LABQUALITY

THE PATH TO PERFECT QUALITY

# EXTERNAL QUALITY ASSESSMENT

## 2023 | PRODUCT CATALOGUE

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LABQUALITY

EXTERNAL QUALITY ASSESSMENT

# Product Catalogue 2023

# Service information

## Labquality – EQAS

Labquality is an independent Finnish external quality assessment provider. Labquality has more than 50 years of experience in helping clinical laboratories and POCT sites develop and maintain their performance. Labquality's EQA schemes are internationally recognized high quality programs. The EQA programs have a clinical scope with an educational touch. Part of the EQA production is outsourced to expert laboratories and national partners.

## Integrated EQA service (EQA³)

Labquality is the first EQA provider that has integrated pre-analytical, analytical and post-analytical phases to its EQA programs. Advanced and traditional EQA schemes have been designed to fully support the total quality management system of the participating laboratories and fulfill ISO 15189 requirements concerning the extra-analytical phases. In addition to the samples, the integrated schemes include pre- and/or post-analytical questionnaires concerning the scope of the scheme.

## Quality management

Labquality's management system is certified according to ISO 9001 (DQS) and the main EQA schemes are accredited according to ISO 17043 (PT02/FINAS). The scope of accreditation is available on the FINAS website: **www.finas.fi**, and the accreditation status of the EQA schemes is available on our website: **www.labquality.fi/en**. The list of accredited schemes will be provided upon request.

## EQA service availability

Labquality has customers in over 50 countries in Europe, Asia, America and North Africa. Service is localized by 40 national partners. All digital schemes, including pre-analytical schemes and diagnostic schemes for anatomic pathology, are available globally. With only a few exceptions all schemes are globally available through national partner. For direct customers, the program selection is limited to the schemes with stabile and non-hazardous sample materials.

## Enrolment and prices

Labquality has annual programs and pricing. Participants shall place their orders for the following year before the end of November to ensure their participation in all needed EQA rounds. Enrolment is possible during the calendar year, but only part of the EQA rounds may be available. To place an order, please contact our national partner in your country or Labquality's customer service at info@labquality.com

## Distributions

Labquality's specimen logistics system is accepted and continuously audited as part of accreditation according to the ISO 17043 (PT02/FINAS) standard. Specimens are shipped according to the annual schedule. Labquality retains the right to make changes in the schedule.

## LabScala EQA portal

Partners and participants are able to handle the whole EQA process from orders to reports through a modern web based software, LabScala. The EQA process is designed to go along with the laboratory process from pre-analytics to post-analytics. Easy availability and user-friendly interface guarantee an advanced experience.

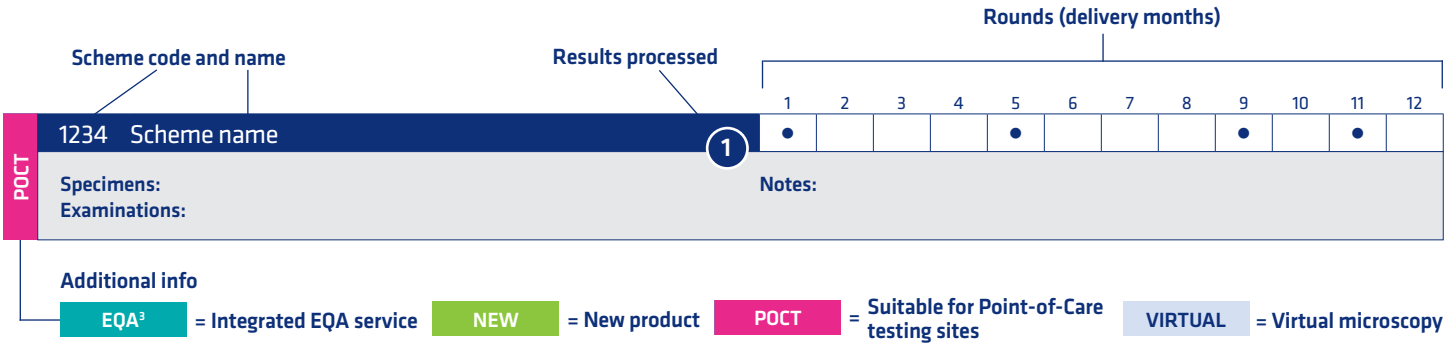
## Certificate

A certificate of participation will be provided upon request at the end of the calendar year. The certificate refers to EQA reports to evaluate the performance of the participant.

## Customer service

Please contact Labquality's international partners (listed on our website: www.labquality.fi/en) or our customer service: info@labquality.fi

# How to use the catalogue




**Results processed:** The number shows how many results from different analyzers or tests within the same laboratory are allowed depending on scheme, when the sample volume is sufficient. Schemes marked with * allow multiple results reporting only, if they are analyzed with different methods.

# Updates for 2023

## New schemes and products

2704 ACTH and Cortisol (p 9)
2706 Salivary cortisol (p 9)
2754 Faecal elastase (p 11)
5250 Interferon Gamma Release Assay (IGRA) for *Mycobacterium tuberculosis* (p 20)
5261 Fungal infections, nucleic acid detection (p 25)
5556 HSV1&2/VZV/*T. pallidum*, nucleic acid detection (p 26)
5965 CXCL13 Chemokine (p 21)
5230 *Mycobacterium tuberculosis*, drug resistance (p 23)
2115 Haemoglobin, 1-level HemoCue 801 and HemoCue 301 (p 7)

## Changes in distribution schedule

2200 Lipids and lipoproteins and 2202 - Lipoprotein a (4 rounds /year)
2109 Bilirubin, conjugated (4 rounds /year)
5612 *Chlamydia trachomatis and Neisseria gonorrhoeae* nucleic acid detection
5302 Sexually transmitted diseases multiplex, nucleic acid detection
2132 C-reactive protein (CRP), POCT
5560 Puumala virus, antibodies
5635 Dengue virus, antibodies and antigen detection
5562 Multiple respiratory virus, nucleic acid detection

## Discontinued schemes

5850 Brucella antibodies
2733 Erythrocyte sedimentation rate: iSED

## Changes in scope, specimens or parameters

5300 Respiratory infections multiplex, nucleic acid detection
New parameter: *Legionella pneumophila*
5472 Faecal parasites multiplex, nucleic acid detection
Discontinued parameter: *Entamoeba dispar*
5681 SARS-CoV-2 antigen detection
Samples: Number of samples increased from two to three

## Planned pilot schemes

Information about pilot studies and schedules are updated on our website
**https://www.labquality.fi/en/external-quality-assessment/new-round/**
Pilot studies are EQA schemes under development.

**Virology:** Monkeypox virus, nucleic acid detection (planned for late 2022)
**Microbiology:** Blood culture pathogens (sepsis), multiplex, nucleic acid detection
**Mycology:** Fungal infection, native and fluorescence virtual microscopy
**Haematology:** Flow cytometry: Immunophenotyping, lymphocyte subsets

# Clinical chemistry

The clinical chemistry portfolio covers areas of allergology, basic chemistry, cardiac markers, diabetes analysis, endocrinology, special chemistry, specific proteins, tumour markers and urine analysis. For routine chemistry needs, schemes with both one and two level samples enabling assessment of more than 50 analytes are available. A wide selection of schemes specifically tailored for POCT devices are also available, including e.g. those for drug abuse screening, glucose meters and troponin detection.

## Clinical chemistry » **Allergology**

### 2675 Allergen component [UK NEQAS]

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | ● | | ● | | ● | | ● |

1

**Specimens:** 2 liquid human serum samples for allergen component tests

**Examinations:** Allergen component test which covers recombinant allergens as well as the ISAC system

**Notes:** Participation to all rounds required. Should be ordered until the beginning of November. Limited availability.

### 2681 Allergy in vitro diagnostics [SKML]

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | ● | | |

1

**Specimens:** 3 liquid human serum samples for specific IgEs with 3 allergens, 2 mixes and total IgE in each and some allergen components, 0.5 mL

**Examinations:** Total IgE, specific IgEs, allergen mixes and allergen components

**Notes:** Participation to all rounds required. Should be ordered until the beginning of November. All samples are distributed in February.

### 2670 Allergy in vitro diagnostics [UK NEQAS]

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | ● | | ● | | ● | | ● |

1

**Specimens:** 2 liquid human serum samples for specific IgEs with 4 allergens in each specimen, 0.5 mL each and 1 serum specimen for total IgE, 0.5 mL

**Examinations:** Total IgE and specific IgEs

**Notes:** Participation to all rounds required. Should be ordered until the beginning of November. Limited availability.

### 2680 Eosinophil cationic protein

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | ● | | ● | | ● | | ● |

1

**Specimens:** 1 lyophilized human serum sample, 0.3 mL

**Examinations:** ECP

**Notes:** Results are processed in connection with total IgE results of scheme 2670.

### 2685 Tryptase [UK NEQAS]

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | ● | ● | | ● | | ● | | ● | |

1

**Specimens:** 2 liquid human serum samples

**Examinations:** Tryptase

**Notes:** Participation to all rounds required. Should be ordered until the beginning of November. Limited availability.

## Clinical chemistry » **Basic chemistry**

POCT

### 2100 Basic chemistry, POCT analyzers

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

3

**Specimens:** 2 human serum samples, 1 mL

**Examinations:** Alanine aminotransferase, albumin, alkaline phosphatase, amylase (total and pancreatic), aspartate aminotransferase, calcium, chloride, HDL cholesterol, cholesterol, creatinekinase, creatinine, gamma glutamyltransferase, glucose, lactate dehydrogenase, magnesium, phosphorus, potassium, sodium, total protein, triglycerides, urea, uric acid

**Notes:** For clinical laboratories and POCT sites. Only for dry chemistry analyzers. If you are not sure whether your device is a POCT meter or an analyzer, please contact our customer service.

### 2730 Erythrocyte sedimentation rate

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | | ● | | ● | |

3

**Specimens:** 1 artificial blood cell suspension, ~ 4 mL

**Examinations:** ESR

**Notes:** Not suitable for Algor iSed

## 2731 Erythrocyte sedimentation rate: Alifax-analyzers; Greiner tube

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | | ● | | ● | |

**Specimens:** 3 test tubes containing synthetic latex solution, 3 mL

**Examinations:** ESR

## 2732 Erythrocyte sedimentation rate: Alifax-analyzers; Sarstedt tube

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | | ● | | ● | |

**Specimens:** 3 test tubes containing synthetic latex solution, 3 mL

**Examinations:** ESR

## 2750 Faecal occult blood, qualitative

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | | | | ● | | | | ● | | ● | |

**Specimens:** 2 preparations that include human haemoglobin, 0.5 mL

**Examinations:** Qualitative detection of Hb in human faeces

**Notes:** For clinical laboratories and POCT sites

POCT

## 2749 Faecal occult blood, quantitative

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | ● | | | ● | | | ● |

**Specimens:** 2 liquid samples including human haemoglobin. In June and Dec possibly lyophilized or artificial stool sample preparations including human haemoglobin. **Examinations:** Quantitative determination of Hb in human faeces (iFOB/FIT)

**Notes:** The liquid samples assess the analytical process only, the other sample forms assess both the preanalytical and analytical processes. For clinical laboratories and POCT sites.

POCT

## 2114 Haemoglobin, 1-level, POCT

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | | ● | | ● | |

**Specimens:** 1 bovine sample, 1 mL

**Examinations:** Haemoglobin

**Notes:** Only for POCT devices. Not suitable for Diaspect, HemoCue 301 or HemoCue 801.

POCT

EQA[3]

## 2115 Haemoglobin, 1-level HemoCue 801 and HemoCue 301

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | | ● | | ● | |

**Specimens:** 1 bovine sample, 1 mL

**Examinations:** Haemoglobin

**Notes:** Only for HemoCue 801 and HemoCue 301.

NEW

## 2113 Haemoglobin, 3-level samples, cell counters and analyzers

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | ● | | | |

**Specimens:** 3 human whole blood control samples, 1 mL (low, medium and high concentration)

**Examinations:** Haemoglobin linearity with three samples. Reference values will be provided in the summary report.

**Notes:** For cell counters and analyzers

## 2112 Haemoglobin, 3-level samples, POCT

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | ● | | | |

**Specimens:** 3 bovine or human samples, 1 mL (low, medium and high concentration)

**Examinations:** Haemoglobin linearity with three samples

**Notes:** Only for POCT devices. Not suitable for Diaspect.

POCT

# Clinical chemistry » **Cardiac markers**

## 1541 CRP, low concentration

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | ● | | ● | | | ● | | ● | |

**Specimens:** 1 human serum sample

**Examinations:** CRP

**Notes:** CRP, low concentration sample is included in product 2541 Myocardiac markers and CRP

## 2540 Myocardial markers

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | ● | | ● | | | ● | | ● | |

**Specimens:** 2 liquid samples, 0.5 mL

**Examinations:** CK MB mass, myoglobin, quantitative troponin I, quantitative troponin T. Not for CKMB activity!

**Notes:** Suits clinical laboratory analyzers. See also scheme 2530 Troponin I and T, detection for POCT. If you are not sure whether your device is a POCT meter or an analyzer, please contact our customer service.

