clinical specificity: 99.3% Brazil (12 April 2021) | FI, PT, SK | | DE ^[2] , FI, FR | | 2052 | 7 July 2021 |

| Manufacturer | RAT commercial name | CE marking | Clinical performance Data by manufacturer | Clinical performance Data used in MS | FIND evaluation studies | EU Member States using in practice | Other countries using in practice | Completed validation studies | MS currently validating | Device ID # in JRC database ¹¹ | Included in Common list of RATs as of: |
|----------------------|--------------------------------|---------------|---|--|---|---|--|---|-------------------------|---|--|
| | | | | | 214 samples, nasal swab Clinical sensitivities: - Days ≤ 7: 81.2%; - Ct ≤ 33: 91.7%; - Ct ≤ 25: 100%; Clinical specificity: 99.3% | | | | | | |
| SD BIOSENSOR Inc. | STANDARD F COVID-19 Ag FIA | Yes | 94,09% sensitivity 98.52% specificity NP swab | BE: 96.5% sensitivity, 99.7% specificity, NP swab DE: 94% sensitivity 97% specificity | DE (10 Dec 2020) 676 samples, NP swab Clinical sensitivities: - Days ≤ 7: 81.2%; - Ct ≤ 33: 75%; - Ct ≤ 25: 100%; Clinical specificity: 96.9% Brazil (10 Dec 2020) 453 samples, NP swab Clinical sensitivities: - Days ≤ 7: 80.2%; - Ct ≤ 33: 80.9%; - Ct ≤ 25: 87.9%; Clinical specificity: 97.9% India (25 June 2020) 417 samples, NP swab Clinical sensitivities: - Days ≤ 7: 61.8%; - Ct ≤ 33: 53.6%; - Ct ≤ 25: 68.5%; Clinical specificity: 99.5% | AT, BE, BG, DE ^[2] , IT , LU, LV, NL ^[5] , PT, RO, SK | СН | DE ^[2] , IT, NL ^[5] , DK CH, UK, BR | LU, PT | 344 | 17 February 2021 |
| SD BIOSENSOR Inc. | STANDARD Q COVID-19 Ag Test | Yes | 96.52% sensitivity 99.68% specificity NP swab | BE: 96.5% sensitivity, 99.7% specificity, NP swab DE: 96.52% sensitivity, 99.68% specificity SI: 96.5% sensitivity, 99.7% specificity, NP swab FI: Validated in several laboratories (studies not published), meeting criteria. | DE (10 Dec 2020) 1263 samples, NP swab Clinical sensitivities: - Days ≤ 7: 80%; - Ct ≤ 33: 87.8%; - Ct ≤ 25: 100%; Clinical specificity: 99.3% Brazil (10 Dec 2020) 400 samples, NP swab Clinical sensitivities: - Days ≤ 7: 90.7%; - Ct ≤ 33: 91.9%; | AT, BE, BG, CY, DE ^[2] , DK, EE, ES, FI, FR, HR, IT, LU, LV, MT, NL ^[5] , PT, RO, SE, SK, SI | ME, NO, CH | | HR, IE, LU, SI, SE | 345 | 17 February 2021 |

