ECDC rapid assessment of laboratory shortages related to COVID-19

ECDC rapid assessment of laboratory practices and needs related to COVID-19

Dear Colleagues,

Based on an urgent request from European Commission SANTE on 15 March, we would kindly ask you to provide us with an overview and analysis of diagnostic tests/kits in use in EU Member States and the needs of Member States in terms of diagnostic tests / kits and other necessary testing items.

The questionnaire is sent to the national operational contact points for influenza; emerging and vector-borne diseases and nominated COVID-19 contact points.

Due to the short deadline, we ask the national level OCPs to estimate the situation for the whole country including the peripheral laboratories and not to cascade the questionnaire to regional or local level. The results of this survey will be used for informing the European Commission.

Country of report:

the Netherlands

Institute of report:

National Institute Public Health & Environment

Email contact:

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Question 1: What type of RNA extraction kits are used in the laboratories in your country? You may indicate multiple options.

- [x] Manual, ready-to use kit
- [ ] Manual, in-house system
- [x] Automatic or machine-based RNA extractor

If `In-house system', please provide details:

Please provide name of kit(s) and manufacturer(s):

BioMerieux, NUCLISENS® easyMAG® 7 labs
Roche 20 labs
ElitechGROUP, Ingenius SP 200 2 labs
RBCBioscience, MagCore® Viral Nucleic Acid Extraction Kit 1lab
Seegene, STARMag 96x4 Universal Cartridge Kit 1lab
Promega, Maxwell RSC Blood DNA kit 1 lab
unknown: 6 labs

Question 2: What type of cDNA reaction kits are used in the laboratories? You may indicate multiple options.

- [ ] Manual, ready-to use kit
- [ ] Manual, in-house system
- [ ] Automatic or machine-based cDNA reaction

If `In-house system', please provide details:

Please provide name of kit(s) and manufacturer(s):

not applicable: almost all labs use a onestep test.

Question 3: What type of diagnostic molecular detection assay(s) are used in the laboratories? You may indicate multiple options.

- [x] Commercial RT-PCR assay
- [ ] Commercial point-of care testing RT-PCR assay
- [x] In-house test system
- [ ]

Other

Other, please specify

Please provide name of kit(s) and manufacturer(s):

only one lab uses a commercial assay;
all others use the test published by Corman at all.

Question 4: What other type of detection assays are in use in the laboratories? You may indicate multiple options.

- ☐ Commercial antigen assay
- ☐ Commercial serological assay (IgM or IgG)
- ☐ Commercial point-of-care test (molecular)
- ☐ Commercial point-of-care test (antigen-based)
- ☐ Commercial unspecific test, e.g. C reactive protein test
- ☑ Other

Please provide name of kit(s) and manufacturer(s):

there is nothing validated yet- this may change the next weeks

Question 5: Which commercial tests have you validated clinically so far? Please provide the model and manufacturer:

there is nothing validated yet- this may change the next weeks

Question 6: What type of equipment is used for machine-based or automatic RNA extraction? Please provide the model and manufacturer:

BioMerieux, easyMAG® 7 labs
Roche, MagNA Pure 96 17 labs
Roche, MagNA Pure 24 2 labs

ElitechGROUP, ELITe InGenius® 2 labs

Hamilton, Microlab STARlet 1lab
Promega, Maxwell 1 lab
Qiagen, QIAsymphony 1 lab
RBCBioscience, MagCore® HF16 Plus 1 lab
unknown: 6 labs

Question 7: What type of equipment is used for cDNA reaction? Please provide the model and manufacturer:

not applicable

Question 8: What type of equipment is used for the RT-PCR reaction? Please provide the model and manufacturer:

Applied Biosystems, 7500 Real-Time PCR 13 labs
Bio-Rad, CFX machine 1 lab
Bio-Rad, CFX96™ Real-time PCR System 1 lab
Qiagen, Rotor-Gene Q 2 labs
QuantStudio, QuantStudio 5 Real-Time PCR System 1 labs
QuantStudio, QuantStudio 6 Pro Real-Time PCR Systems 2 labs
Roche, LightCycler 480/480 II 12 labs
onbekend 7 labs

Question 9. What is the current weekly capacity for testing for COVID-19 in your country overall?

20.000 tests per week (but due to shortages of materials and reagens there is a restriction policy)

Question 10: Can you please quantify the needs for sampling material as number of specimens tested during the next 4 weeks in your country? If not, please provide estimated numbers.

1000-10000? impossible to say

10a. Personal protective equipment (e.g. gloves)

10b. Sampling kits (swabs, tubes, transfer liquid)

10c. Disinfectants

10d. Other, please specify

Question 11: Can you please quantify the needs of diagnostic tests/kits as number of specimens tested during the next 4 weeks in your country? If not, please provide estimated numbers.

not possible to tell

11a. Laboratory consumables (tubes, pipette tips, plates etc.)

11b. Reagents, RNA extraction

11c. Reagents, cDNA reaction

11d. Reagents, RT-PCR (primers, probes, positive controls)

11e. Reagents, RT-PCR (enzymes, buffers etc.)

11f. Machine time

11g. Other, please specify:

Question 12: What type of shortages do you face at the moment? You may indicate multiple options.

- [ ] None
- [x] Personal protective equipment (e.g. gloves)
- [x] Sampling kits (swabs, tubes, transfer liquid)
- [ ] Laboratory consumables (tubes, pipette tips, plates etc.)
- [x] Reagents, RNA extraction
- [ ] Reagents, cDNA reaction
- [x] Reagents, RT-PCR (primers, probes, positive controls)
- [x] Reagents, RT-PCR (enzymes, buffers etc.)
- [ ] Disinfectants
- [ ] Machine time
- [ ]

Other

If other, please specify:

some information is not available (machine time, lab consumables)

Question 13: Please describe in short the testing algorithm in your country.

the algoritm has changed during the outbreak.
At first all suspected cases were tested using two targets

Now only the patients with a serious disease (hospitalized) or specific group (vulnarable, outbreak in old peoples home etc, HCW) will be tested.

Question 14: Do you need support for Whole Genome Sequencing of the COVID-19 samples in your country?

- ○ Yes
- ◉ No

Question 15: Any other comments that you want to make to ECDC?

On behalf of ECDC public health emergency team, many thanks for your participation in this survey. The results will be shared with European Commission.

Contact

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