## 2541 Myocardial markers and CRP, low concentration

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | ● | | ● | | | ● | | ● | |

**Specimens:** 2 liquid samples for myocardial markers, 0,5 mL, and one for CRP 1 mL

**Examinations:** CK-MB mass, myoglobin, quantitative troponin I, quantitative troponin T and CRP, low concentration. Not for CKMB activity!

**Notes:** Suits clinical laboratory analyzers. See also scheme 2530 Troponin I and T, detection for POCT. If you are not sure whether your device is a POCT meter or an analyzer, please contact our customer service.

POCT

## 2690 Natriuretic peptides 1, B-type, NT-ProBNP

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | | | ● | | | ● | | | ● | | |

**Specimens:** 2 liquid samples, 3 mL

**Examinations:** NT-ProBNP

**Notes:** Suits both clinical laboratories and POCT sites. Also suitable for Roche Cardiac Reader and cobas h232.

POCT

## 2691 Natriuretic peptides 2, B-type, BNP

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | | | ● | | | ● | | | ● | | |

**Specimens:** 2 liquid samples, 3 mL **Examinations:** BNP

**Notes:** For clinical laboratories and POCT sites

POCT

## 2530 Troponin I and Troponin T, POCT

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | ● | | ● | | | ● | | ● | |

**Specimens:** 2 fresh human samples or 2 liquid samples, 0.5 mL
**Examinations:** Detection of troponin I and troponin T
**Notes:** Qualitative and quantitative results are processed

This scheme is only for POCT, scheme 2540 is for analyzers. If you are not sure whether your device is a POCT meter or an analyzer, please contact our customer service.

# Clinical chemistry » **Diabetes analysis**

POCT
EQA³

## 2570, 2580, 2590 Glucose meters

5

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | | ● | | ● | |

**Device specific product codes:**
2570 for all glucose meters except Contour, HemoCue and On Call Plus
2580 for HemoCue meters
2590 for Contour meters

**Specimens:** 1 whole blood or plasma sample, 1 mL
**Examinations:** Glucose
**Notes:** 5 results processed with one order if sample volume is sufficient and devices belong to the same product group.

## 1261 Haemoglobin A1c, liquid samples

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | ● | | ● | | ● | | ● | | ● |

**Specimens:** 2 liquid blood samples, 0.5 mL

**Examinations:** HbA1c

**Notes:** Not suitable for Afinion instruments.

POCT

## 1263 Haemoglobin A1c, liquid samples, POCT

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ● | | ● | | | | ● | | ● |

**Specimens:** 2 liquid blood samples, 0.5 mL

**Examinations:** HbA1c

**Notes:** Only for POCT devices. Not suitable for Afinion instruments.

POCT

## 2526 Ketones (beta-hydroxybutyrate), POCT

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | | | | ● | | | |

**Specimens:** 2 serum samples, 0.4 mL

**Examinations:** beta-hydroxybutyrate

**Notes:** For POCT sites and clinical laboratories. 3 results processed with one order if sample volume is sufficient.

# Clinical chemistry » **Endocrinology**

EQA³

## 2300, 2300S Hormones A: Basic analytes of hormone and immunochemistry

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | ● | ● | ● | | ● | | ● | ● | ● |

**Specimens:** 2 human serum samples with differing concentrations, 3 mL each. Liquid serum sample (one level) included in Apr and Oct rounds. Pre- and/or post-analytical cases in part of the rounds

**Examinations:** Ferritin, folate, hCG (total, intact), T3, free T3, T4, free T4, TSH, vitamin B12, active vitamin B-12, pre- and/or post-analytical indicators

**Notes:** 2300S is a limited version of the scheme available for laboratories performing testing of 1–5 analytes. For additional set of samples, order scheme 1300. Product 2300S does not include reporting from multiple analyzers or methods.

NEW

## 1300 Hormones A, extra set of samples

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | ● | ● | ● | | ● | | ● | ● | ● |

**Specimens:** 2 human serum samples, 3 mL

**Notes:** Only in connection with scheme 2300

## 2301, 2301S Hormones B: Steroid and peptide hormones

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | ● | | ● | | ● | | ● | | ● |

EQA3

**Specimens:** 2 human serum samples with differing concentrations, 3 mL. Liquid serum sample (one level) included in Apr, Aug and Dec rounds. Pre- and/or postanalytical cases in part of the rounds.

**Examinations:** Androstenedione, aldosterone, C-peptide, cortisol, DHEAS, estradiol, FSH, gastrin, growth hormone, IGF-1, insulin, LH, progesterone, 17-OH-progesterone, prolactin, SHBG, testosterone, free testosterone, TBG, pre- and/or post-analytical indicators

**Notes:** Reference values for 1 analyte in liquid serum will be provided. 2301S is a limited version of the scheme available for laboratories performing testing of 1–5 analytes. For additional set of samples, order scheme 1301. Product 2301S does not include reporting from multiple analyzers or methods.

## 1301 Hormones B, extra set of samples

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | ● | | ● | | ● | | ● | | ● |

**Specimens:** 2 human serum samples, 3 mL

**Notes:** Only in connection with scheme 2301

## 2250 Parathyroid hormone, intact

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | | | | | ● | | |

**Specimens:** 2 lyophilized human serum samples, 3 mL

**Examinations:** PTH, intact

## 2704 ACTH and cortisol

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | ● | | | | | ● | |

**Specimens:** 2 lyophilized human serum samples, 3 mL

**Examinations:** Adrenocorticotropic hormone (ACTH) and Cortisol

NEW

## 2706 Salivary Cortisol

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | | | | ● | | | |

**Specimens:** To be confirmed: 2 liquid or lyophilized simulated salivary samples

**Examinations:** Salivary cortisol

# Clinical chemistry » **General long-term clinical chemistry, known concentration**

## 1031 DayTrol, human serum

1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

**Specimens:** 1 lyophilized human serum sample, 5 mL

**Examinations:** Alanine aminotransferase, albumin, alkaline phosphatase, amylase, aspartate aminotransferase, bilirubin, calcium, chloride, cholesterol, cholesterol HDL, creatine phosphokinase, creatinine, gamma-glutamyltransferase, glucose, iron, lactate, lactate dehydrogenase, lithium, magnesium, osmolality, phosphorus, potassium, protein, sodium, thyreotropin, thyroxine, thyroxine free, transferrin, transferrin receptor, triglycerides, urea, uric acid

**Notes:** This program combines internal and external quality assessment. Same sample is analyzed daily or weekly basis. Monthly averages and CV%´s are compared with other participants. Minimum order quantity of 10 bottles per year. Monthly reporting is included

# Clinical chemistry » **General short-term clinical chemistry, unknown concentration**

## 1072, 1072S Serum A, lyophilized samples

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

**Specimens:** Lyophilized serum sample, 3 mL, samples are selected to cover a wide concentration range

**Examinations:** Alanine aminotransferase, albumin, alkaline phosphatase, alpha-1-antitrypsin, alpha-1-glykoprotein, amylase, amylase (pancreatic), aspartate aminotransferase, bilirubin, calcium, calcium (ionized, actual), calcium (ionized, pH 7.4), chloride, cholesterol, cholesterol HDL, cholesterol LDL, cortisol, creatine phosphokinase, creatinine, ferritin, gamma-glutamyltransferase, glucose, haptoglobin, IgA, IgE, IgG, IgM, iron, lactate, lactate dehydrogenase, lithium, magnesium, oroso-mucoid, osmolality, phosphorus, potassium, protein, selenium, sodium, thyreotropin, thyroxine, thyroxine free, TIBC, transferrin, transferrin receptor, triglycerides, urea, uric acid

**Notes:** Samples for multiple rounds shipped simultaneously. Monthly processing of results included. 1072S is a limited version of the scheme available for laboratories performing testing of 1–5 analytes. Product 1072S does not include reporting from multiple analyzers or methods.

## 2050 Serum B and C (2-level)

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | ● | | ● | | ● | | ● | ● | |

EQA3

**Specimens:** 2 liquid human serum samples covering a wide concentration range, 3–5 mL

**Examinations:** Alanine aminotransferase, albumin, alfa-1-antitrypcine, alfa-1-glycoprotein, alkaline phosphatase, amylase, pancreas amylase, aspartate aminotransferase, bilirubin, ferritin, phosphate, glucose, glutamyltransferase, haptoglobin, IgA, IgE, IgG, IgM, potassium, calcium, ionized calcium, ionized calcium pH corrected (7.4), chloride, cholesterol, HDL cholesterol, LDL cholesterol, cortisol, creatine kinase, creatinine, copper, lactate, lactate dehydrogenase, lipase, lithium, magnesium, sodium, osmolality, protein, iron binding capacity, iron, selenium, zinc, transferrin, transferrin receptor, triglycerides, tri-iodio-thyronine, thyrotropin, tyroxine, free tyroxine, urea, uric acid

**Notes:** Comparison of two different concentration ranges simultaneously. Reference method values available occasionally for some of the analytes.

POCT

## 2610 Acid-base status and electrolytes

1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | • | | • | | | | • | | | • | |

**Specimens:** 3 buffered artificial samples, 2.5 mL

**Examinations:** Chloride, creatinine, glucose, ionized calcium, ionized magnesium, lactate, pCO2, pH, pO2, potassium, sodium, urea, base excess, HCO3.

**Notes:** Order one sample set for each analyzer. For clinical laboratories and POCT sites.

## 2510 Alcohol in whole blood: Ethanol + methanol + isopropanol

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | • | | | | | | | • | | |

**Specimens:** Ethanol: 2-level whole blood samples. Methanol and isopropanol: 1-level whole blood samples.

**Examinations:** Ethanol, methanol, isopropanol

## 2516 Alcohol in whole blood: Ethylene glycol

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | • | | | | | | | • | | |

**Specimens:** 1-level whole blood samples

**Examinations:** Ethylene glycol

## 2511 Alcohol in serum: Ethanol +methanol +isopropanol +acetone

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | • | | | | | | | • | | |

**Specimens:** Ethanol: 2-level serum samples. Methanol, isopropanol and acetone: 1-level serum samples.

**Examinations:** Ethanol, methanol, isopropanol, acetone

## 2517 Alcohol in serum: Ethylene glycol

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | • | | | | | | | • | | |

**Specimens:** 1-level serum samples

**Examinations:** Ethylene glycol

## 2105 Ammonium ion

1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | • | | | | • | | | | • |

**Specimens:** 2 serum based or buffered samples

**Examinations:** Ammonium ion

## 2210 Angiotensin convertase (ACE)

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | • | | | | | | | |

**Specimens:** 1 liquid and 1 lyophilized human serum sample, 1 mL

**Examinations:** ACE

## 2520 Bile acids

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | • | | | | | | | | • | |

**Specimens:** 2 pooled human serum samples, 0.5 mL

**Examinations:** Bile acids

## 2109 Bilirubin, conjugated

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | • | | • | | | | • | | • | | |

**Specimens:** 2 lyophilized or liquid samples

**Examinations:** Total bilirubin, conjugated bilirubin

## 2040 Bilirubin, neonatal

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | • | | • | | • | | • | | • | | • |

**Specimens:** 2 lyophilized or liquid samples

**Examinations:** Bil, neo

## 8805 Cystatin C, Creatinine and eGFR [DEKS]

1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 times | | | | | | | | | | | |

**Specimens:** 2 human plasma samples with reference target values, 0.75 mL

**Examinations:** P-Cystatin C, P-Creatinine, P-eGFR

**Notes:** Participation to all rounds required.

## 2754 Faecal elastase

NEW

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | • | | | | | | • | | | |

3

**Specimens:** 2 lyophilized faecal specimens, 0.5 mL

**Examinations:** Elastase

## 2753 Gastric biomarkers

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | • | | | | | • | |

3

**Specimens:** 2 lyophilized samples, 3 mL

**Examinations:** Pepsinogen I, Pepsinogen II, Gastrin-17, Helicobacter pylori Ab

## 2150 Haemoxymeters

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | • | | | | | | • | | | |

1

**Specimens:** 2 liquid (1.2 mL) samples

**Examinations:** FO2Hb, FCOHb, FMETHb, ctHb, sO2

**Notes:** Order one sample set for each analyzer

## 8816 Homocysteine [DEKS]

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 times | | | | | | | | | | | |