| Manufacturer | RAT commercial name | CE marking | Clinical performance Data by manufacturer | Clinical performance Data used in MS | FIND evaluation studies | EU Member States using in practice | Other countries using in practice | Completed validation studies | MS currently validating | Device ID # in JRC database ¹¹ | Included in Common list of RATs as of: |
|--|--|---------------|--|---|---|--|--|------------------------------|-------------------------|---|--|
| | | | | | - Ct ≤ 25: 95.9%; Clinical specificity: 97.6% CH (10 Dec 2020) 529 samples, NP swab Clinical sensitivities: - Days ≤ 7: 89.8%; - Ct ≤ 33: 91.8%; - Ct ≤ 25: 97.2%; Clinical specificity: 99.7% India (22 April 2021) 334 samples, NP swab Clinical sensitivities: - Days ≤ 7: 58.3%; - Ct ≤ 33: 65.5%; - Ct ≤ 25: 89.4%; Clinical specificity: 97.3% Peru (22 April 2021) 335 samples, NP swab Clinical specificity: 97.3% Peru (22 April 2021) 335 samples, NP swab Clinical specificity: 97.3% Ct ≤ 33: 83.3%; - Ct ≤ 25: 96.2%; Clinical specificity: 99.6% | | | | | | |
| SGA Medikal | V-Chek SARS-CoV-2 Ag Rapid Test Kit (Colloidal Gold) | Yes | 96.6% sensitivity, Nasal swab | DE: 96.6% sensitivity, 99% specificity | | DE ^[2] | | DE ^[2] | | 1319 | 10 May 2021 |
| SGA Medikal | V-Chek SARS-CoV-2 Rapid Ag Test (colloidal gold) | | Clinical Sensitivity: 96.60% Nasal swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 94,1% at <ct25) +="" 99,5%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>1357</td><td>7 July 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | 1357 | 7 July 2021 |
| Shenzen Ultra- Diagnostics Biotec Co., Ltd | SARS-CoV-2 Antigen Test Kit | Yes | 95.33 % (Nasal), 95.48(NP) Clinical Specificity: | BE: 92% sensitivity, 100% specificity, NP swab 100% sensitivity, 100% specificity, OP swab SI: 95.9% sensitivity, 99.9% specificity, NP/OP/Nasal swab | | AT, BE, ES, SI | | BE, SI | | 2017 | 10 May 2021 |

| Manufacturer | RAT commercial name | CE marking | Clinical performance Data by manufacturer | Clinical performance Data used in MS | FIND evaluation studies | EU Member States using in practice | Other countries using in practice | Completed validation studies | MS currently validating | Device ID # in JRC database ¹¹ | Included in Common list of RATs as of: |
|---|--|---------------|--|---|-------------------------|---|-----------------------------------|---|---------------------------|---|--|
| Shenzhen Lvshiyuan Biotechnology Co., Ltd. | Green Spring SARS-CoV- 2 Antigen-Rapid test-Set | Yes | 98% sensitivity 100% specificity NP/OP/Nasal swab | DE: 98% sensitivity , 100% specificity | | DE ^[2] | | DE ^[2] | | 2109 | 10 May 2021 |
| Shenzhen Microprofit Biotech Co., Ltd | SARS-CoV-2 Antigen Test Kit (Colloidal Gold Chromatographic Immunoassay) | Yes | Clinical Sensitivity: 92.93 % Clinical Specificity: 100 % Nasal/NP/OP swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" 100%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2], ES</td><td></td><td>DE^[2]</td><td></td><td>1967</td><td>7 July 2021</td></ct25)> | | DE ^[2] , ES | | DE ^[2] | | 1967 | 7 July 2021 |
| Shenzhen Microprofit Biotech Co., Ltd. | SARS-CoV-2 Spike Protein Test Kit (Colloidal Gold Chromatographic Immunoassay) | Yes | Sensitivity: 86.3%, Specificity: 100% Nasal Swab | DE : Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" 100%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>1178</td><td>23 July 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | 1178 | 23 July 2021 |
| Shenzhen Watmind Medical Co., Ltd | SARS-CoV-2 Ag Diagnostic Test Kit (Colloidal Gold) | Yes | 95.15% Sensitivity Nasal swab | DE: 95.15% sensitivity , 99.12% specificity | | AT, DE ^[2] , FR | | DE ^[2] | | 1769 | 10 May 2021 |
| Shenzhen Watmind Medical Co., Ltd | SARS-CoV-2 Ag Diagnostic Test Kit (Immuno-fluorescence) | Yes | Clinical Sensitivity: 97.83 % (CT ≤ 33) Clinical Sensitivity: 90.08 % (Ct ≤ 36) Nasal swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" 99,13%<="" manufacturer="" specificity:="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>1768</td><td>7 July 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | 1768 | 7 July 2021 |
| Shenzhen Zhenrui Biotech Co., Ltd | Zhenrui ®COVID-19 Antigen Test Cassette | Yes | 96% sensitivity Nasal swab | DE: 96% sensitivity 97% specificity | | DE ^[2] | | DE ^[2] | | 1574 | 10 May 2021 |
| Siemens Healthineers | CLINITEST Rapid COVID- 19 Antigen Test | Yes | 98.32% sensitivity (NP swab) 97.25% sensitivity 100% specificity (Nasal swab) | BE: 98.32% sensitivity, 99.6% specificity, NP swab 97.25% sensitivity, 100% specificity, Nasal swab SI: 96.7% sensitivity, 99.2% specificity, NP/Nasal swab | | AT, BE, DE ^[2] , FR, HR, NL ^{[5],} PT, SE, SI | СН | DE ^[2] , ES, NL ^[5] | HR, PT, SE ^[3] | 1218 | 17 February 2021 |
| Sugentech, Inc. | SGTi-flex COVID-19 Ag | Yes | 100% sensitivity 100% specificity OP/NP swab | DE: Positive evaluation by Paul-Ehrlich- Institut (sensitivity of 100% at <ct30 and<br="">100% at <ct25)< td=""><td></td><td>AT, DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>1114</td><td>10 May 2021</td></ct25)<></ct30> | | AT, DE ^[2] | | DE ^[2] | | 1114 | 10 May 2021 |
| TODA PHARMA | TODA CORONADIAG Ag | Yes | 98.6% sensitivity Nasal swab | BE: 96.6% sensitivity, 100% specificity, NP/OP swab DE: 96.6% sensitivity, 100 specificity | | BE, DE ^[2] , SI | | DE ^[2] | | 1466 | 10 May 2021 |

