External Quality Assessment
Product Catalogue 2018
The Path to Perfect Quality
Table of contents

Service information 4
Updates for 2018 5

Clinical chemistry 6–14
» Allergology ............................................................................................................. 6
» Basic chemistry ....................................................................................................... 6–7
» Cardiac markers ....................................................................................................... 7–8
» Diabetes analysis ...................................................................................................... 8
» Endocrinology .......................................................................................................... 8–9
» General long-term clinical chemistry .................................................................... 9
» General short-term clinical chemistry ................................................................. 9–10
» Special chemistry ................................................................................................... 10–12
» Specific proteins ..................................................................................................... 12–13
» Tumour markers ..................................................................................................... 13
» Urine analysis .......................................................................................................... 13–14

Blood banks and transfusion medicine 14

Haematology 15–18
» Blood transfusion serological tests ....................................................................... 15
» Cell count and cell morphology ........................................................................... 15–17
» Coagulation ............................................................................................................. 17–18

Point-of-Care 18

Immunology 19–20

Microbiology 21–29
» Bacterial Serology ................................................................................................. 21
» Bacteriology ............................................................................................................ 22–25
» Mycology ................................................................................................................. 25
» Parasitology ............................................................................................................ 25–26
» Virology .................................................................................................................. 26–29

Nucleic acid detection 29

Multiplex 30

Pathology 31
» Diagnostics ............................................................................................................. 31
» Technology .............................................................................................................. 31

Preanalytics 32

Others 33
» Andrology ............................................................................................................. 33
» Clinical physiology .............................................................................................. 33
» Genetics .................................................................................................................. 33
» Laboratory instruments ....................................................................................... 33
» Veterinary EQA .................................................................................................... 33

Alphabetical scheme directory 36–38
Labquality – EQAS

Labquality is an independent external quality assessment provider from Finland owned by various non-profit organizations. Labquality has over 45 years' of experience in helping clinical laboratories and POCT sites to develop and maintain their performance. Labquality’s EQA schemes are internationally recognized high quality programs. EQA programs have clinical scope with educational touch. Part of the EQA production is outsourced to expert laboratories and national partners.

Integrated EQA service

Labquality is the first EQA provider, who has integrated pre-analytical, analytical and post-analytical phases to its EQA programs. Advanced and traditional EQA schemes have been designed to fully support laboratory’s total quality management system and fulfill ISO 15189 requirements concerning the extra-analytical phases. Integrated EQA schemes include samples and pre- and post-analytical questionnaires concerning the scope of the scheme.

Quality management

Labquality’s management system is certified according to ISO 9001 (DQS) and main EQA schemes (299) are accredited according to ISO 17043 (PT02/FINAS). Certificates and scope of accreditation are available on our website www.labquality.fi.

EQA service availability

Labquality has customers in over 50 countries in Europe, Asia, America and North Africa. Service is localized by 25 national partners. All digital schemes including pre-analytical schemes and diagnostic schemes for anatomic pathology are available globally. All schemes (with few exceptions) are available via national partners in Europe, Middle East and Central Asia. For direct customers the program selection is limited to the schemes with stable and non-hazardous sample materials.

Enrolment and prices

Labquality has annual programs and pricing. Participants shall place their orders for next year before the end of November to ensure the participation to 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 to our national partner in your country or Labquality’s customer service at info@labquality.fi.

Deliveries

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

LabScala EQA portal

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

Certificate

Certificate of participation will be issued to all participants in the end of calendar year. Certificate refers to EQA reports to evaluate the performance of the participant.

Customer service

Please contact to Labquality’s national partner (listed on Labquality’s web site: www.labquality.fi) or customer service (English) at info@labquality.fi.

How to use the catalogue

<table>
<thead>
<tr>
<th>Scheme code and name</th>
<th>Rounds (delivery months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1234</td>
<td>1</td>
</tr>
<tr>
<td><strong>POCT</strong></td>
<td></td>
</tr>
</tbody>
</table>

Specimens:
- Examinations:

Notes:

Additional info

- **EQA** = Integrated EQA service
- **NEW** = New product
- **POCT** = Suitable for Point-of-Care testing sites
- **VIRTUAL** = Virtual microscopy
Updates for 2018

New schemes and products

7130  ECG, interpretation (page 33)
8817  HIL-index [DEKS] (page 32)
5086  Human papillomavirus, nucleic acid detection (page 28)
5300  Respiratory infections multiplex, nucleic acid detection (page 30)
5302  Sexually transmitted diseases multiplex, nucleic acid detection (page 30)
2685  Tryptase [UK NEQAS] (page 6)

Discontinued schemes

5970  Enteropathogens

New integrated EQA schemes (EQA³) (pre- and/or post-analytics included)

Integrated EQA schemes combine pre-analytical, analytical and post-analytical EQA to one scheme fulfilling ISO 15189 requirements.

5940  Coeliac disease, antibodies (page 19)
2301  Hormones B: Steroid and peptide hormones (page 9)
2200  Lipids and lipoproteins (page 12)
2240  Proteins, electrophoresis (page 13)
1072  Serum A, lyophilized samples (page 9)
5060  Urine culture, quantitative screening (page 25)
5065  Urine culture, quantitative screening, identification and susceptibility (page 25)

Optional schemes

2221  Down’s syndrome screening, quality assurance (page 8)*
*) Will be organised, if there are at least 10 participants.

Changes in delivery schedule

2040  Bilirubin, neonatal (FEB, APR, JUN, AUG, OCT, DEC)
1002  Haemoglobin for analyzers (FEB, APR, JUN, AUG, OCT, DEC)
6543  Histological staining techniques (MAR, OCT)
6542  Histopathology, virtual microscopy (APR, OCT)
6600, 6600S  Immunohistochemical staining methods (MAR, SEP, NOV)
2226  Prostate specific antigen (FEB, APR, JUL, OCT)

Changes in scope, specimens or parameters

2040  Bilirubin, neonatal
Specimens are not delivered together with Serum A anymore
5191  Faecal bacterial pathogens multiplex, nucleic acid detection
New scope: Multiplex
5191  Faecal bacterial pathogens multiplex, nucleic acid detection
New parameter: Samples may include EHEC
5190  Faecal culture
New parameter: Samples may include EHEC
2370  Folate, erythrocytes
New availability: Available globally
1002  Haemoglobin for analyzers
Specimens are not delivered together with Serum A anymore
5430  Malaria, antigen and nucleic acid detection
New parameter: Nucleic acid detection
1072, 1072S  Serum A, lyophilized samples
Lyophilized specimens only
### Clinical chemistry » Allergology

#### 2675 Allergen component [UK NEQAS]

| 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 is not possible for less than 6 rounds in a year. Should be ordered by November 13th, 2017. |

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

| 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 is not possible for less than 6 rounds in a year. Should be ordered by November 13th, 2017. |

#### 2681 Allergy in vitro diagnostics [SKML]

| 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 each |
| Examinations: | Total IgE, specific IgEs, allergen mixes and allergen components |
| Notes: | Participation is not possible for less than 6 rounds in a year. Should be ordered by November 13th, 2017. All samples are distributed in February. |

#### 2680 Eosinophil cationic protein

| 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]

| Specimens: | 2 liquid human serum samples |
| Examinations: | Tryptase |
| Notes: | Participation is not possible for less than 6 rounds in a year. Should be ordered by November 13th, 2017. |

### Clinical chemistry » Basic chemistry

#### 2100 Basic chemistry, POCT analyzers

| Specimens: | 2 human serum samples, 1 mL each |
| Examinations: | Alanine aminotransferase, albumin, alkaline phosphatase, amylase (total and pancreatic), aspartate aminotransferase, calcium, chloride, HDL cholesterol, cholesterol, creatine kinase, 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. |
### 2730 Erythrocyte sedimentation rate

- **Specimens:** 1 artificial blood cell suspension, 4.5 mL
- **Examinations:** ESR

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

- **Specimens:** 3 test tubes containing synthetic latex solution, 3 mL each
- **Examinations:** ESR

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

- **Specimens:** 3 test tubes containing synthetic latex solution, 3 mL each
- **Examinations:** ESR

### 2750 Faecal occult blood

- **Specimens:** 2 preparations that include human haemoglobin, ≥ 0.5 mL each
- **Examinations:** Detection of haemoglobin
- **Notes:** For clinical laboratories and POCT sites

### 2114 Haemoglobin, 1-level, POCT

- **Specimens:** 1 bovine hemolysate or human whole blood control sample, 1 mL
- **Examinations:** Haemoglobin
- **Notes:** Only for POCT devices. Not suitable for Diaspect.

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

- **Specimens:** 3 human whole blood control samples, 1 mL each (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

- **Specimens:** 3 bovine or human samples, 1 mL each (low, medium and high concentration)
- **Examinations:** Haemoglobin linearity with three samples
- **Notes:** Only for POCT devices. Not suitable for Diaspect.

### 1002 Haemoglobin for analyzers

- **Specimens:** 2 hemolyzed samples, 1 mL
- **Examinations:** Haemoglobin
- **Notes:** Order product 2114 for POCT Hb meters.

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**Clinical chemistry » Cardiac markers**

### 1541 CRP, low concentration

- **Specimens:** 1 human serum sample
- **Examinations:** CRP
- **Notes:** CRP, low concentration sample is included in product 2541 Myocardiac markers and CRP

### 2540 Myocardial markers

- **Specimens:** 2 fresh human samples or 2 liquid samples, 0.5-1 mL each
- **Examinations:** CK MB mass, myoglobin, quantitative troponin I, quantitative troponin T
- **Notes:** Suits clinical laboratory analyzers. See also scheme 2530 Troponin I and T, detection for POCT.
### POCT

#### 2570, 2580, 2590 Glucose meters 1, 2 and 3

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</table>

| Specimens: | 2 fresh human samples or 2 liquid samples for myocardial markers, 0.5–1 mL each and 1 for CRP, 1 mL |
| Examinations: | CK-MB mass, myoglobin, quantitative troponin I, quantitative troponin T and CRP, low concentration |

**Notes:** Suits clinical laboratory analyzers. See also scheme 2530 Troponin I and T, detection for POCT.

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

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| Specimens: | 2 lyophilized or liquid samples, 1–2 mL each |
| Examinations: | NT-ProBNP |

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

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

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| Specimens: | 2 lyophilized or liquid samples, 1–2 mL each |
| Examinations: | BNP |

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

#### 2530 Troponin I and Troponin T, detection, POCT

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| Specimens: | 2 fresh human samples or 2 liquid samples, 0.5 mL each |
| Examinations: | Detection of troponin I and troponin T |

**Notes:** Qualitative, semi-quantitative and quantitative results are processed. This scheme is only for POCT, scheme 2540 is for analyzers.

