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External Quality Assessment Product Catalogue 2019

LABQUALITY

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The Path to Perfect Quality

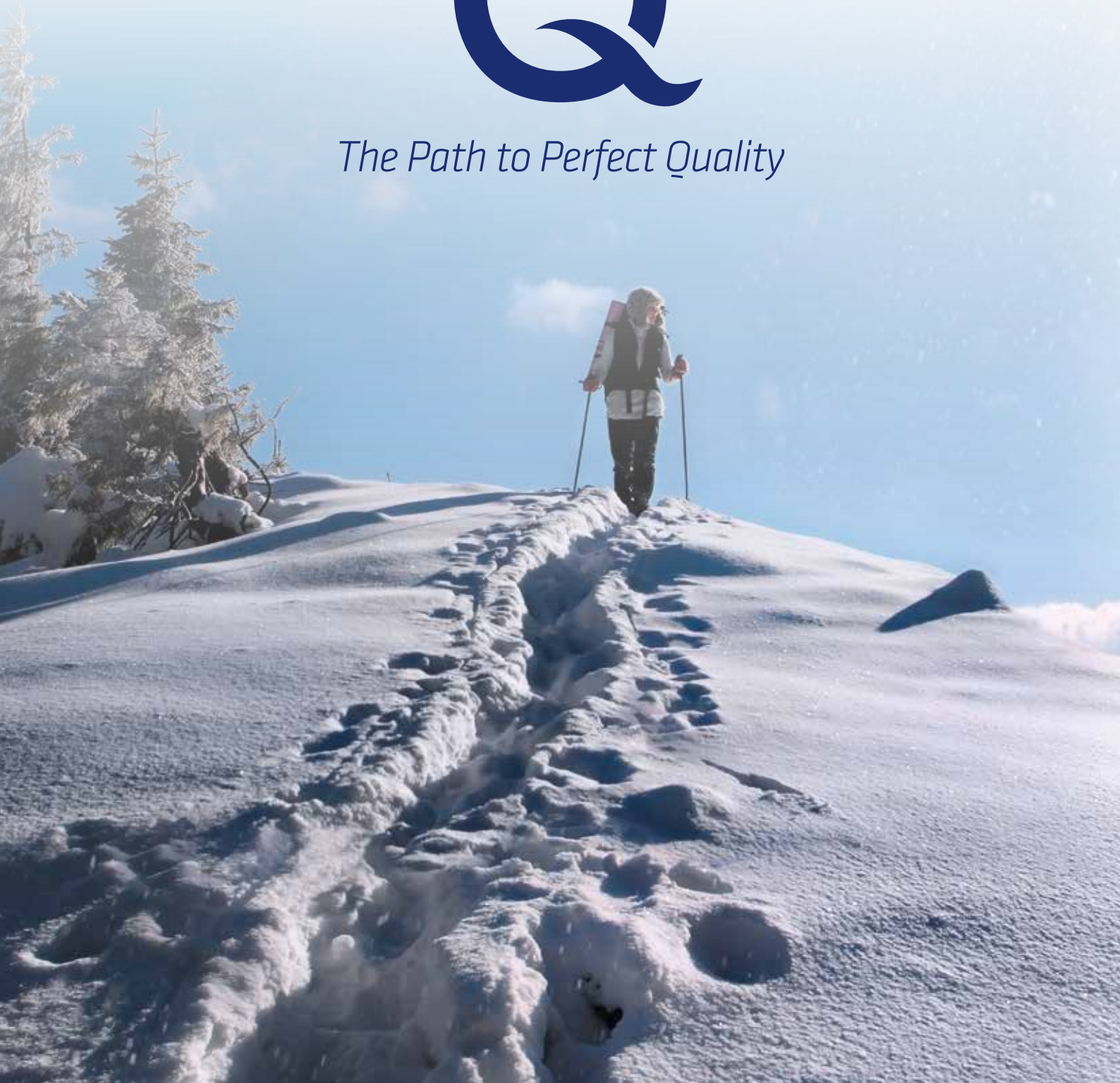


Table of contents

Service information	4
Updates for 2019	5
Clinical chemistry	6
» Allergology	6
» Basic chemistry	6
» Cardiac markers	7
» Diabetes analysis	8
» Endocrinology	8
» General long-term clinical chemistry	9
» General short-term clinical chemistry	9
» Special chemistry	10
» Specific proteins	12
» Tumour markers	13
» Urine analysis	13
Blood banks and transfusion medicine	14
Haematology	15
» Blood transfusion serological tests	15
» Cell count and cell morphology	15
» Coagulation	17
Point-of-Care	18
Immunology	19
Microbiology	21
» Bacterial Serology	21
» Bacteriology	22
» Mycology	25
» Parasitology	25
» Virology	26
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



Labquality – EQAS

Service information

Labquality – EQAS

Labquality is a Finnish independent external quality assessment provider 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. The EQA programs have a clinical scope with an educational touch. Part of the EQA production is outsourced to expert laboratories and national partners.