| Manufacturer | RAT commercial name | CE marking | Clinical performance Data by manufacturer | Clinical performance Data used in MS | FIND evaluation studies | EU Member States using in practice | Other countries using in practice | Completed validation studies | MS currently validating | Device ID # in JRC database ¹¹ | Included in Common list of RATs as of: |
|--|---|---------------|--|---|-------------------------|---|--|------------------------------|-------------------------|---|--|
| | | | | SI: 96.6% sensitivity, 100% specificity, NP/OP swab | | | | | | | |
| Triplex International Biosciences Co., Ltd | SARS-CoV-2 Antigen Rapid Test Kit | Yes | 98.33% sensitivity 100% specificity Nasal/OP/NP swab | DE: Positive evaluation by Paul-Ehrlich- Institut (sensitivity of 92,5% at <ct30 100%="" <ct25)<="" and="" at="" td=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>2074</td><td>16 June 2021</td></ct30> | | DE ^[2] | | DE ^[2] | | 2074 | 16 June 2021 |
| Triplex International Biosciences Co., Ltd, China | SARS-CoV-2 Antigen Rapid Test Kit | Yes | 98.51 % sensitivity Nasal swab | DE: Positive evaluation by Paul-Ehrlich- Institut (sensitivity of 100% at <ct25) +<br="">Manufacturer specificity: 100%</ct25)> | | DE ^[2] , FR, PT | | DE ^[2] | | 1465 | 14 July 2021 |
| Vitrosens Biotechnology Co., Ltd | RapidFor SARS-CoV-2 Rapid Ag Test | Yes | 97.3% sensitivity Nasal swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct30 100%="" 97.3%="" 99%="" <ct25)si:="" and="" at="" nasal="" np="" op="" sensitivity,="" specificity,="" swab<="" td=""><td></td><td>DE^[2], SI</td><td></td><td>DE^[2]</td><td></td><td>1443</td><td>10 May 2021</td></ct30> | | DE ^[2] , SI | | DE ^[2] | | 1443 | 10 May 2021 |
| VivaChek Biotech (Hangzhou) Co., Ltd. | VivaDiag Pro SARS-CoV- 2 Ag Rapid Test | Yes | 97.04% sensitivity 99.9% specificity Nasal/OP/NP swab | AT: 97,06% sensitivity, 100% specificity, all specimen types, i.e. N&OP&NP swab | | AT, SI | | AT, DE ^[2] , SI | АТ | 2103 | 10 May 2021 |
| Wuhan EasyDiagnosis Biomedicine Co., Ltd. | COVID-19 (SARS-CoV-2) Antigen-Test Kit | Yes | 96.1% sensitivity 100% specificity Nasal/OP/NP swab | DE : 96.15% sensitivity , 99.26% specificity | | DE ^[2] | | DE ^[2] | | 2098 | 10 May 2021 |
| Wuhan Life Origin Biotech Joint Stock Co., Ltd. | SARS-CoV-2 Antigen Assay Kit (Immunochromatograp hy) | Yes | 92.67% sensitivity Nasal swab | DE: Positive evaluation by Paul-Ehrlich-Institut (sensitivity of 100% at <ct25) +="" manufacturer="" specificity:="" td="" xx%<=""><td></td><td>DE^[2]</td><td></td><td>DE^[2]</td><td></td><td>1773</td><td>14 July 2021</td></ct25)> | | DE ^[2] | | DE ^[2] | | 1773 | 14 July 2021 |
| Wuhan UNscience Biotechnology Co., Ltd. | SARS-CoV-2 Antigen Rapid Test Kit | Yes | Clinical Sensitivity: 96.33 % Clinical Specificity: 99.57 % Nasal/NP/OP swab | DE: Positive evaluation by Paul-Ehrlich- Institut (sensitivity of 100% at <ct25) +<br="">Manufacturer specificity: 99,57%</ct25)> | | DE ^[2] | | DE ^[2] , FR | | 2090 | 7 July 2021 |
| Xiamen AmonMed Biotechnology Co., Ltd | COVID-19 Antigen Rapid Test Kit (Colloidal Gold) | Yes | 93.2% sensitivity 99.55% specificity Nasal swab | DE : Positive evaluation by Paul-Ehrlich- Institut (sensitivity of 100% at <ct25) +<br="">Manufacturer specificity: 99.55%</ct25)> | | DE ^[2] | | DE ^[2] | | 1763 | 10 May 2021 |
| Xiamen Boson Biotech Co. Ltd | Rapid SARS-CoV-2 Antigen Test Card | Yes | Not specified NP swab | BE: 93.8% sensitivity, 100% specificity, NP swab DE: 96.49% sensitivity, 99.03% specificity | | AT, BE, BG, CY, DE ^[2] , FR, RO | СН | DE ^[2] CH | | 1278 | 17 February 2021 |