#### 1261 Haemoglobin A1c, liquid samples

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</table>

| Specimens: | 2 liquid blood samples, 0.5 mL each |
| Examinations: | HbA1c |

**Notes:** Result processing in IFCC and DCCT units. Not suitable for Afinion instruments.

#### 1263 Haemoglobin A1c, liquid samples, POCT

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| Specimens: | 2 liquid blood samples, 0.5 mL each |
| Examinations: | HbA1c |

**Notes:** Result processing in IFCC and DCCT units. Only for POCT devices. Not suitable for Afinion instruments.

### Clinical chemistry » Diabetes analysis

#### 2541 Myocardial markers and CRP, low concentration

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**Notes:** Suits clinical laboratory analyzers. See also scheme 2530 Troponin I and T, detection for POCT.

#### 2221 Down’s syndrome screening, quality assurance

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| Specimens: | No sample analysis involved |

**Examinations:** Patient results are collected from risk management software (e.g. LifeCycle, Prisca) anonymously for data analysis. Will be delivered only if the number of participants is at least 10.

### Clinical chemistry » Endocrinology

#### 2221 Down’s syndrome screening, quality assurance

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</table>

| Specimens: | No sample analysis involved |

**Examinations:** Patient results are collected from risk management software (e.g. LifeCycle, Prisca) anonymously for data analysis. Will be delivered only if the number of participants is at least 10.
2300, 2300S Hormones A: Basic analytes of hormone and immunochemistry

**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:** Digoxin, 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.

1300 Hormones A, extra set of samples

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

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

2301, 2301S Hormones B: Steroid and peptide hormones

**Specimens:** 2 human serum samples with differing concentrations, 3 mL each. 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.

1301 Hormones B, extra set of samples

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

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

2250 Parathyroid hormone

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

**Examinations:** PTH

Clinical chemistry » General long-term clinical chemistry

1031 DayTrol, human serum

**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:** Minimum order quantity of 10 bottles per year. Monthly processing of results included.

Clinical chemistry » General short-term clinical chemistry

2020 C-reactive protein (CRP) for analyzers

See specific proteins, page 12

1072, 1072S Serum A, lyophilized samples

**Specimens:** Lyophilized serum sample, 3–5 mL each, samples are selected to cover a wide concentration range. Pre- and/or post-analytical cases in part of the rounds.

**Examinations:** Alanine aminotransferase, albumin, alkaline phosphatase, alpha-1-antitrypsin, alpha-1-glycoprotein, amylase, amylase (pancreatic), aspartate aminotransferase, bilirubin, calcium, calcium (ionized, actual), calcium (ionized, pH 74), chloride, cholesterol, cholesterol HDL, cholesterol LDL, copper, cortisol, creatine phosphokinase, creatinine, ferritin, gamma-glutamyltransferase, glucose, haptoglobin, IgA, IgE, IgG, IgM, iron, lactate, lactate dehydrogenase, lithium, magnesium, oso-mucoid, osmolality, phosphorus, potassium, protein, selenium, sodium, thyreotropin, thyroxine, thyroxine free, TIBC, transferrin, transferrin receptor, triglycerides, tri-iodio-thyronine, urea, uric acid, zinc, pre- and/or post-analytical indicators

**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.
1 2 3 4 5 6 7 8 9 10 11 12

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

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

**Examinations:** Alanine aminotransferase, albumin, alfa-1-antitrypsin, alfa-1-glycoprotein, alkaline phosphatase, amylase, pancreas amylase, aspartate aminotransferase, bilirubin, ferritin, phosphate, glucose, glutamytransferase, 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:** Reference values for common analytes are included

---

**2610  Acid-base status and electrolytes**

**Specimens:** 3 buffered artificial samples, 2.5 mL each. Pre- and/or post-analytical cases in part of the rounds.

**Examinations:** Chloride, creatinine, glucose, ionized calcium, ionized magnesium, lactate, pCO2, pH, pO2, potassium, sodium, urea, base excess, HC03, pre- and/or post-analytical cases

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

---

**2510  Alcohol in blood: Ethanol + methanol + isopropanol**

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

**Examinations:** Ethanol, methanol, isopropanol

---

**2516  Alcohol in blood: Ethylene glycol in whole blood**

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

**Examinations:** Ethylene glycol

---

**2511  Alcohol in serum: Ethanol + methanol + isopropanol**

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

**Examinations:** Ethanol, methanol, isopropanol

---

**2517  Alcohol in serum: Ethylene glycol in serum**

**Specimens:** 1-level serum samples

**Examinations:** Ethylene glycol

---

**2105  Ammonium ion**

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

**Examinations:** Ammonium ion

---

**2210  Angiotencin convertase (ACE)**

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

**Examinations:** ACE

---

**2520  Bile acids**

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

**Examinations:** Bile acids

---

**2109  Bilirubin, conjugated**

**Specimens:** 2 lyophilized or liquid samples

**Examinations:** Total bilirubin, conjugated bilirubin
<table>
<thead>
<tr>
<th>Code</th>
<th>Test Description</th>
<th>Specimens</th>
<th>Examinations</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>2040</td>
<td>Bilirubin, neonatal</td>
<td>2 lyophilized samples, 1–3 mL</td>
<td>Bil, neo</td>
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<tr>
<td>8702</td>
<td>Chromogranin A [NKK]</td>
<td>3 genuine human serum samples</td>
<td>1 time</td>
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<tr>
<td>8805</td>
<td>Cystatin C [DEKS]</td>
<td>2 human plasma samples with reference</td>
<td>P-Cystatin C</td>
<td>Participation is not possible for less than 2 rounds a year</td>
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<tr>
<td></td>
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<td>target values, 0.75 mL each</td>
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<tr>
<td>2370</td>
<td>Folate, erythrocytes</td>
<td>1 human whole blood sample, 1 mL each</td>
<td>Blood folate and erythrocyte folate</td>
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<tr>
<td>2150</td>
<td>Haemoxymeters</td>
<td>2 lyophilized samples, 0.5 mL each</td>
<td>FO2Hb, FCOHb, FMETHb, ctHb, sO2</td>
<td>Order own sample set for each analyzer</td>
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<td>8816</td>
<td>Homocysteine [DEKS]</td>
<td>2 human plasma or serum samples</td>
<td>P-Homocysteine</td>
<td>Participation is not possible for less than 5 rounds in a year</td>
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<td>8815</td>
<td>Methyl malonate [DEKS]</td>
<td>2 human serum samples</td>
<td>P-Methyl-malonate</td>
<td>Participation is not possible for less than 5 rounds in a year</td>
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<td>2651</td>
<td>Nasal swab cells</td>
<td>4 digital images of MGG and methylene</td>
<td>Eosinophils, neutrophils</td>
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<td>eosin stained samples</td>
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<td>4 digital images of MGG and methylene</td>
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<td>eosin stained samples</td>
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<td>2640</td>
<td>Synovial fluid crystals</td>
<td>3 slides prepared from patient samples</td>
<td>Sodium urate monohydrate and calcium</td>
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<td>pyrophosphate dihydrate crystals</td>
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<td>2410</td>
<td>Therapeutic drugs</td>
<td>2 liquid or lyophilized human serum</td>
<td>Amikasin, amitriptyline, carbamazepine,</td>
<td>paracetamol (acetaminophen), phenobarbital, phenytoin, phenytoin</td>
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<td>samples, volume 5 mL each</td>
<td>carbamazepine free, cyclosporine,</td>
<td>free, primidone, procainamide, quinidine, salicylate, theophylline,</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>digoxin, disopyramide, ethosuximide,</td>
<td>tobramycin, tricyclics, valproic acid, valproic acid free, vancomycin</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>flecainide, gentamycin, lidocaine,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>lithium, methotrexate, NAPA, netilmicin,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>nortriptyline,</td>
<td></td>
</tr>
<tr>
<td>2040</td>
<td>Bilirubin, neonatal</td>
<td>2 lyophilized samples, 1–3 mL</td>
<td>Bil, neo</td>
<td></td>
</tr>
</tbody>
</table>
### Clinical chemistry » Specific proteins

<table>
<thead>
<tr>
<th>2480</th>
<th>Vitamin A, E and D metabolites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimens: 2 liquid human serum samples, 1 mL each</td>
<td></td>
</tr>
<tr>
<td>Examinations: Vitamin A, vitamin E, 25(OH)D, 1,25(OH)2D</td>
<td></td>
</tr>
<tr>
<td>Notes: Target values for 25(OH)D vitamin metabolite are provided.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2481</th>
<th>Vitamin A, E and D metabolites, extra set of samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimens: 2 liquid human serum samples, 5 mL each</td>
<td></td>
</tr>
<tr>
<td>Notes: Only in connection with scheme 2480</td>
<td></td>
</tr>
</tbody>
</table>

#### POCT

<table>
<thead>
<tr>
<th>2132</th>
<th>C-reactive protein (CRP), POCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimens: 2 human serum samples, 1 mL each</td>
<td></td>
</tr>
<tr>
<td>Examinations: CRP</td>
<td></td>
</tr>
<tr>
<td>Notes: Only for quantitative POCT CRP meters</td>
<td></td>
</tr>
</tbody>
</table>