Integrated EQA service (EQA³)

Labquality is the first EQA provider, 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 the total quality management system of the participating laboratories and fulfill ISO 15189 requirements concerning the non-analytical phases. In addition to the samples, the intergrated schemes include pre- and/or post-analytical questionnaires concerning the scope of the scheme.

Quality management

Labquality's management system is certified according to ISO 9001 (DQS) and 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. With only a few exceptions all schemes are available via national partners in Europe, Middle East and Central Asia. For direct customers the program selection is limited to the schemes with stabile and non-hazardous sample materials.

Enrolment and prices

Labquality has annual programs and pricing. Participants shall place their orders for the 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 the 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 a modern web based software, LabScala. EQA process is designed to go along with the laboratory process from pre-analytics to post-analytics. Easy availability and user-friendly interface guarantee an advanced experience.

Certificate

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

Customer service

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

How to use the catalogue

Scheme code and name

1234 Scheme name

POCT

Specimens: Examinations: Notes:

Additional info

EQA³ = Integrated EQA service **NEW** = New product **POCT** = Suitable for Point-of-Care testing sites **VIRTUAL** = Virtual microscopy

Rounds (delivery months)

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

Updates for 2019

New schemes and products

- 5303 Meningitis-encephalitis multiplex, nucleic acid detection (p. 30)
- 5222 Mycobacteria, extra set of samples (p. 24)
- 4156 Reticulocyte count, automated: Mindray (p. 16)
- 2481 Vitamin A, E and D metabolites, extra set of samples (p. 12)

Discontinued schemes

- 1002 Haemoglobin for analyzers
- 4336 POCT INR evaluation scheme
- 5474 *Trichomonas vaginalis*, antigen detection

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

Integrated EQA schemes combine pre-analytical, analytical and post-analytical EQA to one scheme fulfilling ISO 15189 requirements. The EQA Programme 2019 has over 30 Integrated EQA schemes that include pre and/or postanalytical cases. All integrated EQA schemes are marked with EQA³ label.

Changes in distribution schedule

- 7130 ECG, interpretation (APR, OCT)
- 5472 Faecal parasites multiplex, nucleic acid detection (APR, AUG, DEC)
- 2370 Folate, erythrocytes (FEB, JUN, OCT)
- 5682 Hepatitis E, antibodies (MAY, NOV)
- 6543 Histological staining techniques (APR, OCT)
- 6542 Histopathology, virtual microscopy (MAR, OCT)
- 5300 Respiratory infections multiplex, nucleic acid detection (FEB, MAY, SEP, DEC)

- 8610 Veterinary basic blood count (OCT)
- 8530 Veterinary basic chemistry (NOV)

Changes in scope, specimens or parameters

- 5650 Cytomegalovirus, antibodies
New specimen volume 0.5 mL
- 5472 Faecal parasites multiplex, nucleic acid detection
New parameters: *Dientamoeba fragilis*, *Entamoeba dispar*, *Entamoeba histolytica*
- 2114 Haemoglobin, 1-level, POCT
New specimen quantity: 2 specimens / round
- 4200 Leucocyte differential count, 3-part, automated
Suitable also for Medonic analysers
- 5098 Rotavirus and adenovirus, detection
New parameter: Nucleic acid detection. New specimen material.

Clinical chemistry

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

Clinical chemistry » Allergology

	1	2	3	4	5	6	7	8	9	10	11	12
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 to all rounds required. Should be ordered by November 9th, 2018 .											
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 to all rounds required. Should be ordered by November 9th, 2018 .											
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 to all rounds required. Should be ordered by November 9th, 2018 . 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 to all rounds required. Should be ordered by November 9th, 2018 .											

Clinical chemistry » Basic chemistry

	1	2	3	4	5	6	7	8	9	10	11	12
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, creatinekinase, creatinine, gamma glutamyltransferase, glucose, lactate dehydrogenase, magnesium, phosphorus, potassium, sodium, total protein, triglycerides, urea, uric acid	Notes: For clinical laboratories and POCT sites. Only for dry chemistry analyzers.											