1

**Specimens:** 2 human plasma or serum samples

**Examinations:** P-Homocysteine

**Notes:** Participation to all rounds required.

## 8815 Methyl Malonic acid [DEKS]

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 times | | | | | | | | | | | |

1

**Specimens:** 2 human serum samples

**Examinations:** P-Methylmalonat

**Notes:** Participation to all rounds required.

## 2651 Nasal swab cells

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | • |

1

**Specimens:** 4 digital images of MGG and methylene eosin stained samples

**Examinations:** Eosinophils, neutrophils

## 2652 Sputum cells

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | • |

1

**Specimens:** 4 digital images of MGG and methylene eosin stained samples

**Examinations:** Eosinophils, neutrophils

## 2640 Synovial fluid crystals

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | • | | | | | | • | | | |

3

**Specimens:** 2-3 slides prepared from patient samples

**Examinations:** Sodium urate monohydrate and calcium pyrophosphate dihydrate crystals

## 2410 Therapeutic drugs

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | • | | • | | | • | | | • | |

3

**Specimens:** 2 liquid or lyophilized human serum samples, 5 mL

**Examinations:** Amikasin, amitriptyline, carbamazepine, carbamazepine free, cyclosporine, digoxin, disopyramide, ethosuximide, flecainide, gentamycin, lidocaine, lithium, methotrexate, NAPA, netilmycin, nortriptyline, paracetamol (acetaminophen), phenobarbital, phenytoin, phenytoin free, primidone, procainamide, quinidine, salicylate, theophylline, tobramycin, tricyclics, valproic acid, valproic acid free, vancomycin

## 2480 Vitamin A, E and D metabolites

EQA$^3$

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | • | | | | | | | • | |

3

**Specimens:** 2 liquid human serum samples, 1 mL.
Pre- and/or post-analytical cases in part of the rounds.

**Examinations:** Vitamin A, vitamin E, 25(OH)D-vitamin, 1,25(OH)2-D-vitamin, pre- and/or post-analytical indicators

**Notes:** Target values for 25(OH)D vitamin metabolite are provided.

## 2481 Vitamin A, E and D metabolites, extra set of samples

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | • | | | | | | | • | |

**Specimens:** 2 liquid human serum samples, 5 mL

**Notes:** Only in connection with scheme 2480.

## 2525 5-hydroxyindoleacetic Acid (5-HIAA)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | • | | | | | | • | | |

3

**Specimens:** 2 serum samples

**Examinations:** 5-HIAA

## 2020 C-reactive protein (CRP) for analyzers

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | ● | | ● | | ● | | ● | | ● |

3

**Specimens:** 2 liquid serum or plasma samples, 1 mL
**Examinations:** CRP

**Notes:** Scheme is designed only for clinical chemistry analyzers. Order scheme 2132 for POCT CRP meters. If you are not sure whether your device is a POCT meter or an analyzer, please contact our customer service.

POCT

## 2132 C-reactive protein (CRP), POCT

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | ● | | ● | | ● | | ● | ● | |

3

**Specimens:** 2 human plasma samples, 1 mL
**Examinations:** CRP

**Notes:** Only for quantitative POCT CRP meters. If you are not sure whether your device is a POCT meter or an analyzer, please contact our customer service.

## 2140 Decialotransferrin [EQUALIS]

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | | ● | | ● | | | ● | | ● | | ● |

1

**Specimens:** 2 human plasma samples, varying concentration of CDT
**Examinations:** CDT

**Notes:** Participation to all rounds required.

## 2751 Faecal calprotectin

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

3

**Specimens:** 2 lyophilized faecal specimens, 0.5 mL

**Examinations:** Calprotectin

## 2281 Interleukin-6

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

3

**Specimens:** 2-3 lyophilized samples

**Examinations:** IL-6

EQA³

## 2200 Lipids and lipoproteins

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | | ● | | | ● |

3

**Specimens:** 2 fresh human serum samples, 0.5–1 mL. Pre- and/or post-analytical cases in part of the rounds.
**Examinations:** Cholesterol, HDL cholesterol, LDL cholesterol, lipoprotein apo A1, lipoprotein apo A2, lipoprotein apo B, lipoprotein (a), triglycerides, pre- and/or post-analytical indicators

**Notes:** Separate round for Lp(a), see scheme 2202

## 2202 Lipoprotein a

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | | ● | | | ● |

3

**Specimens:** 1 liquid or lyophilized human serum preparation

**Examinations:** Lp(a)

## 2280 Procalcitonin

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ● | | | | | | ● | | |

3

**Specimens:** 2 lyophilized samples
**Examinations:** Procalcitonin

**Notes:** Only for quantitative methods

## 2160 Proteins in cerebrospinal fluid

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ● | | | | | ● | | | |

3

**Specimens:** 1 cerebrospinal fluid sample 1-3 mL and 1 human serum sample, 1 mL

**Examinations:** Cerebrospinal fluid: Albumin, IgG, total protein, IgG index. Serum: Albumin, IgG.

EQA³

## 2240 Proteins, electrophoresis

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

3

**Specimens:** 2 liquid or lyophilized human serum samples, 1 mL
Pre- and/or post-analytical cases in part of the rounds.

**Examinations:** Electrophoresis, contains immunofixation, pre- and/or post-analytical indicators

## 2230 Proteins, immunochemical determinations

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | | | ● | | ● | | | ● | | | |

3

**Specimens:** 2 liquid human serum samples, 1 mL
**Examinations:** Alpha-1-antitrypsin, alpha-2-macroglobulin, albumin, ceruloplasmin, complement C3, complement C4, haptoglobin, hemopexin, IgA, IgG, IgLcKappa, IgLcLambda, IgLcKappa free, IgLcLambda free, IgM, orosomucoid, pre-albumin, RBP, transferrin, transferrin receptor.

## Clinical chemistry » **Tumour markers**

### 2703 Anti-Müllerian hormone

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

**Specimens:** 2 liquid human serum samples, 1 mL

**Examinations:** Anti-Müllerian hormone

### 2226 Prostate specific antigen

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | ● | | | ● | | | ● | | |

**Specimens:** 2 liquid human serum samples, 1 mL

**Examinations:** PSA, complexed PSA, free PSA, free/total PSA ratio

### 2700, 2700S Tumour markers

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

**Specimens:** 2 liquid human serum samples, 2 mL

**Examinations:** AFP, CA 125, CA 153, CA 199, CEA, ferritin, hCG (total, intact, beta-subunit), PSA, PSA free, PSA free/total index, TG, TG antibodies, beta-2-microglobulin, NSE, HE4

**Notes:** 2700S is a limited version of the scheme available for laboratories performing testing of 1–5 analytes. Product 2700S does not include reporting from multiple analyzers or methods

### 2701 Tumour markers, extra set of samples

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

**Specimens:** 2 liquid human serum samples, 2 mL

**Notes:** Only in connection with scheme 2700

## Clinical chemistry » **Urine analysis**

### 3240 Albumin and creatinine in urine

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ● | | | | | | ● | | |

**Specimens:** 2 liquid human urine samples with spiked albumin and creatinine, 4 mL

**Examinations:** Albumin, creatinine, albumin-creatinine ratio

**Notes:** Only for quantitative methods

POCT

### 3300 Drug of abuse screening in urine

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | | ● | | | ● | | | |

**Specimens:** 2 authentic samples, 5 mL

**Examinations:** Alpha-PVP, Amphetamine, Barbiturates, Benzodiazepines, Buprenorphine, Cannabinoids, Carbamazepine, Cocaine +metabolites, Codeine, Dextropropoxyphene, EDDP, Fencyclidine, Fentanyl, Gammahydroxybutyrate (GHB), Ketamine, LSD, MDMA, MDPV, Metamphetamine, Methaqualone, Methadone +metabolites, Methylphenidate, Morphine, Opiates Oxycodone, Paracetamol, Pregabalin, Salicylate, Tricyclic- antidepr. Tramadol

**Notes:** For clinical laboratories and POCT sites. Expert laboratory confirmatory results are provided. Results are reported as positive or negative.

POCT

### 3270 Pregnancy test

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | | ● | | ● | |

**Specimens:** 2 fresh urine samples, 1 mL

**Examinations:** Qualitative hCG

**Notes:** For clinical laboratories and POCT sites

POCT

### 3170 Urine bacterial screening with automated analyzers

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ● | | | | | | | ● | |

**Specimens:** 1 liquid sample and lyophilized synthetic urine sample containing bacteria.

**Examinations:** Bacterial, erythrocytes and leukocytes counting

### 3200 Urine, identification of cells and other particles (digital images)

1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

**Specimens:** 4 digital images

**Examinations:** Identification of cells and other particles

## 3160 Urine quantitative chemistry

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | | ● | | | ● |

3

**Specimens:** 1 liquid urine, 10 mL

**Examinations:** Albumin, amylase, calcium, chloride, cortisol-free, creatinine, glucose, inorganic phosphate, magnesium, osmolality, pH, potassium, protein, relative density, sodium, urea, uric acid

POCT

## 3100 Urine strip test A

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | ● | | | | ● | | ● | | |

3

**Specimens:** 1 lyophilized urine sample with varying concentrations, 15 mL

**Examinations:** Glucose, ketone bodies, leukocytes, nitrite, pH, protein, blood (erythrocytes), relative density

**Notes:** For clinical laboratories and POCT sites. Water for dissolution available, see scheme 3101, should be ordered separately.

POCT

## 3101 Urine strip test A, 15 mL water for sample dissolution

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | ● | | | | ● | | ● | | |

**Specimens:** 15 mL water for dissolution of samples of scheme 3100

**Notes:** Only in connection with scheme 3100

## 3130 Urine strip test B, particle count and estimation of density

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | | ● | | | ● |

3

**Specimens:** 1 lyophilized urine, 15 mL

**Examinations:** Particle count: erythrocytes and leukocytes. Estimation of density: creatinine, relative density, osmolality. Strip tests: glucose, ketone bodies, leukocytes, nitrite, pH, protein, blood (erythrocytes).

**Notes:** Also suitable for automatic analyzers (erythrocytes and leukocytes counting). The arbitrary concentrations of the obtained strip test results will only be collected in order to avoid different groupings of positive categories used by different strip tests and user laboratories. Water for dissolution of the lyophilized sample available, see scheme 3131, should be ordered separately.

## 3131 Urine strip test B, 15 mL water for sample dissolution

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | | ● | | | ● |

**Specimens:** 15 mL water for dissolution of lyophilized samples of scheme 3130

**Notes:** Only in connection with scheme 3130

# Clinical chemistry and haematology

## Clinical chemistry and haematology » **Percentiler and flagger programs**

### 3501 Flagger program (Noklus)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | • | |

**Specimens:** The percentage of patient results outside the reference limits

**Examinations:** ALP, ALT, AST, bilirubin, BUN, calcium, cholesterol, chloride, creatinine, CRP, ferritin, folate, FT4, GGT, glucose, Hb, HbA1c, HDL-cholesterol, IgA, IgG, IgM, IgA, K, LDH, MCV, magnesium, Na, phosphate, PLT, protein, PSA, PTH, RBC, triglycerides, TSH, urea, uric acid, vitamin B12, vitamin D, WBC

**Notes:** Each participant will receive log in information giving access to the laboratories results and allowing dynamic on-line monitoring of mid-to long-term stability of performance and flagging rate. Laboratories can choose to participate in The Percentiler program only.

### 3500 Percentiler program (Noklus)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | • | |

**Specimens:** results from selected patient groups are used to calculate instrument-specific daily medians

**Examinations:** ALP, ALT, AST, bilirubin, BUN, calcium, cholesterol, chloride, creatinine, CRP, ferritin, folate, FT4, GGT, glucose, Hb, HbA1c, HDL-cholesterol, IgA, IgG, IgM, IgA, K, LDH, MCV, magnesium, Na, phosphate, PLT, protein, PSA, PTH, RBC, triglycerides, TSH, urea, uric acid, vitamin B12, vitamin D, WBC

**Notes:** Participating laboratories calculate, and report instrument-specific medians based on patient results. The total number of patient results is also reported. Ideally, patient medians are reported daily, but less frequent reporting is also possible. Results are exported to a central database by standardized e-mails.