#### EQA

<table>
<thead>
<tr>
<th>2020</th>
<th>C-reactive protein (CRP) for analyzers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimens: 2 liquid serum or plasma samples</td>
<td></td>
</tr>
<tr>
<td>Examinations: CRP</td>
<td></td>
</tr>
<tr>
<td>Notes: Scheme is designed only for clinical chemistry analyzers. Order scheme 2132 for POCT CRP meters.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2140</th>
<th>Decialotransferrin [EQUALIS]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimens: 2 human plasma samples, varying concentration of CDT</td>
<td></td>
</tr>
<tr>
<td>Examinations: CDT</td>
<td></td>
</tr>
<tr>
<td>Notes: Participation is not possible for less than 6 rounds in a year</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2751</th>
<th>Faecal calprotectin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimens: 2 lyophilized faecal specimens, 0.5 mL each</td>
<td></td>
</tr>
<tr>
<td>Examinations: Calprotectin</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2200</th>
<th>Lipids and lipoproteins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimens: 2 fresh human serum samples, 0.5–1 mL each. Pre- and/or post-analytical cases in part of the rounds.</td>
<td></td>
</tr>
<tr>
<td>Examinations: Cholesterol, HDL cholesterol, LDL cholesterol, lipoprotein apo A1, lipoprotein apo A2, lipoprotein apo B, lipoprotein (a), triglycerides, pre- and/or post-analytical indicators</td>
<td></td>
</tr>
<tr>
<td>Notes: Separate round for Lp(a), see scheme 2202</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2202</th>
<th>Lipoprotein a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimens: 1 liquid or lyophilized human serum preparation</td>
<td></td>
</tr>
<tr>
<td>Examinations: Lp(a)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2280</th>
<th>Procalcitonin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimens: 2 liquid or lyophilized samples</td>
<td></td>
</tr>
<tr>
<td>Examinations: Procalcitonin</td>
<td></td>
</tr>
<tr>
<td>Notes: Only for quantitative methods</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2160</th>
<th>Proteins in cerebrospinal fluid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimens: 1 cerebrospinal fluid, 1.8 mL and 1 human serum sample, 1 mL</td>
<td></td>
</tr>
<tr>
<td>Examinations: Cerebrospinal fluid: Albumin, IgG, total protein, IgG index. Serum: Albumin, IgG.</td>
<td></td>
</tr>
</tbody>
</table>
### Proteins, Electrophoresis

**Specimens:** 2 liquid or lyophilized human serum samples, 0.5–1 mL each. Pre- and/or post-analytical cases in part of the rounds.  
**Examinations:** Electrophoresis, contains immunofixation, pre- and/or post-analytical indicators

### Proteins, Immunochemical Determinations

**Specimens:** 2 liquid or lyophilized human serum samples, 1 mL each  
**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

### Tumour Markers

#### Prostate Specific Antigen

**Specimens:** 2 liquid human serum samples, 1 mL each  
**Examinations:** PSA, complexed PSA, free PSA, free/total PSA ratio

#### Tumour Markers

**Specimens:** 2 liquid human serum samples, 2 mL each  
**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, Anti-Müllerian hormone, NSE, HE4  
**Notes:** 2700S is a limited version of the scheme available for laboratories performing testing of 1–5 analytes.

#### Tumour Markers, Extra Set of Samples

**Specimens:** 2 liquid human serum samples, 2 mL each  
**Notes:** Only in connection with scheme 2700

### Urine Analysis

#### Albumin and Creatinine in Urine

**Specimens:** 2 liquid human urine samples with spiked albumin and creatinine, 4 mL each  
**Examinations:** Albumin, creatinine, albumin-creatinine ratio  
**Notes:** Only for quantitative methods

#### Drug Abuse Screening in Urine

**Specimens:** 2 authentic samples, 5 mL each  
**Examinations:** alpha PVP, amphetamines, barbiturates, benzo-diazepines, buprenorphine, cannabinoids, carbamazepine, cocaine metabolites, codeine, gammahydroxybutyrate, LSD, MDMA+MDA (Ecstasy), MDPV, methadone metabolites, morphine, opiates, oxycodone, paracetamol, phencyclidine, phentanyls, propoxyphene, salicylate, tramadol, tricyclic antidepressants  
**Notes:** For clinical laboratories and POCT sites. Expert laboratory confirmatory results are provided. Results are reported as positive or negative.

#### Pregnancy Test

**Specimens:** 2 fresh urine samples, 1 mL each  
**Examinations:** Qualitative hCG  
**Notes:** For clinical laboratories and POCT sites

#### Urine, Identification of Cells and Other Particles

**Specimens:** 4 digital images  
**Examinations:** Identification of cells and other particles  
**Notes:** Images are also available as paper prints, see scheme 3201
3201 Urine, identification of cells and other particles, paper prints

**Specimens:** Images of scheme 3200 as paper prints

**Notes:** Only in connection with scheme 3200

3160 Urine, quantitative chemistry

**Specimens:** 1 lyophilized or liquid urine, 8–10 mL

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

3100 Urine, strip test A

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

**Examinations:** Glucose, ketones, leukocytes, nitrite, pH, protein, blood, relative density

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

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

**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

**Specimens:** 1 lyophilized or liquid urine, 12–15 mL

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

**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

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

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

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**EQA schemes for blood banks**

**Blood transfusion serology**

- 4420 ABO and Rh grouping
- 4460 Antibody screening and compatibility testing
- 4440 Antiglobulin test, direct
- 4480 Blood grouping, gel cards, virtual scheme (trial)

**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
- 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)
The haematology offering 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.

### Blood transfusion serological tests

- **4420 ABO and Rh grouping**
  - **Specimens:** 2 whole blood samples. Pre- and/or post-analytical cases in part of the rounds.
  - **Examinations:** ABO & Rh reactivity and interpretation, pre- and/or post-analytical indicators

- **4460 Antibody screening and compatibility testing**
  - **Specimens:** 2 whole blood samples and 4 red blood cell suspensions.
  - **Examinations:** Reaction strengths and interpretation, pre- and/or post-analytical indicators

- **4440 Antiglobulin test, direct**
  - **Specimens:** 2 red blood cell suspensions.
  - **Examinations:** Reaction strengths and interpretation, pre- and/or post-analytical indicators

- **4480 Blood grouping, gel cards, virtual scheme**
  - **Specimens:** 3–5 cases and digital images
  - **Examinations:** Interpretation of the cases and reaction strengths of the digital images
  - **Notes:** Post-analytical scheme

### Cell count and cell morphology

- **4100 Basic blood count, one specimen**
  - **Specimens:** 1 blood cell suspension
  - **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, two specimens**
  - **Specimens:** 2 blood cell suspensions
  - **Examinations:** Hb, HCT, MCH, MCHC, MCV, PLT, RBC, RDW (red cell distribution width), WBC, cumulative patient means of MCH, MCHC, MCV

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

| Specimens: | 1 blood cell suspension, 2-4 mL |
| Examinations: | Absolute numbers of leucocytes, lymphocytes, mononuclear cells and granulocytes |

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

### 4230–4238 Leucocyte differential count, 5-part, automated

| Specimens: | 1 blood cell suspension, 2-4 mL |
| Examinations: | Leucocytes, basophils, eosinophils, granulocytes, lymphocytes and monocytes |

**Analyzer specific product codes:**
- 4238: Abacus
- 4236: Mindray
- 4234: ABX Pentra
- 4237: Nihon Kohden Celltac MEK
- 4231: Cell-Dyn
- 4230: Siemens Advia
- 4232: Coulter
- 4233: Sysmex XE, XS, XT, XN
- 4235: Coulter ACT5-diff

### 5430 Malaria, antigen and nucleic acid detection

| 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

### 5460 Parasites in blood, Giemsa stain

| Specimens: | 2 Giemsa stained smears. Brief case histories are also given. Authentic samples. |
| Examinations: | Screening and identification of malaria plasmodia and other blood parasites |

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

| Specimens: | Virtual whole slide images of Giemsa stained smears prepared by using a scanner microscope. Authentic samples. |
| Examinations: | Screening and identification of malaria plasmodia and other blood parasites |

### 5461 Parasites in blood, May-Grünwald-Giemsa stain

| Specimens: | 2 May-Grünwald-Giemsa stained smears. Brief case histories are also given. Authentic samples. |
| Examinations: | Screening and identification of malaria plasmodia and other blood parasites |

### 5471 Parasites in blood, May-Grünwald-Giemsa stain, virtual microscopy

| Specimens: | Virtual whole slide images of MGG stained smears prepared by using a scanner microscope. Brief case histories are also given. Authentic samples. |
| Examinations: | Screening and identification of malaria plasmodia and other blood parasites |

### 4150–4155 Reticulocyte count, automated

| Specimens: | 2 stabilized red blood cell suspensions, 2-4 mL each |
| Examinations: | Reticulocyte count |

**Analyzer specific product codes:**
- 4154: ABX Pentra
- 4151: Cell-Dyn 4000, Saphire
- 4155: Cell-Dyn 3200, 3500, 3700, Ruby
- 4152: Coulter Gens, LH750
- 4153: Sysmex

### 4140 Reticulocyte count, manual methods

| Specimens: | 1 stabilized red blood cell suspension, 2 mL |
| Examinations: | Reticulocyte count |
### White blood cell count: HemoCue, POCT

**Specimens:** 1 blood cell suspension, 2 mL  
**Examinations:** Leucocytes  
**Notes:** The scheme is for HemoCue WBC Systems

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

**Specimens:** 1 blood cell suspension, 2 mL  
**Examinations:** Leucocytes, neutrophiles, lymphocytes, monocytes, basophils, eosinophils  
**Notes:** The scheme is for HemoCue WBC Diff analyzers (5-part)

### Activated partial thromboplastin time and fibrinogen

**Specimens:** 2 lyophilized plasma samples, 0.5–1 mL each  
**Examinations:** Coagulation time in seconds, fibrinogen

### Anticoagulants: LMW-Heparin/antiFXa

**Specimens:** 2 lyophilized plasma samples, 0.5–1 mL each  
**Examinations:** LMW-heparin/antiFXA

### Anticoagulants: Rivaroxaban

**Specimens:** 2 lyophilized plasma samples  
**Examinations:** Rivaroxaban concentration

### D-dimer

**Specimens:** 2 pooled plasma samples, 0.5–1 mL each. Pre- and/or post-analytical cases in part of the rounds.  
**Examinations:** D-Dimer, pre- and/or post-analytical indicators  
**Notes:** For clinical laboratories and POCT sites

### INR, CoagSense, POCT

**Specimens:** 1 lyophilized plasma sample  
**Examinations:** Prothrombin time in INR unit  
**Notes:** Only for CoagSense meter

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

**Specimens:** 1 lyophilized or liquid plasma sample  
**Examinations:** Prothrombin time in INR unit  
**Notes:** Only for CoaguChek, i-STAT and Siemens Xprecia meters

### INR, EuroLyzer, POCT

**Specimens:** 1 lyophilized plasma sample  
**Examinations:** Prothrombin time in INR unit  
**Notes:** Only for EuroLyzer INR meter