POCT

	1	2	3	4	5	6	7	8	9	10	11	12
2730 Erythrocyte sedimentation rate			■		■				■		■	
Specimens: 1 artificial blood cell suspension, 4.5 mL Examinations: ESR	Notes: Not suitable for Algor iSed											

	1	2	3	4	5	6	7	8	9	10	11	12
2731 Erythrocyte sedimentation rate: Alifax; Greiner tube			■		■				■		■	
Specimens: 3 test tubes containing synthetic latex solution, 3 mL each	Examinations: ESR											

	1	2	3	4	5	6	7	8	9	10	11	12
2732 Erythrocyte sedimentation rate: Alifax; Sarstedt tube			■		■				■		■	
Specimens: 3 test tubes containing synthetic latex solution, 3 mL each	Examinations: ESR											

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

	1	2	3	4	5	6	7	8	9	10	11	12
2114 Haemoglobin, 1-level, POCT			■		■				■		■	
Specimens: 2 bovine hemolysate or human whole blood control samples, 1 mL each, pre- and/or post-analytical cases in part of the rounds	Examinations: Haemoglobin, pre- and/or post-analytical indicators Notes: Only for POCT devices. Not suitable for Diaspect.											

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

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

Clinical chemistry » Cardiac markers

	1	2	3	4	5	6	7	8	9	10	11	12
1541 CRP, low concentration		■		■		■			■		■	
Specimens: 1 human serum sample Examinations: CRP	Notes: CRP, low concentration sample is included in product 2541 Myocardial markers and CRP											

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

	1	2	3	4	5	6	7	8	9	10	11	12
2541 Myocardial markers and CRP, low concentration		■		■		■			■		■	
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.											

	1	2	3	4	5	6	7	8	9	10	11	12
POCT	2690 Natriuretic peptides 1, B-type, NT-ProBNP											
	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.					

	1	2	3	4	5	6	7	8	9	10	11	12
POCT	2691 Natriuretic peptides 2, B-type, BNP											
	Specimens: 2 lyophilized or liquid samples, 1–2 mL each Examinations: BNP						Notes: For clinical laboratories and POCT sites					

	1	2	3	4	5	6	7	8	9	10	11	12
POCT	2530 Troponin I and Troponin T, detection, POCT											
	Specimens: 2 fresh human samples or 2 liquid samples, 0.5–1 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.					

Clinical chemistry » Diabetes analysis

	1	2	3	4	5	6	7	8	9	10	11	12
POCT	2570, 2580, 2590 Glucose meters											
	Device specific product codes: 2570 for all glucose meters except Contour, HemoCue and On Call Plus 2580 for HemoCue meters 2590 for Contour meters Specimens: 1 whole blood or plasma sample						Examinations: Glucose Notes: For clinical laboratories and POCT sites. Observe device specific product codes. 5 results processed with one order.					

	1	2	3	4	5	6	7	8	9	10	11	12
	1261 Haemoglobin A1c, liquid samples											
	Specimens: 2 liquid blood samples, 1 mL each Examinations: HbA1c						Notes: Result processing in IFCC and DCCT units. Not suitable for Afinion instruments.					

	1	2	3	4	5	6	7	8	9	10	11	12
POCT	1263 Haemoglobin A1c, liquid samples, POCT											
	Specimens: 2 liquid blood samples, 1 mL each Examinations: HbA1c						Notes: Result processing in IFCC and DCCT units. Only for POCT devices. Not suitable for Afinion instruments.					

Clinical chemistry » Endocrinology

	1	2	3	4	5	6	7	8	9	10	11	12
	2221 Down's syndrome screening, quality assurance											
	Specimens: No sample analysis involved						Examinations: Patient results are collected from risk management software (e.g. LifeCycle, Prisca) anonymously for data analysis.					

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

	1	2	3	4	5	6	7	8	9	10	11	12
1300 Hormones A, extra set of samples		■		■	■	■		■		■	■	■
Specimens: 2 human serum samples, 3 mL each	Notes: Only in connection with scheme 2300											

	1	2	3	4	5	6	7	8	9	10	11	12
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.	17-OH-progesterone, prolactin, SHBG, testosterone, free testosterone, TBC, pre- and/or post-analytical indicators											
Examinations: Androstenedione, aldosterone, C-peptide, cortisol, DHEAS, estradiol, FSH, gastrin, growth hormone, IGF-1, insulin, LH, progesterone,	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.											