# Haematology

The haematology selection consists of schemes for blood transfusion serology, cell count and morphology as well as coagulation tests. Specialties include the Erythrocyte sedimentation rate for Alifax as well as the White blood cell count and INR schemes for POCT. Units performing blood transfusions find EQA schemes for hepatitis B and C, HIV as well as other infectious diseases under the microbiology portfolio. **Schemes related to blood parasites can be found under the parasites chapter.**

## Haematology » **Blood transfusion serological tests**

### 4420 ABO and Rh grouping

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

1

**Specimens:** 2 whole blood samples, 4 mL

**Examinations:** ABO & Rh reaction strengths and interpretation

**Notes:** There is possibility to insert results for full ABO RhD group, confirmation group without using the plasma and a group for a newborn.

### 4460 Antibody screening and compatibility testing

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

1

**Specimens:** 2 whole blood samples (4 mL) and 4 red blood cell suspensions (3 mL)

**Examinations:** Reaction strengths and interpretation

### 4440 Antiglobulin test, direct

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

1

**Specimens:** 2 red blood cell suspensions, 3 mL

**Examinations:** Reaction strengths and interpretation

EQA[3]

### 4480 Column agglutination methods: grading of reactions and patient cases

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | ● | | |

3

**Specimens:** 3-5 cases and digital images (DiaMed and Grifols cards)

**Examinations:** Interpretation of the cases and reaction strengths of the digital images

**Notes:** Post-analytical scheme.

## Haematology » **Cell count and cell morphology**

### 4100 Basic blood count, 1-level sample

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

3

**Specimens:** 1 blood cell suspension, 3 mL

**Examinations:** Hb, HCT, MCH, MCHC, MCV, PLT, RBC, RDW (red cell distribution width), WBC, cumulative patient means of MCH, MCHC, MCV

### 4110 Basic blood count, 2-level samples

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

3

**Specimens:** 2 blood cell suspensions, 3 mL

**Examinations:** Hb, HCT, MCH, MCHC, MCV, PLT, RBC, RDW (red cell distribution width), WBC, cumulative patient means of MCH, MCHC, MCV

VIRTUAL

### 4180 Leucocyte differential count and evaluation of blood cell morphology, virtual microscopy

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ● | | | | | ● | | |

3

**Specimens:** 2–3 patient cases as virtual slide images

**Examinations:** Leucocyte differential count and evaluation of red blood cells

### 4200–4201 Leucocyte differential count, 3-part, automated

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | ● | | | ● | | | ● |

3

**Analyzer specific product codes:**
4200: ABX, Advia, Cell-Dyn, Coulter, Medonic, Mindray, Nihon Kohden Celltac MEK
4201: Sysmex

**Specimens:** 1 blood cell suspension, 2–4 mL

**Examinations:** Absolute numbers of leucocytes, lymphocytes, mononuclear cells and granulocytes

## 4230–4240 Leucocyte differential count, 5-part, automated

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | ● | | | ● | | | ● |

**Analyzer specific product codes:**
4230: Siemens Advia
4231: Cell-Dyn
4232: Coulter
4233: Sysmex XE, XS, XT, XN
4234: ABX Pentra, Yumizen
4235: Coulter ACT5-diff
4236: Mindray
4237: Nihon Kohden Celltac MEK
4239: Mythic
4240: Coulter DxH 560 AL

**Specimens:** 1 blood cell suspension, 2–4 mL

**Examinations:** Leucocytes, basophils, eosinophils, granulocytes, lymphocytes and monocytes

## 4150–4156 Reticulocyte count, automated

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | ● | | | ● | | | ● |

**Analyzer specific product codes:**
4150: Siemens Advia
4151: Cell-Dyn 4000, Sapphire, Alinity HQ
4152: Coulter Gens, LH750
4153: Sysmex
4154: ABX Pentra, Yumizen
4155: Cell-Dyn 3200, 3500, 3700, Ruby
4156: Mindray

**Specimens:** 2 stabilized red blood cell suspensions, 2–4 mL

**Examinations:** Reticulocyte count

## 4140 Reticulocyte count, manual methods

1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | ● | | | ● | | | ● |

**Specimens:** 1 stabilized red blood cell suspension, 2 mL

**Examinations:** Reticulocyte count

## 4130 White blood cell count: HemoCue, POCT

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | | | | ● | | | |

POCT

**Specimens:** 1 blood cell suspension, 2 mL

**Examinations:** Leucocytes

**Notes:** The scheme is for HemoCue WBC Systems

## 4190 White blood cell differential count: HemoCue, POCT

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | ● | | | | | | ● |

POCT

**Specimens:** 1 blood cell suspension, 2 mL

**Examinations:** Leucocytes, neutrophils, lymphocytes, monocytes, basophils, eosinophils

**Notes:** The scheme is for HemoCue WBC Diff analyzers (5-part)

# Haematology » **Coagulation**

## 4330 Activated partial thromboplastin time, INR and fibrinogen

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

**Specimens:** 2 lyophilized plasma samples, 0.5–1 mL

**Examinations:** Coagulation time in seconds, fibrinogen, INR

## 4387 Anticoagulants: LMW-Heparin/antiFXa

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

**Specimens:** 2 lyophilized plasma samples, 0.5–1 mL

**Examinations:** LMW-heparin/antiFXA

## 4388 D-dimer

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

POCT

**Specimens:** 2 liquid commercial plasma samples, 0.5 mL

**Examinations:** D-Dimer

**Notes:** For clinical laboratories and POCT sites

## 4335 INR, CoaguChek, i-STAT and Siemens Xprecia, POCT

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ● | | | | | | ● | |

POCT

**Specimens:** Liquid or lyophilized sample

**Examinations:** Prothrombin time in INR unit

**Notes:** Only for CoaguChek, i-STAT and Siemens Xprecia meters

POCT

## 4337 INR, EuroLyzer, POCT

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ● | | | | | | ● | |

**Specimens:** 1 lyophilized plasma sample

**Examinations:** Prothrombin time in INR unit

**Notes:** Only for EuroLyzer INR meter

POCT

## 4340 INR, LabPad, POCT

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ● | | | | | | ● | |

**Specimens:** 1 dried whole blood sample

**Examinations:** Prothrombin time in INR unit

**Notes:** Only for LabPad INR meters

POCT

## 4338 INR, MicroINR, LumiraDX and CoagSense, POCT

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ● | | | | | | ● | |

**Specimens:** Lyophilized whole blood sample or lyophilized plasma sample

**Examinations:** Prothrombin time in INR unit

**Notes:** Only for microINR, LumiraDX and CoagSense meters

## 4300 Prothrombin time

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

**Specimens:** 2 lyophilized plasma samples, 0.5–1 mL

**Examinations:** Prothrombin time, PT%

## 4386 Special coagulation

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

**Specimens:** 2 lyophilized plasma samples, 0.5–1 mL

**Examinations:** Thrombin time, Antithrombin, Factor VIII, Protein C, Protein S

# EQA schemes for blood banks

### Blood transfusion serology

4420 ABO and Rh grouping
4460 Antibody screening and compatibility testing
4440 Antiglobulin test, direct
4480 Column agglutination methods: grading of reactions and patient cases

### Bacterial serology

5880 Syphilis serology

### Bacteriology

5100 Blood culture
5101 Blood culture, screening

### Virology, serological tests

5650 Cytomegalovirus, antibodies
5092 Hepatitis A, antibodies
5093 Hepatitis B, s-antigen antibodies, quantitative
5094–5096 Hepatitis B and C, serology
5091 HIV, antibodies and antigen detection
5089 Human T-cell lymphotropic virus, antibodies
5660 Parvovirus B19, antibodies

### Virology, molecular tests

5679 Hepatitis B virus, nucleic acid detection (DNA)
5678 Hepatitis C virus, nucleic acid detection (RNA)
5680 HIV-1, nucleic acid detection (RNA)

# EQA services for POCT sites

Patient outcome is associated with obtaining a reliable test result regardless of where the testing is performed. To ensure high quality of care and patient safety, it is imperative that point-of-care testing (POCT) is subjected to the same quality requirements as conventional laboratory analyses.

Labquality offers a range of EQA schemes suitable for POCT sites. These services are intended for all testing units including home/community nursing, hospital wards, pediatric clinics, surgical units, occupational healthcare, outpatient clinics and medical centers.

### Clinical chemistry

2610 Acid-base status and electrolytes
3240 Albumin and creatinine in urine
2100 Basic chemistry, POCT analyzers
2132 C-reactive protein (CRP), POCT
3300 Drug of abuse screening in urine
2750 Faecal occult blood, qualitative
2749 Faecal occult blood, quantitative
2570, 2580, 2590 Glucose meters
1263 Haemoglobin A1c, liquid samples, POCT
2114 Haemoglobin, 1-level, POCT
2112 Haemoglobin, 3-level samples, POCT
2526 Ketones (beta-hydroxybutyrate), POCT
2690 Natriuretic peptides 1, B-type, NT-ProBNP
2691 Natriuretic peptides 2, B-type, BNP
3270 Pregnancy test
2530 Troponin I and Troponin T, detection, POCT
3100 Urine strip test A
2115 Haemoglobin, 1-level HemoCue 801 and HemoCue 301

### Haematology

4388 D-Dimer
4335 INR, CoaguChek, i-STAT and Siemens Xprecia, POCT
4337 INR, EuroLyzer, POCT
4340 INR LAbPad, POCT
4338 INR, MicroINR, LumiraDX and CoagSense, POCT
5430 Malaria, antigen and nucleic acid detection
4130 White blood cell count: HemoCue, POCT
4190 White blood cell differential count: HemoCue, POCT

### Microbiology

5640 EBV mononucleosis, POCT
5635 Dengue virus, antibodies and antigen detection
5860 *Helicobacter pylori*, antibodies
5596 *Helicobacter pylori*, antigen detection in faeces
5090 HIV, antibodies and antigen detection, POCT
5671 Influenza virus A+B, antigen detection
5597 Legionella, antigen detection in urine
5430 Malaria, antigen and nucleic acid detection
5980 *Mycoplasma pneumoniae*, antibodies
5560 Puumala virus, antibodies
5673 Respiratory adenovirus, antigen detection
5098 Rotavirus and adenovirus, antigen detection
5672 RS virus, antigen detection
5677 SARS CoV-2, antibodies
5681 SARS-CoV-2 antigen detection
5676 SARS-CoV-2 nucleic acid detection
5595 *Streptococcus pyogenes*, group A, antigen detection in pharyngeal sample
5599 *Streptococcus agalactiae* (GBS), nucleic acid detection
5598 *Streptococcus pneumoniae*, antigen detection in urine
5099 Tick-borne encephalitis virus, antibodies
5473 *Trichomonas vaginalis*, detection

### Preanalytics

7801 Preanalytics, urine and blood sample collection
7804 Preanalytics, POCT in chemistry

# Immunology

This program includes schemes for immunodiagnostic tests such as those for coeliac disease, rheumatoid factor and thyroid gland autoantibodies. All of the schemes involve analysis of liquid human serum or plasma samples. For allergy diagnostics, review the allergology program in the clinical chemistry portfolio.

NEW EQA³

## 5250 Interferon Gamma Release Assay (IGRA) for *Mycobacterium tuberculosis*

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | • | | | • | | | • | | | • | |

**Specimens:** 2-3 lyophilized samples and a preanalytical case description including questions

**Examinations:** TbINFg quantitative result and qualitative interpretation. The scheme is not suitable for the TB T-Spot test.

EQA³

## 5935 ANCA and GbmAb

3*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | • | | | | | | • | | | | |

**Specimens:** 2 liquid human serum or plasma samples, 0.5 mL

**Examinations:** Anti-neutrophilic cytoplasmic Ab, Myeloperoxidase Ab, Proteinase-3 Ab and Glomerular basement membrane Ab.

Pre- and/or post-analytical cases in part of the rounds.

**Notes:** Quantitative results are also processed (Pr3Ab, MPOAb, GbmAb)

EQA³

## 5900 Antinuclear antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | • | | | | | | • | | |

**Specimens:** 3 liquid human serum or plasma samples, 0.6 mL

**Examinations:** ANA, ENAAb, RNPAb, SmAb (SmDAb and/or SmBAb),SSAAb, SSBAb, Scl70Ab, CENP-B, CENP-A, Jo1Ab, dsDNA, HistAb, RibP Ab, RNApol III Ab

Pre- and/or post-analytical cases in part of the rounds.