### INR, MicroINR, POCT

**Specimens:** 1 lyophilized plasma sample  
**Examinations:** Prothrombin time in INR unit  
**Notes:** Only for microINR meter
**EQA services for POCT sites**

Patient outcome is associated with obtaining a reliable test result regardless of where the testing is performed. To ensure 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 abuse screening in urine  
2750 Faecal occult blood  
2570, 2580, 2590 Glucose meters 1, 2 and 3  
1263 Haemoglobin A1c, liquid samples, POCT  
2114 Haemoglobin, 1-level, POCT  
2112 Haemoglobin, 3-level samples, 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

**Haematology**

4388 D-Dimer  
4339 INR, CoaguChek, i-STAT and Siemens Xprecia, POCT  
4335 INR, CoaguChek, i-STAT and Siemens Xprecia, POCT  
4337 INR, EuroLyzer, POCT  
4338 INR, MicroINR, POCT  
5430 Malaria, antigen and nucleic acid detection  
4336 POCT INR evaluation scheme  
4130 White blood cell count: HemoCue, POCT  
4190 White blood cell differential count: HemoCue, POCT

**Microbiology**

5640 EBV mononucleosis, heterophile antibodies  
5596 *Helicobacter pylori*, antigen detection in faeces  
5090 HIV, antibodies, 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  
5672 RS virus, antigen detection  
5595 *Streptococcus, group A*, antigen detection  
5594 *Streptococcus, group B* (GBS), detection  
5598 *Streptococcus pneumoniae*, antigen detection in urine  
5099 Tick-borne encephalitis virus, antibodies  
5474 *Trichomonas vaginalis*, antigen detection

**Preanalytics**

7801 Preanalytics, phlebotomy  
7804 Preanalytics, POCT
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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Program Name</th>
<th>Specimens</th>
<th>Examinations</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>5935</td>
<td>ANCA and GbmAb</td>
<td>2 liquid human serum or plasma samples, 0.5 mL each</td>
<td>Anti-neutrophilic cytoplasmic Ab, Myeloperoxidase Ab, Proteinase-3 Ab and Glomerular basement membrane Ab</td>
<td>Notes: Quantitative results are also processed (Pr3Ab, MPOAb)</td>
</tr>
<tr>
<td>5900</td>
<td>Antinuclear antibodies</td>
<td>3 liquid human serum or plasma samples, 0.6 mL each</td>
<td>ANA, ENAAb, RNPAb, SmAb, SSAAb, SSBAb, SCI70Ab, CentAb, Jo1Ab, DNAAb (dsDNA), HistAb</td>
<td>Notes: Extractable antinuclear antigens and double-stranded deoxyribonucleic acid are included</td>
</tr>
<tr>
<td>5938</td>
<td>Autoimmune diagnostics, IFA interpretation</td>
<td>3–5 cases (digital images)</td>
<td>Interpretation</td>
<td></td>
</tr>
<tr>
<td>5930</td>
<td>Autoimmune liver disease and gastric parietal cell antibodies</td>
<td>2 liquid human serum or plasma samples, 0.4 mL each</td>
<td>Liver kidney microsomal antibodies, Smooth muscle antibodies, Mitochondrial antibodies, Gastric parietal cell antibodies</td>
<td></td>
</tr>
<tr>
<td>5940</td>
<td>Coeliac disease, antibodies</td>
<td>2 liquid human serum or plasma samples, 0.7 mL each</td>
<td>Endomysium antibodies, tissue transglutaminase antibodies, deamidated gliadin peptide antibodies, pre- and/or post-analytical indicators</td>
<td>Notes: Quantitative results are also processed (tTGAbA, tTGAbG, DGPAbA, DGPAbG). Scheme is not suitable for POC tests.</td>
</tr>
<tr>
<td>5937</td>
<td>Phospholipid antibodies</td>
<td>2 liquid human serum or plasma samples, 0.5 mL each</td>
<td>Phospholipid antibodies, Cardiolipin antibodies (IgG and IgM), beta-2-glycoprotein antibodies (IgG and IgM)</td>
<td>Notes: Quantitative results are also processed</td>
</tr>
<tr>
<td>5820</td>
<td>Rheumatoid factor and citrullic peptide antibodies</td>
<td>2 liquid human serum or plasma samples, 0.7 mL each</td>
<td>Qualitative and quantitative RF, CCPAb</td>
<td></td>
</tr>
</tbody>
</table>
### 5920 Thyroid gland antibodies

**Specimens:** 2 liquid human serum or plasma samples, 0.4 mL each  
**Examinations:** Thyroglobulin antibodies and thyroid peroxidase antibodies  
**Notes:** Quantitative results are also processed

### 5913 TSH receptor antibodies

**Specimens:** 2 liquid human serum samples, 0.4 mL each  
**Examinations:** Thyroid stimulating hormone receptor antibodies  
**Notes:** Quantitative results are also processed
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

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5840</td>
<td><strong>Antistreptolysin</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Specimens:</strong> 2 liquid human serum or plasma samples, 0.4 mL each.</td>
</tr>
<tr>
<td></td>
<td>Authentic, commutable, single donor samples.</td>
</tr>
<tr>
<td></td>
<td><strong>Examinations:</strong> Qualitative and quantitative ASO</td>
</tr>
<tr>
<td>5950</td>
<td><strong>Bordetella pertussis, antibodies</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Specimens:</strong> 2 liquid human serum samples, ≥ 0.3 mL each</td>
</tr>
<tr>
<td></td>
<td><strong>Examinations:</strong> B. pertussis IgA, IgG &amp; IgM antibodies, Pertussis toxin IgA, IgG &amp; IgM and clinical interpretation</td>
</tr>
<tr>
<td>5960</td>
<td><strong>Borrelia burgdorferi, antibodies, European origin</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Specimens:</strong> 2 liquid human serum or plasma samples, 0.5 mL each.</td>
</tr>
<tr>
<td></td>
<td>Authentic, commutable, single donor samples.</td>
</tr>
<tr>
<td></td>
<td><strong>Examinations:</strong> B. burgdorferi IgG, IgM and total antibodies, clinical interpretation</td>
</tr>
<tr>
<td>5620</td>
<td><strong>Chlamydia pneumoniae, antibodies</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Specimens:</strong> 1 single serum and 1 paired serum samples, 0.4 mL each</td>
</tr>
<tr>
<td></td>
<td><strong>Examinations:</strong> C. pneumoniae IgA, IgG, IgM antibodies, clinical interpretation</td>
</tr>
<tr>
<td>5860</td>
<td><strong>Helicobacter pylori, antibodies</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Specimens:</strong> 2 liquid human serum or plasma samples, 0.4 mL each.</td>
</tr>
<tr>
<td></td>
<td><strong>Examinations:</strong> H. pylori IgA, IgG and total antibodies, quantitative and qualitative tests, clinical interpretation</td>
</tr>
<tr>
<td>5980</td>
<td><strong>Mycoplasma pneumoniae, antibodies</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Specimens:</strong> 2 liquid human serum samples, 0.3 mL each.</td>
</tr>
<tr>
<td></td>
<td>Authentic, commutable, single donor samples.</td>
</tr>
<tr>
<td></td>
<td><strong>Examinations:</strong> M. pneumoniae IgG, IgM and total antibodies, clinical interpretation</td>
</tr>
<tr>
<td></td>
<td><strong>Notes:</strong> For clinical laboratories and POCT sites</td>
</tr>
<tr>
<td>5880</td>
<td><strong>Syphilis serology</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Specimens:</strong> 2 liquid human serum samples, 0.6 mL each.</td>
</tr>
<tr>
<td></td>
<td>Authentic, commutable, single donor samples.</td>
</tr>
<tr>
<td></td>
<td><strong>Examinations:</strong> Cardiolipin, Treponema pallidum antibodies and clinical interpretation</td>
</tr>
</tbody>
</table>
Microbiology » Bacteriology

<table>
<thead>
<tr>
<th>Code</th>
<th>Service Description</th>
<th>Specimens</th>
</tr>
</thead>
<tbody>
<tr>
<td>5050</td>
<td>Bacteriological staining, direct</td>
<td>3 cases, 3-9 digital images</td>
</tr>
<tr>
<td></td>
<td>Examinations: Interpretation of digital images taken from direct bacteriological staining of clinical samples</td>
<td></td>
</tr>
<tr>
<td>5100</td>
<td>Blood culture</td>
<td>2 lyophilized samples. Brief case histories also given. Fresh blood is needed in the specimen preparation. The samples intended for susceptibility testing may include both international quality control strains and susceptible or resistant clinical strains.</td>
</tr>
<tr>
<td></td>
<td>Examinations: Culture, identification, antimicrobial susceptibility</td>
<td></td>
</tr>
<tr>
<td>Notes:</td>
<td>Fresh blood is needed but not included in the shipment</td>
<td></td>
</tr>
<tr>
<td>5101</td>
<td>Blood culture, screening</td>
<td>2 lyophilized samples. Brief case histories also given. Fresh blood is needed in the sample preparation.</td>
</tr>
<tr>
<td></td>
<td>Examinations: Culture, preliminary identification using Gram staining. The scheme is also suitable for stem cell banks screening only for possible growth.</td>
<td></td>
</tr>
<tr>
<td>Notes:</td>
<td>Fresh blood is needed but not included in the shipment</td>
<td></td>
</tr>
<tr>
<td>5150</td>
<td>Cerebrospinal fluid, culture</td>
<td>2 lyophilized samples. Brief case histories also given.</td>
</tr>
<tr>
<td></td>
<td>Examinations: Culture and identification. The scheme is also suitable for laboratories performing screening and reporting merely a preliminary identification.</td>
<td></td>
</tr>
<tr>
<td>5612</td>
<td>Chlamydia trachomatis and Neisseria gonorrhoeae nucleic acid detection</td>
<td>3 simulated swab/urine samples</td>
</tr>
<tr>
<td></td>
<td>Examinations: Detection of C. trachomatis and N. gonorrhoeae nucleic acid</td>
<td></td>
</tr>
<tr>
<td>5200</td>
<td>Clostridium difficile, culture and toxin detection</td>
<td>2 lyophilized mixtures of bacteria</td>
</tr>
<tr>
<td></td>
<td>Examinations: This scheme includes C. difficile culture, antigen detection (GDH), toxin detection and direct nucleic acid detection</td>
<td></td>
</tr>
<tr>
<td>5201</td>
<td>Clostridium difficile, extra set of samples</td>
<td>2 lyophilized mixtures of bacteria</td>
</tr>
<tr>
<td>Notes:</td>
<td>Only in connection with scheme 5200</td>
<td></td>
</tr>
<tr>
<td>5202</td>
<td>Clostridium difficile, extra set of samples</td>
<td>2 lyophilized mixtures of bacteria</td>
</tr>
<tr>
<td>Notes:</td>
<td>5200 includes also this examination</td>
<td></td>
</tr>
<tr>
<td>5191</td>
<td>Faecal bacterial pathogens multiplex, nucleic acid detection</td>
<td>2 lyophilized mixtures of bacteria</td>
</tr>
<tr>
<td>Notes:</td>
<td>5190 includes also this examination</td>
<td></td>
</tr>
</tbody>
</table>