EQA 3

	1	2	3	4	5	6	7	8	9	10	11	12
1301 Hormones B, extra set of samples		■		■		■		■		■		■
Specimens: 2 human serum samples, 3 mL each	Notes: Only in connection with scheme 2301											

	1	2	3	4	5	6	7	8	9	10	11	12
2250 Parathyroid hormone			■							■		
Specimens: 2 lyophilized human serum samples, 3-5 mL each	Examinations: PTH											

Clinical chemistry » General long-term clinical chemistry

	1	2	3	4	5	6	7	8	9	10	11	12
1031 DayTrol, human serum	■	■	■	■	■	■	■	■	■	■	■	■
Specimens: 1 lyophilized human serum sample, 5 mL	lithium, magnesium, osmolality, phosphorus, potassium, protein, sodium, thyrotropin, thyroxine, thyroxine free, transferrin, transferrin receptor, triglycerides, urea, uric acid											
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,	Notes: Minimum order quantity of 10 bottles per year. Monthly processing of results included.											

Clinical chemistry » General short-term clinical chemistry

	1	2	3	4	5	6	7	8	9	10	11	12
1072, 1072S Serum A, lyophilized samples	■	■	■	■	■	■	■	■	■	■	■	■
Specimens: Lyophilized serum sample, 3-5 mL each, samples are selected to cover a wide concentration range	iron, lactate, lactate dehydrogenase, lithium, magnesium, oroso-mucoid, osmolality, phosphorus, potassium, protein, selenium, sodium, thyrotropin, thyroxine, thyroxine free, TIBC, transferrin, transferrin receptor, triglycerides, tri-iodio-thyronine, urea, uric acid											
Examinations: Alanine aminotransferase, albumin, alkaline phosphatase, alpha-1-antitrypsin, alpha-1-glykoprotein, amylase, amylase (pancreatic), aspartate aminotransferase, bilirubin, calcium, calcium (ionized, actual), calcium (ionized, pH 7.4), chloride, cholesterol, cholesterol HDL, cholesterol LDL, cortisol, creatine phosphokinase, creatinine, ferritin, gamma-glutamyltransferase, glucose, haptoglobin, IgA, IgE, IgG, IgM,	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	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											
Examinations: Alanine aminotransferase, albumin, alfa-1-antitrypcine, alfa-1-glycoprotein, alkaline phosphatase, amylase, pancreas amylase, aspartate aminotransferase, bilirubin, ferritin, phosphate, glucose, glutamyltransferase, haptoglobin, IgA, IgE, IgG, IgM, potassium, calcium, ionized calcium, ionized calcium pH corrected (7.4), chloride, cholesterol,	Notes: Reference values for common analytes are included											

Clinical chemistry » Special chemistry

	1	2	3	4	5	6	7	8	9	10	11	12
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.						Notes: Order one 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 Angiotensin 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					
2040 Bilirubin, neonatal		■		■		■		■		■		■
	Specimens: 2 lyophilized samples, 1-3 mL						Examinations: Bil, neo					
8702 Chromogranin A [NKK]												
	Specimens: 3 genuine human serum samples						1 time					

	1	2	3	4	5	6	7	8	9	10	11	12
8805 Cystatin C [DEKS]	2 times											
Specimens: 2 human plasma samples with reference target values, 0.75 mL each	Examinations: P-Cystatin C Notes: Participation to all rounds required.											

	1	2	3	4	5	6	7	8	9	10	11	12
2370 Folate, erythrocytes		■				■				■		
Specimens: 1 human whole blood sample, 1 mL	Examinations: Blood folate and erythrocyte folate											

	1	2	3	4	5	6	7	8	9	10	11	12
2150 Haemoxymeters			■						■			
Specimens: 2 liquid (1.2 mL) or lyophilized (0.5 mL) samples Examinations: FO2Hb, FCOHb, FMETHb, ctHb, sO2	Notes: Order one sample set for each analyzer											

	1	2	3	4	5	6	7	8	9	10	11	12
8816 Homocysteine [DEKS]	5 times											
Specimens: 2 human plasma or serum samples Examinations: P-Homocysteine	Notes: Participation to all rounds required.											

	1	2	3	4	5	6	7	8	9	10	11	12
8815 Methyl malonate [DEKS]	5 times											
Specimens: 2 human serum samples Examinations: P-Methyl-malonate	Notes: Participation to all rounds required.											