**Notes:** Extractable antinuclear antigens and double-stranded deoxyribonucleic acid are included

## 5938 Autoimmune diagnostics, IFA interpretation (digital images)

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | • | | | | | | | |

**Specimens:** 3–5 cases (digital images)

**Examinations:** Interpretation (ANA, ANCA and EMA images)

## 5930 Autoimmune liver disease and gastric parietal cell antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | • | | | | | | • | |

**Specimens:** 2 liquid human serum or plasma samples, 0.4 mL

**Examinations:** Liver kidney microsomal antibodies, Smooth muscle antibodies, Mitochondrial antibodies, Gastric parietal cell antibodies

EQA³

## 5940 Coeliac disease, antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | • | | | | • | | | | • | | |

**Specimens:** 2 liquid human serum or plasma samples, 0.7 mL

**Examinations:** Endomysium antibodies, tissue transglutaminase antibodies, deamidated gliadin peptide antibodies, interpretation of the Total IgA concentration of the sample. Pre- and/or post-analytical cases in part of the rounds.

**Notes:** Quantitative results are also processed (tTGAbA, tTGAbG, DGPAbA, DGPAbG). Scheme is not suitable for POCT.

## 5937 Phospholipid antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | • | | | | | | | |

**Specimens:** 2 liquid human serum or plasma samples, 0.5 mL

**Examinations:** Phospholipid antibodies, Cardiolipin antibodies (IgG and IgM),

beta-2-glycoprotein antibodies (IgG and IgM).

**Notes:** Quantitative results are also processed

## 5820 Rheumatoid factor and citrullic peptide antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| • | | | • | | | • | | | • | | |

**Specimens:** 2 liquid human-derived samples, 0.7 mL

**Examinations:** Qualitative and quantitative RF, CCPAb

EQA³

## 5920 Thyroid gland antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | • | | | • | | | | • | | |

**Specimens:** 2 liquid human serum or plasma samples, 0.4 mL

**Examinations:** Thyroglobulin antibodies and thyroid peroxidase antibodies.

Pre- and/or post-analytical cases in part of the rounds.

**Notes:** Quantitative results are also processed

## 5913 TSH receptor antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | • | | | | | | • | | | |

**Specimens:** 2 liquid human serum or plasma samples, 0.4 mL

**Examinations:** Thyroid stimulating hormone receptor antibodies

**Notes:** Quantitative results are also processed

# Microbiology

The microbiological EQA programs are suitable for clinical laboratories and POCT sites performing testing in the areas of bacterial serology, bacteriology, mycology, parasitology and virology. While the selection includes schemes for antigen detection, antibody detection, culture, microscopy, and PCR tests, solutions for versatile needs are available. Authentic single donor samples are included in multiple schemes.

## Microbiology » **Bacterial Serology**

### 5840 Antistreptolysin

3*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | • | | | • | | | • | | | • | |

**Specimens:** 2 liquid human serum or plasma samples, 0.4 mL
Authentic, commutable, single donor samples.

**Examinations:** Qualitative and quantitative ASO

### 5950 *Bordetella pertussis*, antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| • | | | • | | | | • | | | • | |

EQA³

**Specimens:** 2 liquid human serum samples, 0.3 mL

**Examinations:** *B. pertussis* IgA, IgG & IgM antibodies, Pertussis toxin IgA, IgG & IgM, post-analytical clinical interpretation

### 5960 *Borrelia burgdorferi*, antibodies, European origin

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| • | | | • | | | | • | | | • | |

EQA³

**Specimens:** 2 liquid human serum or plasma samples, 0.5 mL
Authentic, commutable, single donor samples.

**Examinations:** *B. burgdorferi* IgG, IgM and total antibodies, post-analytical clinical interpretation

### 5965 CXCL 13 Chemokine

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| • | | | | | • | | | | | | |

NEW

**Specimens:** 2 liquid samples

**Examinations:** Chemokine CXCL13 detection

### 5620 *Chlamydia pneumoniae*, antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | • | | | • | | | • | | | • |

EQA³

**Specimens:** 3 liquid serum or plasma samples, 0.4 mL

**Examinations:** *C. pneumoniae* IgA, IgG, IgM antibodies, post-analytical clinical interpretation

### 5851 *Francisella tularensis*, antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | • | | | | | | • | | |

**Specimens:** 3 liquid human serum or plasma samples, 0.5 mL

**Examinations:** *Francisella tularensis* IgG, IgM and total antibodies

### 5860 *Helicobacter pylori*, antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | • | | | • | | | • | | | • |

EQA³ POCT

**Specimens:** 2 liquid human serum or plasma samples, 0.4 mL

**Examinations:** *H. pylori* IgA, IgG and total antibodies, quantitative and qualitative tests, post-analytical clinical interpretation

**Notes:** For clinical laboratories and POCT sites

### 5980 *Mycoplasma pneumoniae*, antibodies

3*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | • | | | • | | | | • | | • | |

EQA³ POCT

**Specimens:** 2 liquid human serum or plasma samples, 0.3 mL
Authentic, commutable, single donor samples.

**Examinations:** *M. pneumoniae* IgG, IgM and total antibodies, post-analytical clinical interpretation

**Notes:** For clinical laboratories and POCT sites

### 5880 Syphilis serology

3*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | • | | | | • | | | | • | | • |

EQA³

**Specimens:** 2 liquid human serum samples, 0.6 mL
Authentic, commutable, single donor samples.

**Examinations:** Cardiolipin, *Treponema pallidum* antibodies, post-analytical clinical interpretation

## 5050 Bacteriological staining, direct (digital images)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ● | | | | | | ● | | |

3

**Specimens:** 3 cases, 3–9 digital images

**Examinations:** Interpretation of digital images taken from direct bacteriological Gram staining of clinical samples

## 5100 Blood culture

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | | | ● | | ● |

1

**Specimens:** 2 lyophilized samples. Brief case histories are also given. Fresh blood is needed for specimen preparation. The samples intended for susceptibility testing may include both international quality control strains and susceptible or resistant clinical strains.

**Examinations:** Culture, identification, antimicrobial susceptibility

**Notes:** Fresh blood is needed but not included in the shipment

## 5101 Blood culture, screening

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | | | ● | | ● |

1

**Specimens:** 2 lyophilized samples. Brief case histories are also given. Fresh blood is needed for sample preparation.

**Examinations:** Culture, preliminary identification using Gram staining. The scheme is also suitable for stem cell banks screening only for possible growth. **Notes:** Fresh blood is needed but not included in the shipment

## 5150 Cerebrospinal fluid, bacterial culture

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | | ● | | | ● |

1

**Specimens:** 2 lyophilized samples. Brief case histories are also given.

**Examinations:** Culture and identification. The scheme is also suitable for laboratories performing screening and reporting merely a preliminary identification.

**Notes:** See also scheme 5303 Meningitis-encephalitis multiplex, nucleic acid detection

## 5612 *Chlamydia trachomatis* and *Neisseria gonorrhoeae* nucleic acid detection

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | ● | | | ● | |

3

**Specimens:** 3 simulated swab/urine samples, 2 mL
**Examinations:** Detection of *C. trachomatis* and *N. gonorrhoeae* nucleic acid

**Notes:** See also scheme 5302 Sexually transmitted diseases multiplex, nucleic acid detection

## 5200 *Clostridioides difficile*, culture and toxin detection

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

1

**Specimens:** 2 lyophilized mixtures of bacteria

**Examinations:** This scheme includes *C. difficile* culture, antigen detection (GDH), toxin detection and direct nucleic acid detection. Hypervirulent *C. difficile* strains also included.

## 5202 *Clostridioides difficile*, extra set of samples

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

**Specimens:** 2 lyophilized mixtures of bacteria

**Notes:** Only in connection with scheme 5200

## 5201 *Clostridioides difficile*, nucleic acid detection

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

1

**Specimens:** 2 lyophilized mixtures of bacteria

**Examinations:** *C. difficile* direct nucleic acid detection. Hypervirulent *C. difficile* strains also included.
**Notes:** 5200 includes also this examination

## 5191 Faecal bacterial pathogens multiplex, nucleic acid detection

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ● | | ● | | | | ● | | ● |

1

**Specimens:** 3 samples. Either lyophilized mixtures of bacteria and/or simulated samples, 1 mL.

**Examinations:** Direct nucleic acid detection. Pathogens included are Aeromonas, Campylobacter, *E. coli* EHEC (stx1/stx2), *E. coli* EAEC, *E. coli* EIEC, *E. coli* EPEC, *E. coli* ETEC, Plesiomonas, Salmonella, Shigella and Yersinia.

**Notes:** During the period of one calendar year, a comprehensive selection of listed pathogens will be covered.

## 5230 *Mycobacterium tuberculosis*, drug resistance

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | ● | | | ● | | | ● |

NEW

**Specimens:** 2 simulated samples, 1 mL

**Examinations:** *Mycobacterium tuberculosis* nucleic acid detection, rifampicin susceptibility and isoniazid susceptibility

## 5190 Faecal culture

1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ● | | ● | | | | ● | | ● |

**Specimens:** 2 lyophilized mixtures of bacteria

**Examinations:** Culture and direct nucleic acid detection. Pathogens included are *Aeromonas*, *Campylobacter*, *Plesiomonas*, *Salmonella*, *Shigella* and *Yersinia*.

## 5080 General Bacteriology 1 (aerobes and anaerobes)

1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | | ● | | | ● |

EQA[3]

**Specimens:** 4 lyophilized mixtures of microbes: both pathogens and normal flora. The samples intended for susceptibility testing may include both international quality control strains and susceptible or resistant clinical strains. Brief case histories are also given. Pre- and/or post-analytical cases in part of the rounds.

**Examinations:** Isolation of pathogens and antimicrobial susceptibility testing, pre- and/or post-analytical cases

**Notes:** 5080 includes 5081, General Bacteriology 2

## 5081 General Bacteriology 2 (aerobes)

1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | | ● | | | ● |

EQA[3]

**Specimens:** 2 lyophilized mixtures of microbes: both pathogens and normal flora. The specimens intended for susceptibility testing may include both international quality control strains and susceptible or resistant clinical strains. Brief case histories are also given. Pre- and/or post-analytical cases in part of the rounds.

**Examinations:** Isolation of pathogens and antimicrobial susceptibility testing, pre- and/or post-analytical cases

**Notes:** 5080 General Bacteriology 1 includes 5081

## 5041 Gram stain, blood culture

1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | | | ● | | | ● | | | ● | | |

**Specimens:** 2 air-dried, unfixed microbe suspensions on slides. Brief case histories also given.

**Examinations:** Staining and microscopy

## 5040 Gram stain, colonies

1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | | | ● | | | ● | | | ● | | |

**Specimens:** 3 air-dried, unfixed microbe suspensions on a slide

**Examinations:** Staining and microscopy

## 5596 *Helicobacter pylori*, antigen detection in faeces

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | ● | | | ● | | | ● |

POCT

**Specimens:** 3 samples: lyophilized faecal or swab
**Examinations:** Antigen detection

**Notes:** For clinical laboratories and POCT sites

## 5597 Legionella, antigen detection in urine

3*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | | ● | | | ● |

POCT

**Specimens:** 3 simulated urine samples

**Examinations:** Legionella antigen detection

## 5220 Mycobacterial culture and stain

1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | ● | | | ● | | | ● |

**Specimens:** 2 lyophilized samples and 2 fixed smears on slides

**Examinations:** Detection of *Mycobacterium tuberculosis*, *Mycobacterium tuberculosis* complex and atypical mycobacteria: culture, direct nucleic acid detection, acid-fast staining and microscopy

**Notes:** See also product 5250 IGRA for *M. tuberculosis*

## 5221 Mycobacterial nucleic acid detection

1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | ● | | | ● | | | ● |

**Specimens:** 2 lyophilized samples

**Examinations:** Direct nucleic acid detection

**Notes:** 5220 includes also this examination. For additional set of samples, order scheme 5222

## 5222 Mycobacteria, extra set of samples

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | ● | | | ● | | | ● |

**Specimens:** 2 lyophilized samples

**Notes:** Only in connection with scheme 5220 or 5221

## 5240 Mycobacterial stain

1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | ● | | | ● | | | ● |

**Specimens:** 2 fixed smears on slides

**Examinations:** Acid-fast staining and microscopy

## 5120 *Neisseria gonorrhoeae* (Gc), culture and susceptibility testing

1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | ● | | | ● | |

**Specimens:** 2 lyophilized mixtures of microbes. The samples intended for susceptibility testing may include both international quality control strains and susceptible or resistant clinical strains.

**Examinations:** Culture, identification and antimicrobial susceptibility testing. Also suitable for laboratories performing preliminary screening.