Examinations: Direct nucleic acid detection. Pathogens included are *Aeromonas*, *Campylobacter*, *Plesiomonas*, *Salmonella*, *Shigella* and *Yersinia*, may also include EHEC.
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Specimens</th>
<th>Examinations</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>5190</td>
<td>Faecal culture</td>
<td>2 lyophilized mixtures of bacteria</td>
<td>Culture and direct nucleic acid detection. Pathogens included are Aeromonas, Campylobacter, Plesiomonas, Salmonella, Shigella and Yersinia, may also include EHEC.</td>
<td></td>
</tr>
<tr>
<td>5080</td>
<td>General Bacteriology 1 (aerobes and anaerobes)</td>
<td>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.</td>
<td>Isolation of pathogens and antimicrobial susceptibility testing, pre- and/or post-analytical cases</td>
<td>5080 includes 5081, General Bacteriology 2</td>
</tr>
<tr>
<td>5081</td>
<td>General Bacteriology 2 (aerobes)</td>
<td>2 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.</td>
<td>Isolation of pathogens and antimicrobial susceptibility testing, pre- and/or post-analytical cases</td>
<td>5080 General Bacteriology 1 includes 5081</td>
</tr>
<tr>
<td>5040</td>
<td>Gram stain, colonies</td>
<td>3 air-dried, unfixed microbe suspensions on a slide</td>
<td>Staining and microscopy</td>
<td></td>
</tr>
<tr>
<td>5041</td>
<td>Gram stain, blood culture</td>
<td>2-3 air-dried microbe suspensions on slides</td>
<td>Staining and microscopy</td>
<td></td>
</tr>
<tr>
<td>5596</td>
<td>Helicobacter pylori, antigen detection in faeces</td>
<td>3 lyophilized faecal samples</td>
<td>Antigen detection</td>
<td>For clinical laboratories and POCT sites</td>
</tr>
<tr>
<td>5597</td>
<td>Legionella, antigen detection in urine</td>
<td>3 simulated urine samples</td>
<td>Legionella antigen detection</td>
<td></td>
</tr>
<tr>
<td>5220</td>
<td>Mycobacterial culture and stain</td>
<td>2 lyophilized samples and 2 fixed smears on slides</td>
<td>Detection of <em>Mycobacterium tuberculosis</em>, <em>Mycobacterium tuberculosis</em> complex and atypical mycobacteria: culture, direct nucleic acid detection, acid-fast staining and microscopy</td>
<td></td>
</tr>
<tr>
<td>5221</td>
<td>Mycobacterial nucleic acid detection and stain</td>
<td>2 lyophilized samples and 2 fixed smears on slides</td>
<td>Direct nucleic acid detection, acid-fast staining and microscopy</td>
<td>5220 includes also this examination</td>
</tr>
<tr>
<td>5240</td>
<td>Mycobacterial stain</td>
<td>2 fixed smears on slides</td>
<td>Acid-fast staining and microscopy</td>
<td></td>
</tr>
<tr>
<td>5081</td>
<td>General Bacteriology 2 (aerobes)</td>
<td>2 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.</td>
<td>Isolation of pathogens and antimicrobial susceptibility testing, pre- and/or post-analytical cases</td>
<td>5080 General Bacteriology 1 includes 5081</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td>Specimens</td>
<td>Examinations</td>
<td></td>
</tr>
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</tr>
<tr>
<td>5120</td>
<td><strong>Neisseria gonorrhoeae (Gc), culture and susceptibility testing</strong></td>
<td>2 lyophilized mixtures of microbes. The samples intended for susceptibility testing may include both international quality control strains and susceptible or resistant clinical strains.</td>
<td>Examinations: Culture, identification and antimicrobial susceptibility testing. Also suitable for laboratories performing preliminary screening.</td>
<td></td>
</tr>
<tr>
<td>5180</td>
<td><strong>Salmonella culture</strong></td>
<td>2 lyophilized mixtures of bacteria</td>
<td>Notes: 5190 also includes 5180</td>
<td></td>
</tr>
<tr>
<td>5595</td>
<td><strong>Streptococcus group A, antigen detection</strong></td>
<td>3 simulated pharyngeal samples</td>
<td>Notes: For clinical laboratories and POCT sites</td>
<td></td>
</tr>
<tr>
<td>5594</td>
<td><strong>Streptococcus group B (GBS), detection</strong></td>
<td>2 lyophilized samples. Samples include pathogens and/or normal flora.</td>
<td>Examinations: Culture, direct nucleic acid detection and antigen detection</td>
<td></td>
</tr>
<tr>
<td>5598</td>
<td><strong>Streptococcus pneumoniae, antigen detection in urine</strong></td>
<td>3 simulated urine specimens</td>
<td>Examinations: S. pneumoniae antigen detection</td>
<td></td>
</tr>
<tr>
<td>5073</td>
<td><strong>Surveillance culture for multidrug resistant bacteria, gramnegative rods</strong></td>
<td>1 lyophilized mixture of microbes; including pathogens and/or normal flora.</td>
<td>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</td>
<td></td>
</tr>
<tr>
<td>5071</td>
<td><strong>Surveillance culture for multidrug resistant bacteria, MRSA</strong></td>
<td>1 lyophilized mixture of microbes; including pathogens and/or normal flora.</td>
<td>Examinations: The scheme is intended for laboratories performing screening of MRSA (methicillin resistant Staphylococcus aureus) by culture and/or direct nucleic acid detection method</td>
<td></td>
</tr>
<tr>
<td>5072</td>
<td><strong>Surveillance culture for multidrug resistant bacteria, VRE</strong></td>
<td>1 lyophilized mixture of microbes; including pathogens and/or normal flora.</td>
<td>Examinations: The scheme is intended for laboratories performing screening of VRE (vancomycin-resistant enterococci) by culture and/or direct nucleic acid detection method</td>
<td></td>
</tr>
<tr>
<td>5140</td>
<td><strong>Throat streptococcal culture</strong></td>
<td>3 lyophilized mixtures of bacteria</td>
<td>Examinations: Culture and identification of group A, C and G streptococci</td>
<td></td>
</tr>
</tbody>
</table>
### Microbiology » Parasitology

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>5060</td>
<td>Urine culture, quantitative screening</td>
<td><strong>Specimens:</strong> 2 lyophilized samples and dilutor. Brief case histories also given. Pre- and/or post-analytical cases in part of the rounds. <strong>Examinations:</strong> Culture and quantitation, pre-and/or post-analytical indicators</td>
</tr>
<tr>
<td>5065</td>
<td>Urine culture, quantitative screening, identification and susceptibility</td>
<td><strong>Specimens:</strong> 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. <strong>Examinations:</strong> Culture, quantitation, identification and antimicrobial susceptibility testing, pre-and/or post-analytical indicators</td>
</tr>
<tr>
<td>5470</td>
<td>Parasites in blood, Giemsa stain</td>
<td><strong>Specimens:</strong> 2 Giemsa stained smears. Brief case histories also given. Authentic samples. <strong>Examinations:</strong> Screening and identification of malaria plasmodia and other blood parasites</td>
</tr>
<tr>
<td>5471</td>
<td>Parasites in blood, May-Grünwald-Giemsa stain, virtual microscopy</td>
<td><strong>Specimens:</strong> Virtual whole slide images of MGG stained smears prepared by using a scanner microscope. Brief case histories also given. Authentic samples. <strong>Examinations:</strong> Screening and identification of malaria plasmodia and other blood parasites</td>
</tr>
<tr>
<td>5472</td>
<td>Giardia and Cryptosporidium, nucleic acid detection</td>
<td><strong>Specimens:</strong> 3 lyophilized samples <strong>Examinations:</strong> Detection of <em>Giardia lamblia</em> and/or <em>Cryptosporidium</em> nucleic acid.</td>
</tr>
<tr>
<td>5473</td>
<td>Parasites in blood, May-Grünwald-Giemsa stain, virtual microscopy</td>
<td><strong>Specimens:</strong> Virtual whole slide images of MGG stained smears prepared by using a scanner microscope. Brief case histories also given. Authentic samples. <strong>Examinations:</strong> Screening and identification of malaria plasmodia and other blood parasites</td>
</tr>
</tbody>
</table>

### Microbiology » Mycology

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>5260</td>
<td>Fungal culture</td>
<td><strong>Specimens:</strong> 3 lyophilized samples. Brief case histories also given. The samples include moulds, dermatophytes and yeasts. <strong>Examinations:</strong> Culture and identification. Antimicrobial susceptibility testing of yeast strains.</td>
</tr>
<tr>
<td>5430</td>
<td>Malaria, antigen and nucleic acid detection</td>
<td><strong>Specimens:</strong> 3 whole blood samples <strong>Examinations:</strong> Antigen and nucleic acid detection. Target antigens: HRP2 and/or pLDH and/or aldolase. <strong>Notes:</strong> For clinical laboratories and POCT sites</td>
</tr>
<tr>
<td>5460</td>
<td>Parasites in blood, Giemsa stain</td>
<td><strong>Specimens:</strong> 2 Giemsa stained smears. Brief case histories also given. Authentic samples. <strong>Examinations:</strong> Screening and identification of malaria plasmodia and other blood parasites</td>
</tr>
<tr>
<td>5461</td>
<td>Parasites in blood, May-Grünwald-Giemsa stain</td>
<td><strong>Specimens:</strong> 2 MGG stained smears. Brief case histories also given. Authentic samples. <strong>Examinations:</strong> Screening and identification of malaria plasmodia and other blood parasites</td>
</tr>
<tr>
<td>5470</td>
<td>Parasites in blood, May-Grünwald-Giemsa stain, virtual microscopy</td>
<td><strong>Specimens:</strong> Virtual whole slide images of MGG stained smears prepared by using a scanner microscope. Brief case histories also given. Authentic samples. <strong>Examinations:</strong> Screening and identification of malaria plasmodia and other blood parasites</td>
</tr>
<tr>
<td>5471</td>
<td>Parasites in blood, May-Grünwald-Giemsa stain, virtual microscopy</td>
<td><strong>Specimens:</strong> Virtual whole slide images of MGG stained smears prepared by using a scanner microscope. Brief case histories also given. Authentic samples. <strong>Examinations:</strong> Screening and identification of malaria plasmodia and other blood parasites</td>
</tr>
</tbody>
</table>