	1	2	3	4	5	6	7	8	9	10	11	12
2651 Nasal swab cells												■
Specimens: 4 digital images of MGG and methylene eosin stained samples	Examinations: Eosinophils, neutrophils											

	1	2	3	4	5	6	7	8	9	10	11	12
2652 Sputum cells												■
Specimens: 4 digital images of MGG and methylene eosin stained samples	Examinations: Eosinophils, neutrophils											

	1	2	3	4	5	6	7	8	9	10	11	12
2640 Synovial fluid crystals			■						■			
Specimens: 3 slides prepared from patient samples	Examinations: Sodium urate monohydrate and calcium pyrophosphate dihydrate crystals											

	1	2	3	4	5	6	7	8	9	10	11	12
2410 Therapeutic drugs			■		■			■			■	
Specimens: 2 liquid or lyophilized human serum samples, volume 5 mL each, pre- and/or post-analytical cases in part of the rounds Examinations: Amikasin, amitriptyline, carbamazepine, carbamazepine free, cyclosporine, digoxin, disopyramide, ethosuximide, flecainide, gentamycin, lidocaine, lithium, methotrexate, NAPA, netilmycin, nortriptyline,	paracetamol (acetaminophen), phenobarbital, phenytoin, phenytoin free, primidone, procainamide, quinidine, salicylate, theophylline, tobramycin, tricyclics, valproic acid, valproic acid free, vancomycin, pre- and/or post-analytical indicators											

	1	2	3	4	5	6	7	8	9	10	11	12
2480 Vitamin A, E and D metabolites				■							■	
Specimens: 2 liquid human serum samples, 1 mL each. Pre- and/or post-analytical cases in part of the rounds. Examinations: Vitamin A, vitamin E, 25(OH)D, 1,25(OH)2D, pre- and/or post-analytical indicators	Notes: Target values for 25(OH)D vitamin metabolite are provided.											

EOA³EOA³

NEW	2481 Vitamin A, E and D metabolites, extra set of samples	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 2 liquid human serum samples, 5 mL each	Notes: Only in connection with scheme 2480.											

Clinical chemistry » Specific proteins

2020	C-reactive protein (CRP) for analyzers	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 2 liquid serum or plasma samples, 1 mL each Examinations: CRP	Notes: Scheme is designed only for clinical chemistry analyzers. Order scheme 2132 for POCT CRP meters.											

POCT	2132 C-reactive protein (CRP), POCT	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 2 human serum samples, 1 mL each Examinations: CRP	Notes: Only for quantitative POCT CRP meters.											

2140	Decalotransferrin [EQUALIS]	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 2 human plasma samples, varying concentration of CDT Examinations: CDT	Notes: Participation to all rounds required.											

2751	Faecal calprotectin	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 2 lyophilized faecal specimens, 0.5 mL each	Examinations: Calprotectin											

EQA ³	2200 Lipids and lipoproteins	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 2 fresh human serum samples, 0.5–1 mL each. Pre- and/or post-analytical cases in part of the rounds.	Examinations: Cholesterol, HDL cholesterol, LDL cholesterol, lipoprotein apo A1, lipoprotein apo A2, lipoprotein apo B, lipoprotein (a), triglycerides, pre- and/or post-analytical indicators Notes: Separate round for Lp(a), see scheme 2202											

2202	Lipoprotein a	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 1 liquid or lyophilized human serum preparation	Examinations: Lp(a)											

2280	Procalcitonin	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 2 lyophilized samples Examinations: Procalcitonin	Notes: Only for quantitative methods											

2160	Proteins in cerebrospinal fluid	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 1 cerebrospinal fluid, 1.8 mL and 1 human serum sample, 1 mL	Examinations: Cerebrospinal fluid: Albumin, IgG, total protein, IgG index. Serum: Albumin, IgG.											

EQA ³	2240 Proteins, electrophoresis	1	2	3	4	5	6	7	8	9	10	11	12
	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											

	1	2	3	4	5	6	7	8	9	10	11	12
2230 Proteins, immunochemical determinations	■			■		■			■			
Specimens: 2 liquid or lyophilized human serum samples, 1 mL each	Examinations: IgA, IgG, IgLcKappa, IgLcLambda, IgLcKappa free, IgLcLambda free, IgM, orosomucoid, pre-albumin, RBP, transferrin, transferrin receptor											
Examinations: Alpha-1-antitrypsin, alpha-2-macroglobulin, albumin, ceruloplasmin, complement C3, complement C4, haptoglobin, hemopexin,												

