



Interim report SARS-CoV-2 EQA

Progress report of the services and deliverables as requested in ECDC specific contract No 3 ECD.10833 implementing Framework contract No ECDC/2017/002.

DL1

An updated schedule for the project plan is shown in appendix 1.

DL2.1

An overview of progress of services and deliverables as of May 19 2020.

Service 1.1 Project plan and schedule:

The plan and schedule are completed and can be found in appendix 1.

Service 1.2 Selection of viruses:

The selection is completed. The composition of the panel allows for identification of the diagnostic method sensitivity, as six SARS-CoV-2 samples in varying concentrations are included. It also contains a respiratory syndrome panel of six non-SARS-CoV-2 samples, including other human coronaviruses and other respiratory viruses, allowing to assess method specificity (table 1).

Table 1. Final composition of EQA panel selected for EQA SARS-Cov-2. The order of samples is not representative for the panels.

N°	sample name	included viruses
1	Alphacoronaviruses	HCoV-229E HCoV-NL63
2	Low pathogenic Betacoronaviruses	HCoV-OC43 or bovine CoV*
3	SARS-CoV	SARS-CoV
4	MERS-CoV	MERS-CoV
5	Non-coronavirus respiratory viruses 1	Metapneumovirus A Metapneumovirus B Parainfluenzavirus 1 Parainfluenzavirus 2 Parainfluenzavirus 3 Parainfluenzavirus 4 RSV
6	Non-coronavirus respiratory viruses 2	Enterovirus Rhinovirus Influenzavirus A H1N1 Influenzavirus B Adenovirus
7	SARS-CoV-2 high	SARS-CoV-2
8	SARS-CoV-2 medium	SARS-CoV-2
9	SARS-CoV-2 low 1	SARS-CoV-2
10	SARS-CoV-2 low 2	SARS-CoV-2
11	SARS-CoV-2 very low 1	SARS-CoV-2
12	SARS-CoV-2 very low 2	SARS-CoV-2

*The information which of these two strains is in the final panel will be send in email on May 20 2020.

Service 1.3 Minimum criteria

The minimum criteria are that all SARS-CoV-2 containing samples need to be correctly identified and none of non-SARS-CoV-2 samples should be scored positive.

Service 2.1 Invitation letter, final list participants

Invitations to participate in the EQA, including a link to register, were sent through the EVD-LabNet on April 8th 2020 and through ECDC to the operational contact points for Influenza and COVID-19 on April 23rd 2020. Two reminders for registrations were sent. The final list of participants was approved by ECDC and can be found in appendix 2.

Service 2.2 Preparation and inactivation of panel

The different viruses were grown under BSL-2 or BSL-3 conditions according to applicable biosafety requirements. Approximately 50 mL of viral supernatant per virus were produced. The desired virus genome copies per panel member were lyophilized from diluted virus culture medium in panel tubes. Samples were heat-inactivated at 70°C for 4 hours (BSL3 viruses)*. Inactivation of BSL-3 pathogens was certified by 3 passages on cells, demonstrating lack of viral growth. Lyophilization is done under BSL-2 conditions using established procedures.

*Due to SARS-COV-2 related restrictions, inactivation by gamma-irradiation was not possible. Virus quantification will rely on established real-time (RT-)PCR techniques.

Service 2.3 Package insert (safety and testing instructions)

Not finalized yet. It will be shared with ECDC before panels are send out.

Service 2.4 Pretesting of whole inactivated panel

Two laboratories were selected to pre-test the whole inactivated panel: Robert-Koch-Institute (RKI) and National Institute for Public Health and the Environment (RIVM). The panels will be send to the laboratories May 22 2020. The online form for result submission has been prepared and will be pretested by the two pretesting laboratories to check for functionality.

Service 2.5 Prepare panels for shipment and distribution of panels

All panels are being prepared and will be distributed as soon as confirmation by the pretesting laboratories is received.

Service 2.6 Interim report (panel composition, invitation letter, package insert, to whom distributed, web-bases reporting module)

The interim report was given to ECDC on May 19 2020.

Service 2.7 to Service 4.1 are scheduled as shown in appendix 1.

Appendixes

1. Detailed scheduled project plan
2. Final list of participating laboratories