### Notes:
- For clinical laboratories and POCT sites.
<table>
<thead>
<tr>
<th>Code</th>
<th>Test Description</th>
<th>Specimens:</th>
<th>Examinations:</th>
</tr>
</thead>
<tbody>
<tr>
<td>5440</td>
<td>Parasites in faeces</td>
<td>3 stool samples in formalin. Brief case histories also given.</td>
<td>Screening and identification of intestinal parasites (ova and parasites)</td>
</tr>
<tr>
<td>5450</td>
<td>Parasites in faeces, virtual microscopy</td>
<td>Virtual whole slide images of stool samples in formalin prepared by using a scanner microscope. Brief case histories also given.</td>
<td>Screening and identification of intestinal parasites (ova and parasites)</td>
</tr>
<tr>
<td>5420</td>
<td>Toxoplasma, antibodies</td>
<td>3 liquid human plasma samples, 0.7 mL each. Authentic commutable samples: Each sample batch originates from a single human donor.</td>
<td>Toxoplasma IgA, IgG, IgM and total antibodies, IgG avidity and clinical interpretation</td>
</tr>
<tr>
<td>5474</td>
<td>Trichomonas vaginalis, antigen detection</td>
<td>3 artificial samples</td>
<td>Detection of Trichomonas vaginalis antigen</td>
</tr>
<tr>
<td>5473</td>
<td>Trichomonas vaginalis, nucleic acid detection</td>
<td>3 lyophilized samples</td>
<td>Detection of Trichomonas vaginalis nucleic acid (NAT)</td>
</tr>
<tr>
<td>5650</td>
<td>Cytomegalovirus, antibodies</td>
<td>3 liquid human plasma samples, ≥ 0.7 mL each. Authentic commutable samples: each batch originates from a single human donor.</td>
<td>Cytomegalovirus IgG, IgM and total antibodies, IgG avidity and clinical interpretation</td>
</tr>
<tr>
<td>5635</td>
<td>Dengue virus, antibodies and antigen detection</td>
<td>3 human serum or plasma samples, 0.5 mL each. Authentic, commutable samples from a single human donor or occasionally simulated samples.</td>
<td>Dengue virus IgG and IgM antibodies, Dengue virus antigen (NS1) and clinical interpretation</td>
</tr>
<tr>
<td>5640</td>
<td>EBV mononucleosis, heterophile antibodies</td>
<td>3 liquid human plasma samples, 0.5 mL each. Authentic commutable samples: each batch originates from a single human donor.</td>
<td>MonAb, heterophile antibodies</td>
</tr>
<tr>
<td>5641</td>
<td>EBV mononucleosis, specific antibodies</td>
<td>3 liquid human plasma samples, 1.4 mL each. Authentic commutable samples: each batch originates from a single human donor.</td>
<td>EBNAAb, EBVAb, EBVAbG, EBVAbM, EBVAvi and clinical interpretation</td>
</tr>
<tr>
<td>5092</td>
<td>Hepatitis A, antibodies</td>
<td>3 liquid human plasma samples, ≥ 0.6 mL each. Authentic commutable samples: each batch originates from a single human donor.</td>
<td>HAVAb, HAVAbM, HAVAbG and clinical interpretation</td>
</tr>
<tr>
<td>Scheme</td>
<td>Test</td>
<td>Specimens</td>
<td>Examinations</td>
</tr>
<tr>
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</tr>
<tr>
<td>5094–5096</td>
<td>Hepatitis B and C, serology, specimen volume</td>
<td>0.6 mL / 1.2 mL / 2.0 mL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Specimens:</td>
<td>3 liquid human plasma samples, 0.6 / 1.2 or 2.0 mL. Authentic commutable samples: each batch originates from a single human donor.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Examinations:</td>
<td>HBcAb, HbcAbM, HBeAb, HBeAg, HBsAb (qual), HBsAg, HCVAb, HCVAbCt and clinical interpretation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Volume specific product codes:</td>
<td>5094: for 0.6 mL human plasma specimens&lt;br&gt;5095: for 1.2 mL human plasma specimens&lt;br&gt;5096: for 2.0 mL human plasma specimens</td>
<td></td>
</tr>
<tr>
<td>5093</td>
<td>Hepatitis B, s-antigen antibodies, quantitative</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Specimens:</td>
<td>2 liquid human plasma or serum samples, ≥ 0.5 mL each. Authentic commutable samples: each batch originates from a single human donor.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Examinations:</td>
<td>HBsAb (anti-HBs), quantitative</td>
<td></td>
</tr>
<tr>
<td>5679</td>
<td>Hepatitis B virus, nucleic acid detection (DNA)</td>
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<td></td>
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<tr>
<td></td>
<td>Specimens:</td>
<td>3 lyophilized or liquid plasma samples, ≥ 1.2 mL each</td>
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<tr>
<td></td>
<td>Examinations:</td>
<td>HBV DNA, quantitative and/or qualitative nucleic acid detection</td>
<td></td>
</tr>
<tr>
<td>5678</td>
<td>Hepatitis C virus, nucleic acid detection (RNA)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Specimens:</td>
<td>3 lyophilized or liquid plasma samples, ≥ 1.2 mL each</td>
<td></td>
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<tr>
<td></td>
<td>Examinations:</td>
<td>HCV RNA, quantitative and/or qualitative nucleic acid detection</td>
<td></td>
</tr>
<tr>
<td>5682</td>
<td>Hepatitis E, antibodies</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Specimens:</td>
<td>3 liquid human plasma samples, ≥ 0.5 mL each. Authentic commutable samples: each batch originates from a single human donor.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Examinations:</td>
<td>Hepatitis E virus IgG and IgM antibodies and clinical interpretation.</td>
<td></td>
</tr>
<tr>
<td>5555</td>
<td>Herpes simplex 1 and 2, antibodies</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Specimens:</td>
<td>3 liquid human plasma or serum samples, ≥ 0.5 mL each. Authentic commutable samples: each batch originates from a single human donor.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Examinations:</td>
<td>HSV IgG (qualitative/quantitative), HSV IgM, HSV-1 IgG, HSV-2 IgG</td>
<td></td>
</tr>
<tr>
<td>5680</td>
<td>HIV-1, nucleic acid detection (RNA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Specimens:</td>
<td>3 lyophilized or liquid plasma samples, ≥ 1.2 mL each</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Examinations:</td>
<td>HIV-1 RNA, quantitative and/or qualitative nucleic acid detection</td>
<td></td>
</tr>
<tr>
<td>5091</td>
<td>HIV, antibodies</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Specimens:</td>
<td>4 liquid human plasma samples, ≥ 0.7 mL each</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Examinations:</td>
<td>HIVAgAb (combo), HIVAb, HIVAbCt: primary and confirmatory tests, clinical interpretation. Positive specimens may include HIV-1 or HIV-2.</td>
<td></td>
</tr>
<tr>
<td>5090</td>
<td>HIV, antibodies, POCT</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Specimens:</td>
<td>3–4 liquid human plasma samples, ≥ 0.5 mL each</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Examinations:</td>
<td>HIVAb and HIVAgAb primary tests (POCT)</td>
<td></td>
</tr>
</tbody>
</table>
### Human papillomavirus, nucleic acid detection

**Specimens:** Simulated samples  
**Examinations:** High-risk human papillomavirus NAT, hrHPVNAT  
**Notes:** Suitable for nucleic acid methods used in cervical cancer screening

### Human T-cell lymphotropic virus, antibodies

**Specimens:** 3 liquid human plasma samples, ≥ 0.5 mL each. Authentic commutable samples: each batch originates from a single human donor.  
**Examinations:** HTLVAb: primary and confirmatory tests. Positive samples may include HTLV-1 or HTLV-2.

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

**Specimens:** 5 artificial samples, 0.5 mL each  
**Examinations:** InfANAT, InfBNAT, RSVNAT

### Influenza virus A+B, antigen detection

**Specimens:** 3 artificial samples, 0.5 mL each  
**Examinations:** InfAAg, InfBAg  
**Notes:** For clinical laboratories and POCT sites

### Measles virus, antibodies

**Specimens:** 3 liquid human plasma samples, 0.5 mL each. Authentic commutable samples: each batch originates from a single human donor.  
**Examinations:** Measles virus IgG and IgM antibodies and clinical interpretation

### Mumps virus, antibodies

**Specimens:** 3 liquid human plasma samples, 0.5 mL each. Authentic commutable samples: each batch originates from a single human donor.  
**Examinations:** Mumps virus IgG and IgM antibodies and clinical interpretation

### Norovirus, nucleic acid detection

**Specimens:** 3 simulated samples, ≥ 0.5 mL each  
**Examinations:** Norovirus NAT, genogroups GI and GII

### Parvovirus B19, antibodies

**Specimens:** 3 liquid human plasma or serum samples, ≥ 0.4 mL each. Authentic commutable samples: each batch originates from a single human donor.  
**Examinations:** Parvovirus IgG, IgM, IgG avidity and clinical interpretation

### Puumala virus, antibodies

**Specimens:** 3 liquid human plasma or serum samples, ≥ 0.3 mL each. Brief case histories are also provided.  
**Examinations:** Puumala virus IgG, IgM, POC tests and specific antibodies, IgG avidity and clinical interpretation  
**Notes:** For clinical laboratories and POCT sites