EQA 3

Clinical chemistry » Tumour markers

	1	2	3	4	5	6	7	8	9	10	11	12
2226 Prostate specific antigen		■		■			■			■		
Specimens: 2 liquid human serum samples, 1 mL each	Examinations: PSA, complexed PSA, free PSA, free/total PSA ratio											

	1	2	3	4	5	6	7	8	9	10	11	12
2700, 2700S Tumour markers		■			■			■			■	
Specimens: 2 liquid human serum samples, 2 mL each	Notes: 2700S is a limited version of the scheme available for laboratories performing testing of 1-5 analytes.											
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												

	1	2	3	4	5	6	7	8	9	10	11	12
2701 Tumour markers, extra set of samples		■			■			■			■	
Specimens: 2 liquid human serum samples, 2 mL each	Notes: Only in connection with scheme 2700											

Clinical chemistry » Urine analysis

	1	2	3	4	5	6	7	8	9	10	11	12
3240 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											

POCT

	1	2	3	4	5	6	7	8	9	10	11	12
3300 Drug of abuse screening in urine		■				■			■			
Specimens: 2 authentic samples, 5 mL each	Notes: For clinical laboratories and POCT sites. Expert laboratory confirmatory results are provided. Results are reported as positive or negative.											
Examinations: alpha PVP, amphetamines, barbiturates, benzo-diazepines, buprenorphine, cannabinoids, carbamazepine, cocaine metabolites, codeine, gammahydroxybutyrate (GHB), ketamine, LSD, MDMA+MDA (Ecstasy), MDPV, metaqualone, methadone metabolites, morphine, opiates, oxycodone, paracetamol, phencyclidine, phentanyle, pregabalin, propoxyphene, salicylate, tramadol, tricyclic antidepressants												

POCT

	1	2	3	4	5	6	7	8	9	10	11	12
3270 Pregnancy test			■		■				■		■	
Specimens: 2 fresh urine samples, 1 mL each	Notes: For clinical laboratories and POCT sites											
Examinations: Qualitative hCG												

POCT

	1	2	3	4	5	6	7	8	9	10	11	12
3200 Urine, identification of cells and other particles		■			■			■			■	
Specimens: 4 digital images	Notes: Images are also available as paper prints, see scheme 3201											
Examinations: Identification of cells and other particles												

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

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

	1	2	3	4	5	6	7	8	9	10	11	12
3100 Urine, strip test A		■		■				■		■		
Specimens: 1 lyophilized urine sample with varying concentrations, 15 mL	Notes: For clinical laboratories and POCT sites. Water for dissolution available, see scheme 3101, should be ordered separately.											
Examinations: Glucose, ketone bodies, leukocytes, nitrite, pH, protein, blood (erythrocytes), relative density												

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

	1	2	3	4	5	6	7	8	9	10	11	12
3130 Urine, strip test B, particle count and estimation of density			■		■				■			■
Specimens: 1 lyophilized or liquid urine, 12–15 mL	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.											
Examinations: Particle count: erythrocytes and leukocytes. Estimation of density: creatinine, relative density, osmolality. Strip tests: glucose, ketone bodies, leukocytes, nitrite, pH, protein, blood (erythrocytes).												

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

EQA schemes for **blood banks**

Blood transfusion serology

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

Bacterial serology

- 5880 Syphilis serology

Bacteriology

- 5100 Blood culture
- 5101 Blood culture, screening

Virology, serological tests

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

Virology, molecular tests

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

Haematology

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

Haematology » Blood transfusion serological tests

	1	2	3	4	5	6	7	8	9	10	11	12
4420 ABO and Rh grouping		■			■			■			■	
Specimens: 2 whole blood samples	Examinations: ABO & Rh reactivity and interpretation, pre- and/or post-analytical indicators											

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

	1	2	3	4	5	6	7	8	9	10	11	12
4440 Antiglobulin test, direct		■			■			■			■	
Specimens: 2 red blood cell suspensions	Examinations: Reaction strengths and interpretation, pre- and/or post-analytical indicators											

	1	2	3	4	5	6	7	8	9	10	11	12
4480 Column agglutination methods: grading of reactions and patient cases										■		
Specimens: 3–5 cases and digital images	Notes: Post-analytical scheme											
Examinations: Interpretation of the cases and reaction strengths of the digital images												

EQA³

Haematology » Cell count and cell morphology

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

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

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

VIRTUAL

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

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

		■			■			■				■
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Analyzer specific product codes:

4200: ABX, Advia, Cell-Dyn, Coulter, Medonic, Mindray, Nihon Kohden Celltac MEK
4201: Sysmex

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

Specimens: 1 blood cell suspension, 2–4 mL

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

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

		■			■			■				■
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Analyzer specific product codes:

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

Specimens: 1 blood cell suspension, 2–4 mL

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

POCT

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

5430 Malaria, antigen and nucleic acid detection

	■			■			■				■	
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Specimens: 3 whole blood samples

Notes: For clinical laboratories and POCT sites

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

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

5460 Parasites in blood, Giemsa stain

	■			■			■				■	
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Specimens: 2 methanol fixed or Giemsa stained smears. Brief case histories are also given. Authentic samples.