## 5180 Salmonella culture

1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ● | | ● | | | | ● | | ● |

**Specimens:** 2 lyophilized mixtures of bacteria **Examinations:** Culture

**Notes:** 5190 also includes 5180

POCT

## 5599 *Streptococcus agalactiae* (GBS), nucleic acid detection

3*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ● | | ● | | | ● | | ● | |

**Specimens:** 2 swab samples. Samples also include normal flora.
**Examinations:** Direct nucleic acid detection

**Notes:** See also product 5594 for *S. agalactiae* (GBS) culture.

## 5594 *Streptococcus agalactiae* (GBS), culture

1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ● | | ● | | | ● | | ● | |

**Specimens:** 2 lyophilized samples. Samples include pathogens and/or normal flora.

**Examinations:** Culture
**Notes:** See also product 5599 for direct nucleic acid detection.

POCT

## 5598 *Streptococcus pneumoniae*, antigen detection in urine

3*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | | ● | | | ● |

**Specimens:** 3 simulated urine specimens

**Examinations:** *S. pneumoniae* antigen detection

POCT

## 5595 *Streptococcus pyogenes* (Group A), antigen detection in pharyngeal sample

3*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | | ● | | | ● |

**Specimens:** 3 simulated pharyngeal samples
**Examinations:** Antigen detection

**Notes:** For clinical laboratories and POCT sites. Three results if used different kits.

## 5593 *Streptococcus pyogenes* (Group A), nucleic acid detection in pharyngeal sample

3*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | | ● | | | ● |

**Specimens:** 3 simulated pharyngeal samples **Examinations:** Nucleic acid detection. **Notes:** Three results if used different kits.

## 5073 Surveillance for multidrug resistant bacteria, gramnegative rods

1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | | ● | | | ● | | ● | |

**Specimens:** 1 lyophilized mixture of microbes; including pathogens and/or normal flora

**Examinations:** The scheme is intended for laboratories performing screening of multidrug resistant gramnegative rods (e.g. CPE, ESBL, MDR *Acinetobacter* and *P. aeruginosa)* by culture and/or direct nucleic acid detection method

## 5071 Surveillance for multidrug resistant bacteria, MRSA

1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | | ● | | | ● | | ● | |

**Specimens:** 1 lyophilized mixture of microbes; including pathogens and/or normal flora

**Examinations:** The scheme is intended for laboratories performing screening of MRSA (methicillin resistant *Staphylococcus aureus*) by culture and/or direct nucleic acid detection method

### 5072 Surveillance for multidrug resistant bacteria, VRE

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ● | | | | ● | | | ● | | ● | |

**Specimens:** 1 lyophilized mixture of microbes; including pathogens and/or normal flora

**Examinations:** The scheme is intended for laboratories performing screening of VRE (vancomycin-resistant enterococci) by culture and/or direct nucleic acid detection method

### 5140 Throat streptococcal culture

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | ● | | ● | | | ● | | | ● | |

**Specimens:** 3 lyophilized mixtures of bacteria

**Examinations:** Culture and identification of group A, C and G streptococci

### 5060 Urine culture, quantitative screening

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | ● | | | ● | | | ● | | | ● |

**Specimens:** 2 lyophilized samples and dilutor. Brief case histories also given. Pre- and/or post-analytical cases in part of the rounds.

**Examinations:** Culture and quantitation, pre-and/or post-analytical indicators

**Notes:** Scheme 3170 available for urine bacterial screening with automated analyzers.

EQA[3]

### 5065 Urine culture, quantitative screening, identification and susceptibility

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | ● | | | ● | | | ● | | | ● |

**Specimens:** 2 lyophilized samples and dilutor. Brief case histories also given. The samples intended for susceptibility testing may include both international quality control strains and susceptible or resistant clinical strains. Pre- and/or post-analytical cases in part of the rounds.

**Examinations:** Culture, quantitation, identification and antimicrobial susceptibility testing, pre-and/or post-analytical indicators

**Notes:** Scheme 3170 available for urine bacterial screening with automated analyzers.

EQA[3]

## Microbiology » **Mycology**

### 5261 Fungal infections, nucleic acid detection

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | | | ● | | | | | | ● | | |

**Specimens:** 3-4 simulated samples. The samples may include yeasts, dermatophytes and moulds. **Examinations:** Nucleic acid detection according to laboratory's own test selection.

**Notes:** Test selection of the participating lab is taken into consideration in result processing.

NEW

### 5260 Fungal culture

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | ● | | ● | | | | ● | | ● | |

**Specimens:** 3 lyophilized samples. Brief case histories also given. The samples include moulds, dermatophytes and yeasts.

**Examinations:** Culture and identification. Antimicrobial susceptibility testing of yeast strains.

## Microbiology » **Parasitology**

### 5472 Faecal parasites multiplex, nucleic acid detection

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ● | | | ● | | | ● | | | ● | |

**Specimens:** 3 lyophilized samples

**Examinations:** Nucleic acid detection of *Cryptosporidium, Dientamoeba fragilis, Entamoeba histolytica* and *Giardia lamblia.*

### 5430 Malaria, antigen and nucleic acid detection

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3* | ● | | | ● | | | ● | | | ● | |

**Specimens:** 3 whole blood samples

**Examinations:** Antigen and nucleic acid detection. Target antigens: HRP2 and/or pLDH and/or aldolase.

**Notes:** For clinical laboratories and POCT sites

POCT

### 5462 Malaria screening, Giemsa stain

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | ● | | | ● | | | ● | | | ● | |

**Specimens:** 2 methanol fixed or Giemsa stained smears. Brief case histories also given.

**Examinations:** Preliminary screening of malaria plasmodia

### 5463 Malaria screening, MGG stain

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | ● | | | ● | | | ● | | | ● | |

**Specimens:** 2 methanol fixed or May-Grünwald-Giemsa stained smears. Brief case histories are also given.

**Examinations:** Preliminary screening of malaria plasmodia

## 5460 Parasites in blood, Giemsa stain

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

3

**Specimens:** 2 methanol fixed or Giemsa stained smears. Brief case histories also given.

**Examinations:** Screening and identification of malaria plasmodia and other blood parasites

VIRTUAL

## 5470 Parasites in blood, Giemsa stain, virtual microscopy

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | ● | |

5

**Specimens:** 2 virtual whole slide images of Giemsa stained smears prepared by using a scanner microscope. Brief case histories also given.

**Examinations:** Screening and identification of malaria plasmodia and other blood parasites

## 5461 Parasites in blood, MGG stain

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

3

**Specimens:** 2 methanol fixed or May-Grünwald-Giemsa stained smears. Brief case histories are also given.

**Examinations:** Screening and identification of malaria plasmodia and other blood parasites

VIRTUAL

## 5471 Parasites in blood, MGG stain, virtual microscopy

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | ● | |

5

**Specimens:** 2 virtual whole slide images of MGG stained smears prepared by using a scanner microscope. Brief case histories also given.

**Examinations:** Screening and identification of malaria plasmodia and other blood parasites

## 5440 Parasites in faeces

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

1

**Specimens:** 3 stool samples in formalin. Brief case histories also given.

**Examinations:** Screening and identification of intestinal parasites (ova and parasites)

VIRTUAL

## 5450 Parasites in faeces, virtual microscopy

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ● | | | | | | ● | | |

5

**Specimens:** Virtual whole slide images of stool samples in formalin prepared by using a scanner microscope. Brief case histories also given.

**Examinations:** Screening and identification of intestinal parasites (ova and parasites)

EQA[3]

## 5420 Toxoplasma, antibodies

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

3

**Specimens:** 3 liquid human plasma samples, 0.7 mL each. Brief case histories also given. Authentic commutable samples: Each sample batch originates from a single human donor.

**Examinations:** Toxoplasma IgA, IgG, IgM and total antibodies, IgG avidity, post-analytical clinical interpretation

POCT

## 5473 *Trichomonas vaginalis*, detection

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | ● | | | | ● | | ● | | |

3*

**Specimens:** 3 simulated samples

**Examinations:** Detection of *Trichomonas vaginalis* antigen and nucleic acid (NAT)

# Microbiology » **Virology**

NEW

## 5556 HSV1&2/VZV/*T. pallidum*, nucleic acid detection

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ● | | | ● | | | | | |

1

**Specimens:** 2-3 samples simulating swab samples taken from lesions

**Examinations:** Nucleic acid detection of HSV1, HSV2, VZV, *Treponema pallidum*

## 5651 CMV and EBV, nucleic acid detection, quantitative

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | | | | ● | | | |

3

**Specimens:** 5 samples simulating plasma, 1.5 mL
**Examinations:** CMV and EBV NAT (quantitative).

**Notes:** Quantitative result processing

EQA[3]

## 5650 Cytomegalovirus, antibodies

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | | ● | | | ● |

3

**Specimens:** 3 liquid human plasma samples, 0.7 mL. Authentic commutable samples: each batch originates from a single human donor.

**Examinations:** Cytomegalovirus IgG, IgM and total antibodies, IgG avidity and post-analytical clinical interpretation

## 5635 Dengue virus, antibodies and antigen detection

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | ● | | | ● | | ● | |

POCT EQA³

**Specimens:** 3 human serum or plasma samples, 0.5 mL. Authentic, commutable samples from a single human donor or occasionally simulated samples.

**Examinations:** Dengue virus IgG and IgM antibodies, Dengue virus antigen (NS1) and post-analytical clinical interpretation

## 5640 EBV mononucleosis, POCT

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | | ● | | | ● |

POCT

**Specimens:** 3 liquid human plasma samples, 0.5 mL. Authentic commutable samples: each batch originates from a single human donor.

**Examinations:** MonAb
**Notes:** For clinical laboratories and POCT sites

## 5641 EBV mononucleosis, specific antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | | ● | | | ● |

EQA³

**Specimens:** 3 liquid human plasma samples, 1.4 mL. Authentic commutable samples: each batch originates from a single human donor.

**Examinations:** EBNA AbG, EBV VCA AbG, EBV VCA AbM, IgG Avidity and post-analytical clinical interpretation

## 5092 Hepatitis A, antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

EQA³

**Specimens:** 3 liquid human plasma samples, 0.6 mL. Authentic commutable samples: each batch originates from a single human donor.

**Examinations:** HAVAb, HAVAbM, HAVAbG and post-analytical clinical interpretation

## 5094–5096 Hepatitis B and C, serology, specimen volume 0.6 mL / 1.2 mL / 2.0 mL

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

EQA³

**Specimens:** 3 liquid human plasma samples, 0.6 / 1.2 or 2.0 mL. Authentic commutable samples: each batch originates from a single human donor.

**Examinations:** HBcAb, HBcAbM, HBeAb, HBeAg, HBsAb (qual), HBsAg, HCVAb, HCVAbCt and post-analytical clinical interpretation

**Volume specific product codes:**
5094: for 0.6 mL human plasma specimens
5095: for 1.2 mL human plasma specimens
5096: for 2.0 mL human plasma specimens

## 5093 Hepatitis B, s-antigen antibodies, quantitative

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | | | ● | | | ● | | | ● | | |

**Specimens:** 2 liquid human plasma or serum samples, 0.5 mL. Authentic commutable samples: each batch originates from a single human donor.

**Examinations:** HBsAb (anti-HBs), quantitative

## 5679 Hepatitis B virus, nucleic acid detection (DNA)

3*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | | ● | | ● | |

**Specimens:** 3 lyophilized or liquid plasma samples, 1.2 mL

**Examinations:** HBV DNA, quantitative and/or qualitative nucleic acid detection

## 5678 Hepatitis C virus, nucleic acid detection (RNA)

3*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | | ● | | ● | |

**Specimens:** 3 lyophilized or liquid plasma samples, 1.2 mL

**Examinations:** HCV RNA, quantitative and/or qualitative nucleic acid detection

## 5682 Hepatitis E, antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ● | | | | | | ● | |

EQA³

**Specimens:** 3 liquid human plasma samples, 0.5 mL. Authentic commutable samples: each batch originates from a single human donor.

**Examinations:** Hepatitis E virus IgG and IgM antibodies, post-analytical clinical interpretation.

## 5555 Herpes simplex 1 and 2, antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

**Specimens:** 3 liquid human plasma or serum samples, 0.5 mL. Authentic commutable samples: each batch originates from a single human donor. Occasionally simulated samples.

**Examinations:** HSV IgG (qualitative/quantitative), HSV IgM, HSV-1 IgG, HSV-2 IgG

## 5680 HIV-1, nucleic acid detection (RNA)

3*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | | ● | | ● | |

**Specimens:** 3 lyophilized or liquid plasma samples, 1.2 mL

**Examinations:** HIV-1 RNA, quantitative and/or qualitative nucleic acid detection

EQA³

## 5091 HIV, antibodies and antigen detection

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

**Specimens:** 3 liquid human plasma 0.7 mL

**Examinations:** HIVAgAb (combo), HIVAb, HIVAg, HIVAbCt: primary and confirmatory tests, post-analytical clinical interpretation. Positive specimens may include HIV-1 or HIV-2.