### Rotavirus and adenovirus, antigen detection

**Specimens:** 3 faecal suspensions, 0.5 mL each  
**Examinations:** Rotavirus and adenovirus antigen detection

### RS virus, antigen detection

**Specimens:** 3 artificial samples, 0.5 mL each  
**Examinations:** RSVAg  
**Notes:** For clinical laboratories and POCT sites
Rubella virus, antibodies

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

Examinations: Rubella virus IgG and IgM antibodies, IgG avidity and clinical interpretation

Tick-borne encephalitis virus, antibodies

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

Examinations: TBE IgG, IgM, total antibodies and clinical interpretation

Notes: For clinical laboratories and POCT sites

Varicella-zoster virus, antibodies

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

Examinations: Varicella zoster IgG, IgM, total antibodies and 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 culture for multidrug resistant bacteria, gramnegative rods
5071 Surveillance culture for multidrug resistant bacteria, MRSA
5072 Surveillance culture for multidrug resistant bacteria, VRE
5065 Urine culture, quantitative screening, identification and susceptibility

EQA schemes suitable for direct nucleic acid testing methods

Bacteriology

5612 Chlamydia trachomatis and Neisseria gonorrhoeae nucleic acid detection
5201 Clostridium difficile, nucleic acid detection
5191 Faecal bacterial pathogens multiplex, nucleic acid detection
5221 Mycobacterial nucleic acid detection and stain
5593 Streptococcus group A, nucleic acid detection
5594 Streptococcus group B (GBS), detection
5071 Surveillance culture for multidrug resistant bacteria, MRSA
5072 Surveillance culture for multidrug resistant bacteria, VRE
5073 Surveillance culture for multidrug resistant bacteria, gramnegative rods

Parasitology

5472 Giardia and Cryptosporidium, nucleic acid detection
5473 Trichomonas vaginalis, nucleic acid detection

Virology

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
5675 Norovirus, nucleic acid detection

Multiplex

5191 Faecal bacterial pathogens multiplex, nucleic acid detection
5300 Respiratory infections multiplex, nucleic acid detection
5302 Sexually transmitted diseases multiplex, nucleic acid detection
Multiplex EQA schemes are aimed to support laboratories to fulfill quality requirements of multiplex nucleic acid tests. Schemes cover the most common screening methods for respiratory infections, gastrointestinal bacteria and sexually transmitted diseases. All schemes include clinically relevant samples specially designed for multiplex nucleic acid testing. Multiplex schemes are annual programs and during the period of one calendar year, samples will cover listed pathogens.

5191 Faecal bacterial pathogens multiplex, nucleic acid detection

Specimens: 2 lyophilized mixtures of bacteria
Examinations: Direct nucleic acid detection. Pathogens included are Aeromonas, Campylobacter, Plesiomonas, Salmonella, Shigella and Yersinia, may also include EHEC.

Notes: 5190 includes also this examination. Pathogens are covered during annual scheme: participation to all rounds required.

5300 Respiratory infections multiplex, nucleic acid detection

Specimens: 4 simulated samples, ≥ 0.5mL each
Examinations: Direct multiplex nucleic acid detection. Pathogens included are C. pneumoniae, M. pneumoniae, B. pertussis, B. parapertussis, influenza A/B, RSV A/B, human rhinovirus, enterovirus, parainfluenza, human metapneumovirus, adenovirus and coronavirus.

Notes: Pathogens are covered during annual scheme: participation to all rounds required

5302 Sexually transmitted diseases multiplex, nucleic acid detection

Specimens: 4 simulated swab/urine samples
Examinations: Direct multiplex nucleic acid detection. Pathogens included are C. trachomatis, M. genitalium, N. gonorrhoeae, T. vaginalis and U. urealyticum.

Notes: Pathogens are covered during annual scheme: participation to all rounds required

Note also our minipanels

5670 Influenza virus A+B and RS virus, nucleic acid detection
5472 Giardia and Cryptosporidium, nucleic acid detection
5612 Chlamydia trachomatis and Neisseria gonorrhoeae nucleic acid detection
Six high quality schemes are available for pathology laboratories. With changing topics of the rounds, both the routine and more advanced needs are covered. The challenges are realistic and include also the 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 » Diagnostics

<table>
<thead>
<tr>
<th>6700</th>
<th>Gynaecological cytology (smear), virtual microscopy</th>
<th>1 2 3 4 5 6 7 8 9 10 11 12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Specimens:</strong> 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.</td>
<td><strong>Examinations:</strong> Observations and diagnoses</td>
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</table>

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<thead>
<tr>
<th>6701</th>
<th>Gynaecological cytology (liquid based), virtual microscopy</th>
<th>1 2 3 4 5 6 7 8 9 10 11 12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Specimens:</strong> Virtual images of at least 5 Papanicolaou stained slides of liquid based pap samples (ThinPrep). Diagnostics of cellular atypias in samples taken from gynaecological loci is assessed. Brief case histories and instructions are provided.</td>
<td><strong>Examinations:</strong> Observations and diagnoses</td>
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</table>

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<tr>
<th>6702</th>
<th>Non-gynaecological cytology, virtual microscopy</th>
<th>1 2 3 4 5 6 7 8 9 10 11 12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Specimens:</strong> Virtual images of Papanicolaou stained slides of non-gynaecological cytosentrifuge or smear preparations or May-Grünwald-Giemsa stained smears. Images of at least 5 cases from representative loci. Brief case histories and instructions are provided.</td>
<td><strong>Examinations:</strong> Observations and diagnoses</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6542</th>
<th>Histopathology, virtual microscopy</th>
<th>1 2 3 4 5 6 7 8 9 10 11 12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topics in 2018:</strong> Apr: Prostate pathology, Oct: Breast pathology</td>
<td><strong>Examinations:</strong> Observations and diagnoses</td>
<td></td>
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<tr>
<td><strong>Specimens:</strong> Virtual images of at least 5 slides of miscellaneous tissue. Brief case histories and instructions are provided.</td>
<td><strong>Notes:</strong> Topics may vary annually</td>
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</table>

### Pathology » Technology

<table>
<thead>
<tr>
<th>6543</th>
<th>Histological staining techniques</th>
<th>1 2 3 4 5 6 7 8 9 10 11 12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topics in 2018:</strong> Mar: Iron, Reticulin, Oct: Toluidine blue, Jones (Methenamine)</td>
<td><strong>Examinations:</strong> Staining of the slides. A set of stained slides is returned to Labquality for evaluation by an expert board.</td>
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</tr>
<tr>
<td><strong>Specimens:</strong> Paraffin sections or smears</td>
<td><strong>Notes:</strong> Stains vary annually</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>6600, 6600S</th>
<th>Immunohistochemical staining methods</th>
<th>1 2 3 4 5 6 7 8 9 10 11 12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topics in 2018:</strong> Mar: CD1a, CD43, CD45, CD30, CyclinD1 (lymphoma), Sep: ER, PR, Ki-67, HER2, GATA3 (breast cancer), Nov: Synaptophysin (SVP), Chromogranin A (CGA), Melan A (MART-1), CEA, CD117 (unknown tumour, melanoma)</td>
<td><strong>Examinations:</strong> Staining of the slides. A set of stained slides is returned to Labquality for evaluation by an expert board.</td>
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<tr>
<td><strong>Specimens:</strong> Paraffin embedded tissue from different tissue blocks or from one multiblock</td>
<td><strong>Notes:</strong> 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).</td>
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</table>
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]

**Specimens:** 2 serum samples, 2 mL each  
**Examinations:** Selected components are asked to be analysed. The other sample is haemolysed, icteric or lipemic.

### 7800 Preanalytics, clinical chemistry

**Specimens:** 3 cases with preanalytical error(s)  
**Examinations:** Laboratories are asked to find preanalytical error(s) in the cases  
**Notes:** The scheme is intended for clinical chemistry laboratories. Scheme is carried out online.

### 7802 Preanalytics, microbiology

**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.

### 7801 Preanalytics, phlebotomy

**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 sample collection (phlebotomy). Scheme is carried out online.

### 7804 Preanalytics, POCT

**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.
### Andrology

**6400 - Semen analysis**

**Specimens:** 3–6 digital videos and/or digital images  
**Examinations:** Concentration, morphology and motility  
**Notes:** Scheme is carried out online

### Clinical physiology

**7130 - ECG, interpretation**

**Specimens:** 6 digital ECG registrations (images)  
**Examinations:** Technical quality and findings  
**Notes:** Scheme is designed for personnel in POCT units as well as nurses and general practitioners. Participants are evaluated on their responses on technical quality, findings or both if given.

### Genetics

**3865 - DNA analysis [EQUALIS]**

**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 tetrahydrophosphate reductase (MTHFR) c.677C>T; c.1298A>C

### Laboratory instruments

**8814 - ELISA reader photometry control [DEKS]**

**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  
**Circulation starts in March**

### Veterinary EQA

**8610 - Veterinary basic blood count**

**Specimens:** 2 animal blood cell suspensions. Species vary from round to round.  
**Examinations:** Most common examinations in use

**8530 - Veterinary basic chemistry**

**Specimens:** 2 animal serum samples. Species vary from round to round.  
**Examinations:** Most common examinations in use
Digital External Quality Assessment Program

Labquality’s digital EQA product line provides an advanced approach to external quality assessment. Digital programs use digital images, videos, virtual microscopy technology and questionnaires as EQA samples. It has many advantages. Samples have no stability issues and no shipping costs. All participants get to evaluate the same sample at the same time all over the world. There are no logistical limitations to participate. Only an Internet connection and an appropriate screen are needed.
<table>
<thead>
<tr>
<th>Digital EQA programs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anatomic pathology</strong></td>
</tr>
<tr>
<td>- Clinical cytology diagnostics</td>
</tr>
<tr>
<td>- Gynecological cytology diagnostics</td>
</tr>
<tr>
<td>- Histopathology diagnostics</td>
</tr>
<tr>
<td><strong>Immunology and microbiology</strong></td>
</tr>
<tr>
<td>- Preanalytics, clinical chemistry</td>
</tr>
<tr>
<td>- Preanalytics, microbiology</td>
</tr>
<tr>
<td>- Preanalytics, point-of-care</td>
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</tbody>
</table>

**Clinical chemistry and haematology**
Visual evaluation of cell morphology or motility of sperm cells uses digital images, digital video and virtual microscopy technology as sample material. Several cases are provided in every round.