| Manufacturer | RAT commercial name | CE marking | Clinical performance Data by manufacturer | Clinical performance Data used in MS | FIND evaluation studies | EU Member States using in practice | Other countries using in practice | Completed validation studies | MS currently validating | Device ID # in JRC database ¹¹ | Included in Common list of RATs as of: |
|---|---|---------------|---|--|-------------------------|--|-----------------------------------|------------------------------|-------------------------|---|--|
| Xiamen Wiz Biotech Co., Ltd | SARS-CoV-2 Antigen Rapid Test | Yes | 96.3% sensitivity, Nasal swab | DE: 96.3% sensitivity, 100% specificity | | AT, DE ^[2] | | DE ^[2] | | 1456 | 10 May 2021 |
| Xiamen Wiz Biotech Co., Ltd | SARS-CoV-2 Antigen Rapid Test (Colloidal Gold) | Yes | 95.91% sensitivity 100% specificity Nasal swab | DE: 95.91% sensitivity , 100% specificity | | AT, DE ^[2] | | DE ^[2] | | 1884 | 10 May 2021 |
| Zhejiang Anji Saianfu Biotech Co, Ltd | AndLucky COVID-19 Antigen Rapid Test | Yes | 95.8% sensitivity, Nasal swab | DE : 97.5% sensitivity, 99.1% specificity | | AT, DE ^[2] | | DE ^[2] | | 1296 | 10 May 2021 |
| Zhejiang Anji Saianfu Biotech Co, Ltd | reOpenTest COVID-19 Antigen Rapid Test | Yes | 95.8% sensitivity, Nasal swab | DE: Positive evaluation by Paul-Ehrlich- Institut (sensitivity of 94,1% at <ct25) +<br="">Manufacturer specificity: 99%</ct25)> | | DE ^[2] | | DE ^[2] | | 1295 | 10 May 2021 |
| Zhejiang Orient Gene Biotech Co., Ltd | Coronavirus Ag Rapid Test Cassette (Swab) | Yes | 99.6 % specificity Nasal/NP swab | BE: 98.32% sensitivity, 99.6% specificity, NP swab; 97.25% sensitivity, 100% specificity, Nasal swab DE: 96.72% sensitivity, 99.22% specificity | | AT, BE, BG, DE ^[2] , PT | CH, UK | DE ^[2] | SE ^[3] | 1343 | 17 February 2021 |
| Zhuhai Lituo Biotechnology Co., Ltd. | COVID-19 Antigen Detection Kit (Colloidal Gold) | Yes | 96.12% sensitivity Nasal swab (CT≤33) 99.59% sensitivity NP swab 100% specificity Nasal swab (CT≤33) | DE : Positive evaluation by Paul-Ehrlich- Institut (sensitivity of 100% at <ct25) +<br="">Manufacturer specificity: 100%</ct25)> | | CZ, DE ^[2] , SI | | DE ^[2] | | 1957 | 14 July 2021 |