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

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

5470 Parasites in blood, Giemsa stain, virtual microscopy

									■			
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Specimens: Virtual whole slide images of Giemsa stained smears prepared by using a scanner microscope. Brief case histories also given. Authentic samples.

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

VIRTUAL

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

5461 Parasites in blood, May-Grünwald-Giemsa stain

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

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

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

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

									■			
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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

VIRTUAL

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

4150–4156 Reticulocyte count, automated

		■			■			■				■
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Analyzer specific product codes:

4154: ABX Pentra
4151: Cell-Dyn 4000, Sapphire
4155: Cell-Dyn 3200, 3500, 3700, Ruby
4152: Coulter Gens, LH750
4156: Mindray
4150: Siemens Advia
4153: Sysmex

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

Examinations: Reticulocyte count

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

4140 Reticulocyte count, manual methods

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

Examinations: Reticulocyte count

	1	2	3	4	5	6	7	8	9	10	11	12
4130 White blood cell count: HemoCue, POCT			■						■			
Specimens: 1 blood cell suspension, 2 mL Examinations: Leucocytes	Notes: The scheme is for HemoCue WBC Systems											

POCT

	1	2	3	4	5	6	7	8	9	10	11	12
4190 White blood cell differential count: HemoCue, POCT						■						■
Specimens: 1 blood cell suspension, 2 mL Examinations: Leucocytes, neutrophils, lymphocytes, monocytes, basophils, eosinophils	Notes: The scheme is for HemoCue WBC Diff analyzers (5-part)											

POCT

Haematology » Coagulation

	1	2	3	4	5	6	7	8	9	10	11	12
4330 Activated partial thromboplastin time and fibrinogen		■			■			■			■	
Specimens: 2 lyophilized plasma samples, 0.5–1 mL each	Examinations: Coagulation time in seconds, fibrinogen											

	1	2	3	4	5	6	7	8	9	10	11	12
4387 Anticoagulants: LMW-Heparin/antiFXa		■			■			■			■	
Specimens: 2 lyophilized plasma samples, 0.5–1 mL each	Examinations: LMW-heparin/antiFXA											

	1	2	3	4	5	6	7	8	9	10	11	12
4391 Anticoagulants: Rivaroxaban					■						■	
Specimens: 2 lyophilized plasma samples	Examinations: Rivaroxaban concentration											

	1	2	3	4	5	6	7	8	9	10	11	12
4388 D-dimer		■			■			■			■	
Specimens: 2 pooled plasma samples, 0.5–1 mL each Examinations: D-Dimer	Notes: For clinical laboratories and POCT sites											

POCT

	1	2	3	4	5	6	7	8	9	10	11	12
4339 INR, CoagSense, POCT					■						■	
Specimens: 1 lyophilized plasma sample Examinations: Prothrombin time in INR unit	Notes: Only for CoagSense meter											

POCT

	1	2	3	4	5	6	7	8	9	10	11	12
4335 INR, CoaguChek, i-STAT and Siemens Xprexia, POCT					■						■	
Specimens: 1 lyophilized or liquid plasma sample Examinations: Prothrombin time in INR unit	Notes: Only for CoaguChek, i-STAT and Siemens Xprexia meters											

POCT

	1	2	3	4	5	6	7	8	9	10	11	12
4337 INR, EuroLyzer, POCT					■						■	
Specimens: 1 lyophilized plasma sample Examinations: Prothrombin time in INR unit	Notes: Only for EuroLyzer INR meter											

POCT

	1	2	3	4	5	6	7	8	9	10	11	12
4338 INR, MicroINR, POCT					■						■	
Specimens: 1 lyophilized plasma sample Examinations: Prothrombin time in INR unit	Notes: Only for microINR meter											

POCT

	1	2	3	4	5	6	7	8	9	10	11	12
4300 Prothrombin time		■			■			■			■	
Specimens: 2 lyophilized plasma samples, 0.5–1 mL each	Examinations: Prothrombin time, PT%											