POCT

## 5090 HIV, antibodies and antigen detection, POCT

3*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

**Specimens:** 3 liquid human plasma 0.5 mL
**Examinations:** HIVAb and HIVAgAb primary tests (POCT)

**Notes:** Scheme 5091 is for clinical laboratories

## 5086 Human papillomavirus, nucleic acid detection

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | | | ● | | | ● | | | ● | | |

**Specimens:** 2 simulated samples, 1 mL
**Examinations:** High-risk human papillomavirus NAT, hrHPVNAT

**Notes:** Suitable for nucleic acid methods used in cervical cancer screening

EQA³

## 5089 Human T-cell lymphotropic virus, antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

**Specimens:** 3 liquid human plasma samples, 0.5 mL. Authentic commutable samples: each batch originates from a single human donor.

**Examinations:** HTLVAb: primary and confirmatory tests, post-analytical clinical interpretation. Positive samples may include HTLV-1 or HTLV-2.

## 5670 Influenza virus A+B and RS virus, nucleic acid detection

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | | | | | | | ● | |

**Specimens:** 5 artificial samples. 1 mL
**Examinations:** InfANAT, InfBNAT, RSVNAT

**Notes:** See also scheme 5300 Respiratory infections multiplex, nucleic acid detection

POCT

## 5671 Influenza virus A+B, antigen detection

3*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | | | | | | | ● | |

**Specimens:** 3 liquid and/or swab samples.
**Examinations:** InfAAg, InfBAg

**Notes:** For clinical laboratories and POCT sites. The samples are not suitable for IFA or NAT methods, please see scheme 5670 or 5562.

EQA³

## 5668 Measles virus, antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | | | ● | | | ● | | | ● | | |

**Specimens:** 3 liquid human plasma samples, 0.5 mL. Authentic commutable samples: each batch originates from a single human donor.

**Examinations:** Measles virus IgG and IgM antibodies and post-analytical clinical interpretation

## 5562 Multiple respiratory virus, nucleic acid detection

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | | | ● | | | | ● | |

**Specimens:** The round contains 3 swab samples.
**Examinations:** Influenza A/B virus NAT, RSV NAT and SARS-CoV-2 NAT

**Notes:** Scheme is not suitable for TMA methods (e.g. Hologic Panther SARS-CoV-2 assay).

EQA³

## 5669 Mumps virus, antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | | | ● | | | ● | | | ● | | |

**Specimens:** 3 liquid human plasma samples, 0.5 mL. Authentic commutable samples: each batch originates from a single human donor.

**Examinations:** Mumps virus IgG and IgM antibodies and post-analytical clinical interpretation

## 5675 Norovirus, nucleic acid detection

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | ● | | | ● | | | ● |

**Specimens:** 3 simulated samples, 1 mL

**Examinations:** Norovirus NAT, genogroups GI and GII

## 5660 Parvovirus B19, antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | ● | | | ● | | | ● |

EQA³

**Specimens:** 3 liquid human plasma or serum samples, 0.4 mL. Authentic commutable samples: each batch originates from a single human donor.

**Examinations:** Parvovirus IgG, IgM, IgG avidity and post-analytical clinical interpretation

## 5560 Puumala virus, antibodies

3*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | ● | | | ● | | ● | |

POCT

EQA³

**Specimens:** 3 liquid human plasma or serum samples, 0.3 mL. Brief case histories are also provided.

**Examinations:** Puumala virus IgG, IgM, POC tests and specific antibodies, IgG avidity and post-analytical clinical interpretation

**Notes:** For clinical laboratories and POCT sites

## 5673 Respiratory adenovirus, antigen detection

3*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | ● | | | ● | | | ● |

POCT

**Specimens:** 3 simulated samples, 1 mL

**Examinations:** Adenovirus Ag

## 5098 Rotavirus and adenovirus, antigen detection

3*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | ● | | | ● | | | ● |

POCT

**Specimens:** 3 simulated samples, 1 mL

**Examinations:** Rotavirus and adenovirus antigen detection

## 5672 RS virus, antigen detection

3*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | | | | | | | ● | |

POCT

**Specimens:** 3 liquid and/or swab samples.
**Examinations:** RSVAg

**Notes:** For clinical laboratories and POCT sites. The samples are not suitable for IFA or NAT methods, please see scheme 5670 or 5562.

## 5667 Rubella virus, antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | | | ● | | | ● | | | ● | | |

EQA³

**Specimens:** 3 liquid human plasma samples, 0.5 mL. Authentic commutable samples: each batch originates from a single human donor.

**Examinations:** Rubella virus IgG and IgM antibodies, IgG avidity and post-analytical clinical interpretation

## 5099 Tick-borne encephalitis virus, antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | ● | | | ● | | | ● |

EQA³

POCT

**Specimens:** 3 liquid human plasma or serum samples, 0.5 mL. Authentic commutable samples: each batch originates from a single human donor.

**Examinations:** TBE IgG, IgM, total antibodies and post-analytical clinical interpretation

**Notes:** For clinical laboratories and POCT sites

## 5677 SARS-CoV-2, antibodies

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | | | ● | | | ● | | | ● | | |

POCT

**Specimens:** 3 liquid human plasma or serum samples, 0.5 mL. Authentic commutable samples: each batch originates from a single human donor.

**Examinations:** SARS-CoV-2 Ab, SARS-CoV-2 IgG, SARS-CoV-2 IgM, SARS-CoV-2 IgA

**Notes:** For clinical laboratories and POCT sites

## 5681 SARS-CoV-2, antigen detection

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | | | ● | | | ● | | | ● | | |

POCT

**Specimens:** 3 simulated samples
**Examinations:** SARS-CoV-2 Ag

**Notes:** For clinical laboratories and POCT sites

## 5676 SARS-CoV-2, nucleic acid detection

3

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | | | ● | | | ● | | | ● | | |

POCT

**Specimens:** 3 simulated whole genome cDNA samples

**Examinations:** SARS-CoV-2 NAT

**Notes:** Including variants. Scheme is not suitable for TMA methods (e.g. Hologic Panther SARS-CoV-2 assay).

EQA³

| 5665 Varicella-zoster virus, antibodies | 3 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ● | | | ● | | | ● | | | ● | |

**Specimens:** 3 liquid human plasma or serum samples, 0.5 mL. Authentic commutable samples: each batch originates from a single human donor.

**Examinations:** Varicella zoster IgG, IgM, total antibodies and post-analytical clinical interpretation

| 5636 Zika virus, antibodies | 3 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | ● | | | | | | ● | |

**Specimens:** 3 liquid human plasma or serum samples, 0.5 mL. Authentic commutable samples: each batch originates from a single human donor.

**Examinations:** Zika virus IgG, Zika virus IgM, clinical interpretation

# EQA schemes including Antimicrobial Susceptibility Testing

## Bacteriology and mycology

5100 Blood culture
5260 Fungal culture
5080 General Bacteriology 1
5081 General Bacteriology 2
5120 *Neisseria gonorrhoeae* (Gc), culture and susceptibility testing
5073 Surveillance for multidrug resistant bacteria, gramnegative rods
5071 Surveillance for multidrug resistant bacteria, MRSA
5072 Surveillance for multidrug resistant bacteria, VRE
5065 Urine culture, quantitative screening, identification and susceptibility
5230 *Mycobacterium tuberculosis*, drug resistance

# EQA schemes suitable for direct nucleic acid testing methods

## Bacteriology

5612 *Chlamydia trachomatis* and *Neisseria gonorrhoeae,* nucleic acid detection
5201 *Clostridioides difficile*, nucleic acid detection
5191 Faecal bacterial pathogens multiplex, nucleic acid detection
5221 Mycobacterial nucleic acid detection
5599 *Streptococcus agalactiae (GBS),* nucleic acid detection
5593 *Streptococcus pyogenes* (Group A), nucleic acid detection in pharyngeal sample
5071 Surveillance for multidrug resistant bacteria, MRSA
5072 Surveillance for multidrug resistant bacteria, VRE
5073 Surveillance for multidrug resistant bacteria, gramnegative rods
5230 *Mycobacterium tuberculosis*, drug resistance

## Multiplex

5191 Faecal bacterial pathogens multiplex, nucleic acid detection
5472 Faecal parasites multiplex, nucleic acid detection
5304 Gastrointestinal viral multiplex, nucleic acid detection
5303 Meningitis-encephalitis multiplex, nucleic acid detection
5300 Respiratory infections multiplex, nucleic acid detection
5302 Sexually transmitted diseases multiplex, nucleic acid detection

## Parasitology

5472 Faecal parasites multiplex, nucleic acid detection
5430 Malaria, antigen and nucleic acid detection
5473 *Trichomonas vaginalis*, detection

## Virology

5556 HSV1&2/VZV/*T. pallidum*, nucleic acid detection
5651 CMV and EBV, nucleic acid detection, quantitative
5679 Hepatitis B virus, nucleic acid detection (DNA)
5678 Hepatitis C virus, nucleic acid detection (RNA)
5680 HIV-1, nucleic acid detection (RNA)
5086 Human papillomavirus, nucleic acid detection
5670 Influenza virus A+B and RS virus, nucleic acid detection
5562 Multiple Respiratory Virus, nucleic acid detection
5675 Norovirus, nucleic acid detection
5676 SARS-CoV-2, nucleic acid detection

## Mycology

5261 Fungal infections, nucleic acid detection

# Multiplex

Multiplex EQA schemes are aimed to support laboratories to fulfill quality requirements of multiplex nucleic acid tests. All schemes include clinically relevant samples specially designed for multiplex nucleic acid testing. The multiplex schemes are annual programs and during the period of one calendar year, a comprehensive selection of listed pathogens will be covered.

## 5191 Faecal bacterial pathogens multiplex, nucleic acid detection

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ● | | ● | | | | ● | | ● |

1

**Specimens:** 3 samples. Either lyophilized mixtures of bacteria and/or simulated samples, 1 mL.

**Examinations:** Direct nucleic acid detection. Pathogens included are Aeromonas, Campylobacter, *E. coli* EHEC (stx1/stx2), *E. coli* EAEC, *E. coli* EIEC, *E. coli* EPEC, *E. coli* ETEC, Plesiomonas, Salmonella, Shigella and Yersinia.

**Notes:** During the period of one calendar year, a comprehensive selection of listed pathogens will be covered.

## 5472 Faecal parasites multiplex, nucleic acid detection

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | ● | | | ● | |

1

**Specimens:** 3 lyophilized samples

**Examinations:** Nucleic acid detection of *Cryptosporidium*, *Dientamoeba fragilis*, *Entamoeba histolytica*, *Giardia lamblia*.

## 5304 Gastrointestinal viral multiplex, nucleic acid detection

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ● | | | | | | ● | |

1

**Specimens:** 3 simulated samples, 1 mL.

**Examinations:** Direct multiplex nucleic acid detection. Pathogens included are: Adenovirus, Astrovirus, Norovirus, Rotavirus, Sapovirus.

**Notes:** During the period of one calendar year, a comprehensive selection of listed pathogens will be covered.

## 5303 Meningitis-encephalitis multiplex, nucleic acid detection

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | | ● | | ● | |

1

**Specimens:** 3 simulated samples, 1 mL.

**Examinations:** Direct multiplex nucleic acid detection. Pathogens included are: *Escherichia coli* K1, *Haemophilus influenzae, Listeria monocytogenes, Neisseria meningitidis, Streptococcus agalactiae, Streptococcus pneumoniae,* Cytomegalovirus (CMV), Enterovirus, Epstein-Barr virus (EBV), Herpes simplex virus 1 (HSV1), Herpes simplex virus 2 (HSV2), Human herpesvirus 6 (HHV6), Human parechovirus (HPeV), Varizella zoster virus (VZV) and *Cryptococcus neoformans/gattii.*

**Notes:** During the period of one calendar year, a comprehensive selection of listed pathogens will be covered.

## 5300 Respiratory infections multiplex, nucleic acid detection

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ● | | | ● | | | | ● | | | ● |

1

**Specimens:** 4 simulated samples, 1 mL

**Examinations:** Direct multiplex nucleic acid detection. Pathogens included are adenovirus, *B. parapertussis, B. pertussis, C. pneumoniae,* coronavirus (OC43, 229E, NL63, HKU1), enterovirus, influenzavirus A/B, *L. pneumophila,* metapneumovirus, *M. pneumoniae,* parainfluenzavirus 1-4, rhinovirus, RSV A/B, SARS-CoV-2 and *S. pneumoniae*.