Notes:

- [1] FR: Reference to validation study (not specifying which specific RAT is being recommended or was tested in practice): https://www.has-sante.fr/upload/docs/application/pdf/2020-10/synthese tests antigeniques vd.pdf
- [2] DE: Rapid antigen tests that have completed practical validation studies in Germany: See: https://www.pei.de/SharedDocs/Downloads/DE/newsroom/dossiers/evaluierung-sensitivitaet-sars-cov-2-antigentests-04-12-2020.pdf blob=publicationFile&v=43
- [3] SE: Smaller evaluations ongoing in some of the regions.
- [4] BE: In the clinical performance study performed in three different clinical laboratories during the ascendant phase of the epidemiological curve, we found an overall sensitivity and specificity of 57.6 and 99.5%, respectively with an accuracy of 82.6%.
- [5] NL: Collected validation data from accredited laboratories in the Netherlands. The report includes evaluations of various RAT that labs performed at their own initiative. https://lci.rivm.nl/antigeensneltesten
- [6] BE: Van Honacker E. et al., Comparison of five SARS-CoV-2 rapid antigen detection tests in a hospital setting and performance of one antigen assay in routine practice: a useful tool to guide isolation precautions? J Hosp Infect. In press.

ANNEX II: Common standardised set of data to be included in COVID-19 test result certificates, as agreed by Member States on 17 February 2021 and updated on 19 March 2021

| Section | Data element | Description | Preferred Code System |
|--------------------------|--|--|--|
| | Person name | The legal name of the tested person. Surname(s) and forename(s), in that order. | |
| Person identification | Person identifier (optional) | An identifier of the tested person, according to the policies applicable in each country. Examples: citizen ID and/or document number (ID-card/passport). | |
| | Person date of birth (optional) | Tested person's date of birth. Mandatory if no Person identifier is provided. | Complete date, without time, following the ISO 8601. |
| | Disease or agent targeted | Specification that it concerns the detection of SARS-CoV-2 infection. | ICD-10, SNOMED CT |
| | Type of test | Description of the type of test that was conducted, e.g. NAAT or rapid antigen test. | LOINC, NPU |
| | Test name (optional for NAAT) | Commercial or brand name of the test. | |
| | Test Manufacturer (optional for NAAT) | Legal manufacturer of the test. | |
| | Sample origin (optional) | The type of sample that was taken (e.g. nasopharyngeal swab, oropharyngeal swab, nasal swab). | SNOMED CT |
| Test information | Date and time of the test sample collection | Date and time when the sample was collected. | Complete date, with time and time zone, following ISO 8601 |
| | Date and time of the test result production (optional) | Date and time when the test result was produced. | Complete date, with time and time zone, following ISO 8601 |
| | Result of the test | For example, negative, positive, inconclusive or void. | SNOMED CT |
| | Testing centre or facility (mandatory for NAAT) | Name/code of testing centre, facility or a health authority responsible for the testing event. Optional: address of the testing facility. | |
| | Health Professional identification (optional) | Name or health professional code responsible for conducting (and validating) the test. Surname(s) and forename(s), in that order. | |
| | Country where the test was taken | The country in which the individual was tested. | ISO 3166 Country Codes |
| Test certificate | Test result certificate issuer | Entity that issued the COVID-19 test result certificate (allowing to check the certificate). | |
| metadata | Certificate identifier | Reference of the COVID-19 test result certificate (unique identifier). | |