- Blood grouping, gel cards, evaluation
- Down’s syndrome screening, data analysis (LifeCycle, Prisca)
- Leucocyte differential count and evaluation of blood cell morphology
- Nasal swab cells identification
- Semen analysis
- Sputum cells identification
- Urine, identification of cells and other particles

**Clinical physiology**
Clinical physiology scheme uses digital images of ECG registration.

- ECG, interpretation

Available globally
No shipping costs
No stability or homogeneity issues
Alphabetical scheme directory, A – F

A
ABO and Rh grouping, page 15
Acid-base status and electrolytes, page 10
Activated partial tromboplastin time and fibrinogen, page 17
Albumin and creatinine in urine, page 13
Alcohol in blood: Ethanol + methanol + isopropanol, page 10
Alcohol in blood: Ethylene glycol in whole blood, page 10
Alcohol in serum: Ethanol + methanol + isopropanol, page 10
Alcohol in serum: Ethylene glycol in serum, page 10
Allergen component [UK NEQAS], page 6
Allergy in vitro diagnostics [SKML], page 6
Allergy in vitro diagnostics [UK NEQAS], page 6
Ammonium ion, page 10
ANCA and GbmAb, page 19
Angiotensin convertase (ACE), page 10
Antibody screening and compatibility testing, page 15
Anticoagulants: LMW-Heparin/antiFXa, page 17
Anticoagulants: Rivaroxaban, page 17
Antiglobulin test, direct, page 15
Antinuclear antibodies, page 19
Antistreptolysin, page 21
Autoimmune diagnostics, IFA interpretation, page 19
Autoimmune liver disease and gastric parietal cell antibodies, page 19

B
Bacteriological staining, direct, page 22
Basic blood count, one specimen, page 15
Basic blood count, two specimens, page 15
Basic chemistry, POCT analyzers, page 6
Bile acids, page 10
Bilirubin, conjugated, page 10
Bilirubin, neonatal, page 11
Blood culture, page 22
Blood culture, screening, page 22
Blood grouping, gel cards, virtual scheme, page 15
Bordetella pertussis, antibodies, page 21
Borrelia burgdorferi, antibodies, European origin, page 21

C
Cerebrospinal fluid, culture, page 22
Chlamydia pneumoniae, antibodies, page 21
Chlamydia trachomatis and Neisseria gonorrhoeae nucleic acid detection, page 22
Chromogranin A [NKK], page 11
Clostridium difficile, culture and toxin detection, page 22
Clostridium difficile, nucleic acid detection, page 22
Coeliac disease, antibodies, page 19
C-reactive protein (CRP) for analyzers, page 12
C-reactive protein (CRP), POCT, page 12
CRP, low concentration, page 7
Cystatin C [DEKS], page 11
Cytomegalovirus, antibodies, page 26

D
DayTrol, human serum, page 9
D-dimer, page 17
Decialotransferrin [EQUALIS], page 12
Dengue virus, antibodies and antigen detection, page 26
DNA analysis [EQUALIS], page 33
Down’s syndrome screening, quality assurance, page 8
Drug abuse screening in urine, page 13

E
EBV mononucleosis, heterophile antibodies, page 26
EBV mononucleosis, specific antibodies, page 26
ECG, interpretation, page 33
ELISA reader photometry control [DEKS], page 33
Eosinophil cationic protein, page 6
Erythrocyte sedimentation rate, page 7
Erythrocyte sedimentation rate: Alifax; Greiner tube, page 7
Erythrocyte sedimentation rate: Alifax; Sarstedt tube, page 7

F
Faecal bacterial pathogens multiplex, nucleic acid detection, page 22, 30
Faecal calprotectin, page 12
Faecal culture, page 23
Faecal occult blood, page 7
Folate, erythrocytes, page 11
Fungal culture, page 25
Alphabetical scheme directory, G – N

G
General Bacteriology 1 (aerobes and anaerobes), page 23
General Bacteriology 2 (aerobes), page 23
Giardia and Cryptosporidium, nucleic acid detection, page 25
Glucose meters 1, 2 and 3, page 8
Gram stain, blood culture, page 23
Gram stain, colonies, page 23
Gynaecological cytology (liquid based), virtual microscopy, page 31
Gynaecological cytology (smear), virtual microscopy, page 31

H
Haemoglobin A1c, liquid samples, page 8
Haemoglobin A1c, liquid samples, POCT, page 8
Haemoglobin, 1-level, POCT, page 7
Haemoglobin, 3-level samples, cell counters and analyzers, page 7
Haemoglobin, 3-level samples, POCT, page 7
Haemoglobin for analyzers, page 7
Haemoxymeters, page 11
Helicobacter pylori, antibodies, page 21
Helicobacter pylori, antigen detection in faeces, page 23
Hepatitis A, antibodies, page 26
Hepatitis B and C, serology, specimen volume 0.6 mL / 1.2 mL / 2.0 mL, page 27
Hepatitis B, s-antigen antibodies, quantitative, page 27
Hepatitis B virus, nucleic acid detection (DNA), page 27
Hepatitis C virus, nucleic acid detection (RNA), page 27
Hepatitis E, antibodies, page 27
Herpes simplex 1 and 2, antibodies, page 27
HIL-index [DEKS], page 32
Histological staining techniques, page 31
Histopathology, virtual microscopy, page 31
HIV-1, nucleic acid detection (RNA), page 27
HIV, antibodies, page 27
HIV, antibodies, POCT, page 27
Homocysteine [DEKS], page 11
Hormones A: Basic analytes of hormone and immunochemistry, page 9
Hormones B: Steroid and peptide hormones, page 9
Human papillomavirus, nucleic acid detection, page 28
Human T-cell lymphotropic virus, antibodies, page 28

I
Immunohistochemical staining methods, page 31
Influenza virus A+B and RS virus, nucleic acid detection, page 28
Influenza virus A+B, antigen detection, page 28
INR, CoagSense, POCT, page 17
INR, CoaguChek, i-STAT and Siemens Xprecia, POCT, page 17
INR, EuroLyzer, POCT, page 17
INR, MicroINR, POCT, page 17

L
Legionella, antigen detection in urine, page 23
Leucocyte differential count and evaluation of blood cell morphology, virtual microscopy, page 15
Leucocyte differential count, 3-part, automated, page 16
Leucocyte differential count, 5-part, automated, page 16
Lipids and lipoproteins, page 12
Lipoprotein a, page 12

M
Malaria, antigen detection, page 16, 25
Measles virus, antibodies, page 28
Methyl malonate [DEKS], page 11
Mumps virus, antibodies, page 28
Mycobacterial culture and stain, page 23
Mycobacterial nucleic acid detection and stain, page 23
Mycobacterial stain, page 23
Mycoplasma pneumoniae, antibodies, page 21
Myocardial markers, page 7
Myocardial markers and CRP, low concentration, page 8

N
Nasal swab cells, page 11
Natriuretic peptides 1, B-type, NT-ProBNP, page 8
Natriuretic peptides 2, B-type, BNP, page 8
Neisseria gonorrhoeae (Gc), culture and susceptibility testing, page 24
Non-gynaecological cytology, virtual microscopy, page 31
Norovirus, nucleic acid detection, page 28
Alphabetical scheme directory, P – W

P
Parasites in blood, Giemsa stain, page 16, 25
Parasites in blood, Giemsa stain, virtual microscopy, page 16, 25
Parasites in blood, May-Grünwald-Giemsa stain, page 16, 25
Parasites in blood, May-Grünwald-Giemsa stain, virtual microscopy, page 16, 25
Parasites in faeces, page 26
Parasites in faeces, virtual microscopy, page 26
Parathyroid hormone, page 9
Parvovirus B19, antibodies, page 28
Phospholipid antibodies, page 19
POCT INR evaluation scheme, page 18
Preanalytics, clinical chemistry, page 32
Preanalytics, microbiology, page 32
Preanalytics, phlebotomy, page 32
Preanalytics, POCT, page 32
Pregnancy test, page 13
Procalcitonin, page 12
Prostate specific antigen, page 13
Proteins in cerebrospinal fluid, page 12
Proteins, electrophoresis, page 13
Proteins, immunochemical determinations, page 13
Prothrombin time, page 18
Puumala virus, antibodies, page 28

R
Respiratory infections multiplex, nucleic acid detection, page 30
Reticulocyte count, automated, page 16
Reticulocyte count, manual methods, page 16
Rheumatoid factor and citrullic peptide antibodies, page 19
Rotavirus and adenovirus, antigen detection, page 28
RS virus, antigen detection, page 28
Rubella virus, antibodies, page 29

S
Salmonella, culture, page 24
Semen analysis, page 33
Serum A, lyophilized samples, page 9
Serum B and C (2-level), page 10
Sexually transmitted diseases multiplex, nucleic acid detection, page 30
Special coagulation, page 18
Sputum cells, page 11
Streptococcus group A, antigen detection, page 24
Streptococcus group A, nucleic acid detection, page 24
Streptococcus group B (GBS), detection, page 24
Streptococcus pneumoniae, antigen detection in urine, page 24
Surveillance culture for multidrug resistant bacteria, gramnegative rods, page 24
Surveillance culture for multidrug resistant bacteria, MRSA, page 24
Surveillance culture for multidrug resistant bacteria, VRE, page 24
Synovial fluid crystals, page 11
Syphilis serology, page 21

T
Therapeutic drugs, page 11
Throat streptococcal culture, page 24
Thyroid gland antibodies, page 20
Tick-borne encephalitis virus, antibodies, page 29
Toxoplasma, antibodies, page 26
Trichomonas vaginalis, antigen detection, page 26
Trichomonas vaginalis, nucleic acid detection, page 26
Troponin I and Troponin T, detection, POCT, page 8
Tryptase [UK NEQAS], page 6
TSH receptor antibodies, page 20
Tumour markers, page 13

U
Urine culture, quantitative screening, page 25
Urine culture, quantitative screening, identification and susceptibility, page 25
Urine, identification of cells and other particles, page 13
Urine, quantitative chemistry, page 14
Urine, strip test A, page 14
Urine, strip test B, particle count and estimation of density, page 14

V
Varicella-zoster virus, antibodies, page 29
Veterinary basic blood count, page 33
Veterinary basic chemistry, page 33
Vitamin A, E and D metabolites, page 12

W
White blood cell count, HemoCue, POCT, page 17
White blood cell differential count: HemoCue, POCT, page 17
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