**Notes:** During the period of one calendar year, a comprehensive selection of listed pathogens will be covered.

## 5302 Sexually transmitted diseases multiplex, nucleic acid detection

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | ● | | | ● | | | ● | |

1

**Specimens:** 4 simulated swab/urine samples, 2 mL

**Examinations:** Direct multiplex nucleic acid detection. Pathogens included are *C. trachomatis,M. genitalium, M. hominis, N. gonorrhoeae, T. vaginalis, U. parvum and U. urealyticum.*

**Notes:** During the period of one calendar year, a comprehensive selection of listed pathogens will be covered.

# Pathology

Seven high quality schemes are available for pathology laboratories. With changing topics in the rounds, both the routine and more advanced needs are covered. The challenges are realistic and include also less commonly encountered clinically relevant cases. In the cytology and histopathology schemes virtual microscopy is used. With this technology, viewing of several fields of vision and levels of focus are enabled on a computer screen simulating analysis with an optical microscope.

## Pathology » **Preanalytics**

### 7806 Preanalytics and process in anatomic pathology

5 rounds

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ● | | | | | | ● | |

**Specimens:** 3-5 cases with preanalytical and process error(s)

**Examinations:** Participants are asked to find preanalytical or laboratory process error(s) in the cases.

**Notes:** The scheme is intended for all laboratory staff of pathology laboratories. Scheme is carried out online.

## Pathology » **Diagnostics**

VIRTUAL

### 6701 Gynaecological cytology (liquid based), virtual microscopy

5 rounds

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ● | | | | | | | |

**Specimens:** Virtual images of at least 5 Papanicolaou stained slides of liquid based cytology (LBC) samples (ThinPrep). Diagnostics of cellular atypias in samples taken from gynaecological loci is assessed. Brief case histories and instructions are provided.

**Examinations:** Observations and diagnoses

**Notes:** Virtual microscopy program does not work with Internet Explorer.

VIRTUAL

### 6700 Gynaecological cytology (smear), virtual microscopy

5 rounds

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | | | | | | | |

**Specimens:** Virtual images of at least 5 Papanicolaou stained slides of conventional pap smear samples. The samples are selected from routine cytological material. Diagnostics of cellular atypias in samples taken from gynaecological loci is assessed. Brief case histories and instructions are provided

**Examinations:** Observations and diagnoses

**Notes:** Virtual microscopy program does not work with Internet Explorer.

VIRTUAL

### 6542 Histopathology, virtual microscopy

5 rounds

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | | | | | ● | | |

**Topics 2023:** 1/2023 Lymphohematopoietic pathology, 2/2023 Prostate

**Specimens:** Virtual images of at least 5 slides of miscellaneous tissue. Brief case histories and instructions are provided.

**Examinations:** Observations and diagnoses

**Notes:** Topics may vary annually

VIRTUAL

### 6702 Non-gynaecological cytology, virtual microscopy

5 rounds

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | ● | | |

**Specimens:** Virtual images of Papanicolaou stained slides of non-gynaecological cytosentrifuge (CCF) or smear preparations or May-Grünwald-Giemsa stained smears or imprint preparations. Images of at least 5 cases from representative loci. Brief case histories and instructions are provided.

**Examinations:** Observations and diagnoses

**Notes:** Virtual microscopy program does not work with Internet Explorer.

## Pathology » **Technology**

### 6543 Histological staining techniques

1 round

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ● | | | | | | ● | | |

**Topics:** 1/2023 HE, FE 2/2023 PAS, D-PAS, LEDER

**Specimens:** Unstained paraffin sections or smears

**Examinations:** Staining of the slides. A set of stained slides is returned to Labquality for evaluation by an expert board.

**Notes:** Stains vary annually

### 6600, 6600S Immunohistochemical staining methods

1 round

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ● | | | | | | ● | | ● | |

**Topics:** 1/2023 Unknown tumour: SOX10, Prame, Melan A/Mart-1, CK20, CK7
2/2023 Breast cancer: PR, HER2, ER, Ki-67 and HER2 -ISH* *) also double stain accepted, but no FISH
3/2023 Lymphoma: CD23, bcl2, bcl6, CD35, CD138

**Specimens:** Unstained paraffin embedded tissue from different tissue blocks or from one multiblock

**Examinations:** Staining of the slides. A set of stained slides is returned to Labquality for evaluation by an expert board.

**Notes:** Changes in frequency, antibodies and sample type. Three rounds with distinct topics available annually. Multiblock samples are now included. Participants can select 3 or 5 antibodies of their choice in each round (6600S for 3 antibodies, 6600 for 5).

# Preanalytics

The preanalytical schemes provide laboratories and POCT sites with tools for extending quality assurance beyond the commonly assessed analytical phase. As a result of the improved analytical quality, most errors have been suggested to now occur in the preanalytical phase. Managing all phases of the total testing cycle is equally important to ensure patient safety.

## 8817 HIL-index [DEKS]

1 2 3 4 5 6 7 8 9 10 11 12
1 • • •

**Specimens:** 2 serum samples, 2 mL.

**Examinations:** Selected components are asked to be analysed. One of the samples is haemolysed, icteric or lipemic.

## 7806 Preanalytics and process in anatomic pathology

1 2 3 4 5 6 7 8 9 10 11 12
5 • •

**Specimens:** 3-5 cases with preanalytical and process error(s)
**Examinations:** Participants are asked to find preanalytical or laboratoryprocess error(s) in the cases.

**Notes:** The scheme is intended for all laboratory staff of pathologylaboratories. Scheme is carried out online.

## 7800 Preanalytics, clinical chemistry

1 2 3 4 5 6 7 8 9 10 11 12
5 • •

**Specimens:** 3 cases with preanalytical error(s)

**Examinations:** Participants are asked to find preanalytical error(s) in the cases

**Notes:** The scheme is intended for clinical chemistry laboratories. The scheme is carried out online.

## 7802 Preanalytics, microbiology

1 2 3 4 5 6 7 8 9 10 11 12
5 • •

**Specimens:** 3 cases with preanalytical error(s)

**Examinations:** Participants are asked to find preanalytical error(s) in the cases

**Notes:** The scheme is intended for all laboratory staff of clinical microbiology laboratories. Scheme is carried out online.

## 7807 Preanalytics, Pneumatic Sample Transport

1 2 3 4 5 6 7 8 9 10 11 12
3 •

**Specimens:** Two surrogate blood vials (i.e. measurement devices for recording 3-axis acceleration during pneumatic tube system transport (PTS).

**Examinations:** Vials are sent through the PTS as regular blood samples, no laboratory analysis is performed. Rejection probability of LDH, ASAT and K will be calculated using the cumulative vibration level, laboratory defined anayte-specific hemolysis cutoffs, and a hemolysis model.

**Notes:** Vials are sent to the participating laboratories during September-October. Laboratories are asked to perform the recordings within one week upon receiving the vials and to return the vials using a courier (shipping costs not included). It is possible to measure 3 different lines from the same PTS manufacturer.

NEW

## 7804 Preanalytics, POCT in chemistry

1 2 3 4 5 6 7 8 9 10 11 12
5 •

**Specimens:** 3 cases with preanalytical error(s)

**Examinations:** Participants are asked to find preanalytical error(s) in the cases

**Notes:** The scheme is intended for personnel using POCT tests and devices. Scheme is carried out online.

POCT

## 7801 Preanalytics, urine and blood sample collection

1 2 3 4 5 6 7 8 9 10 11 12
5 •

**Specimens:** 3 cases with preanalytical error(s)

**Examinations:** Participants are asked to find preanalytical error(s) in the cases

**Notes:** The scheme is intended for personnel performing blood and urine sample collection. Scheme is carried out online.

POCT

# Others

## Others » **Andrology**

| 6400 Semen analysis | 3 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | ● | | |

**Specimens:** 3–6 digital videos and/or digital images
**Examinations:** Concentration, morphology and motility

**Notes:** Scheme is carried out online

## Others » **Clinical physiology**

EQA³

| 7130 ECG, interpretation | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | ● | | | | | | ● | | |

**Specimens:** 3 digital ECG registrations (images)
**Examinations:** Technical quality and findings

**Notes:** Scheme is designed for nurses and general practitioners as well as for personnel in POCT units. Participants are evaluated on their responses on technical quality, findings or both if given.

## Others » **Genetics**

| 3865 DNA single nucleotide variation [EQUALIS] | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ● | | | | | | | ● | | |

**Specimens:** Whole blood or extracted DNA. Blank samples (water) are sometimes included.

**Examinations:** DNA-Apolipoprotein E genotype, DNA-Factor 2 (F2) g.20210G>A, DNA-Factor 5 (F5) c.1691G>A, DNA-Hemochromatosis (HFE) c.187C>G; c.845G>A, DNA-Lactase gene (LCT) g.13910C>T, DNA-Methylene tetrahydropholate reductase (MTHFR) c.677C>T; c.1298A>C

## Others » **Laboratory instruments**

| 8814 ELISA reader photometry control [DEKS] | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Circulation starts in March | | | | | | | | | | | |

**Specimens:** An ELISA-plate with built-in gray glass filters
**Examinations:** Control for the absorbance scale in ELISA reader

**Notes:** Absorbance traceable to NIST Control of the absorbance scale of ELISA readers

# External quality assessment for extra-analytical phases

PREANALYTICAL EQA | ANALYTICAL EQA | POSTANALYTICAL EQA

Labquality has two advanced external quality assessment programs for extra-analytical phases of clinical laboratory investigation process. Preanalytical EQA programs are independent schemes for the evaluation of preanalytical phase and Integrated EQA programs includes pre- and/or postanalytical evaluation together with traditional EQA samples.

## Pre- and postanalytical EQA programs

### Preanalytical EQA programs

7800 Preanalytics, clinical chemistry
7802 Preanalytics, microbiology
7806 Preanalytics and process in anatomic pathology
8817 HIL-index [DEKS]
7807 Preanalytics, Pneumatic sample transport
7804 Preanalytics, POCT in chemistry
7801 Preanalytics, urine and blood sample collection

### Integrated EQA programs

**Clinical chemistry**

2570, 2580, 2590 Glucose meters
2114 Haemoglobin, 1-level, POCT
2300, 2300S Hormones A:
Basic analytes of hormone and immunochemistry
2301, 2301S Hormones B: Steroid and peptide hormones
2200 Lipids and lipoproteins
2240 Proteins, electrophoresis
2050 Serum B and C (2-level)
2480 Vitamin A, E and D metabolites

**Clinical physiology**

7130 ECG, interpretation

**Haematology**

4480 Column agglutination methods:
grading of reactions and patient cases

**Immunology**

5935 ANCA and GbmAb
5900 Antinuclear antibodies
5920 Thyroid gland antibodies
5940 Coeliac disease, antibodies
5250 Interferon Gamma Release Assay (IGRA) for
*Mycobacterium tuberculosis*

**Microbiology**

5950 *Bordetella pertussis*, antibodies
5960 *Borrelia burgdorferi*, antibodies, European origin
5620 Chlamydia pneumoniae, antibodies
5650 Cytomegalovirus, antibodies
5635 Dengue virus, antibodies and antigen detection
5641 EBV mononucleosis, specific antibodies
5080 General Bacteriology 1 (aerobes and anaerobes)
5081 General Bacteriology 2 (aerobes)
5860 Helicobacter pylori, antibodies
5092 Hepatitis A, antibodies
5094–5096 Hepatitis B and C, serology
5682 Hepatitis E, antibodies
5091 HIV, antibodies and antigen detection
5089 Human T-cell lymphotropic virus, antibodies
5668 Measles virus, antibodies
5669 Mumps virus, antibodies
5980 *Mycoplasma pneumoniae*, antibodies
5660 Parvovirus B19, antibodies
5560 Puumala virus, antibodies
5667 Rubella virus, antibodies
5880 Syphilis serology
5099 Tick-borne encephalitis virus, antibodies
5420 Toxoplasma, antibodies
5060 Urine culture, quantitative screening
5065 Urine culture, quantitative screening, identification and susceptibility
5665 Varicella-zoster virus, antibodies
5636 Zika virus, antibodies

# Alphabetical scheme directory

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**9-10 FEBRUARY, 2023**
**HELSINKI, FINLAND**

LABQUALITY
DAYS

# International Congress on Quality in Laboratory Medicine and Health Technology

Labquality Days is one of the largest annual international congresses in Scandinavia focusing on quality in laboratory medicine and medical devices.

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