	1	2	3	4	5	6	7	8	9	10	11	12
4386 Special coagulation		■			■			■			■	
Specimens: 2 lyophilized plasma samples, 0.5–1 mL each	Examinations: Antithrombin, Factor VIII, Protein C, Protein S											

EQA services for POCT sites

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

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

Clinical chemistry

- 2610 Acid-base status and electrolytes
- 3240 Albumin and creatinine in urine
- 2100 Basic chemistry, POCT analyzers
- 2132 C-reactive protein (CRP), POCT
- 3300 Drug of abuse screening in urine
- 2750 Faecal occult blood
- 2570, 2580, 2590 Glucose meters
- 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, CoagSense, 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
- 4130 White blood cell count: HemoCue, POCT
- 4190 White blood cell differential count: HemoCue, POCT

Microbiology

- 5640 EBV mononucleosis, heterophile antibodies
- 5860 *Helicobacter pylori*, 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
- 5098 Rotavirus and adenovirus, detection
- 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

Preanalytics

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

Immunology

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

	1	2	3	4	5	6	7	8	9	10	11	12
5935 ANCA and GbmAb		■						■				
Specimens: 2 liquid human serum or plasma samples, 0.5 mL each		Notes: Quantitative results are also processed (Pr3Ab, MPOAb)										
Examinations: Anti-neutrophilic cytoplasmic Ab, Myeloperoxidase Ab, Proteinase-3 Ab and Glomerular basement membrane Ab												
5900 Antinuclear antibodies				■						■		
Specimens: 3 liquid human serum or plasma samples, 0.6 mL each		Notes: Extractable antinuclear antigens and double-stranded deoxyribonucleic acid are included										
Examinations: ANA, ENAAb, RNPAb, SmAb, SSAAb, SSBAb, Scl70Ab, CentAb, Jo1Ab, DNAnAb (dsDNA), HistAb												
5938 Autoimmune diagnostics, IFA interpretation					■							
Specimens: 3–5 cases (digital images)		Examinations: Interpretation										
5930 Autoimmune liver disease and gastric parietal cell antibodies					■						■	
Specimens: 2 liquid human serum or plasma samples, 0.4 mL each		Examinations: Liver kidney microsomal antibodies, Smooth muscle antibodies, Mitochondrial antibodies, Gastric parietal cell antibodies										
5940 Coeliac disease, antibodies		■				■				■		
Specimens: 2 liquid human serum or plasma samples, 0.7 mL each. Pre- and/or post-analytical cases in part of the rounds.		Notes: Quantitative results are also processed (tTGAbA, tTGAbG, DGPAbA, DGPAbG). Scheme is not suitable for POCT.										
Examinations: Endomysium antibodies, tissue transglutaminase antibodies, deamidated gliadin peptide antibodies, pre- and/or post-analytical indicators												
5937 Phospholipid antibodies					■							
Specimens: 2 liquid human serum or plasma samples, 0.5 mL each		Notes: Quantitative results are also processed										
Examinations: Phospholipid antibodies, Cardiolipin antibodies (IgG and IgM), beta-2-glycoprotein antibodies (IgG and IgM).												
5820 Rheumatoid factor and citrullinic peptide antibodies	■			■			■			■		
Specimens: 2 liquid human serum or plasma samples, 0.7 mL each		Examinations: Qualitative and quantitative RF, CCPAb										

EOA³

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

5920 Thyroid gland antibodies

		■			■					■		
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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

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

5913 TSH receptor antibodies

		■							■			
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Specimens: 2 liquid human serum samples, 0.4 mL each
Examinations: Thyroid stimulating hormone receptor antibodies

Notes: Quantitative results are also processed



Microbiology

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

Microbiology » Bacterial Serology

	1	2	3	4	5	6	7	8	9	10	11	12		
5840 Antistreptolysin		■			■			■			■			
Specimens: 2 liquid human serum or plasma samples, 0.4 mL each. Authentic, commutable, single donor samples.	Examinations: Qualitative and quantitative ASO													
5950 <i>Bordetella pertussis</i>, antibodies	■			■				■			■			EQA ³
Specimens: 2 liquid human serum samples, ≥ 0.3 mL each	Examinations: <i>B. pertussis</i> IgA, IgG & IgM antibodies, Pertussis toxin IgA, IgG & IgM, post-analytical clinical interpretation													
5960 <i>Borrelia burgdorferi</i>, antibodies, European origin	■			■				■			■			EQA ³
Specimens: 2 liquid human serum or plasma samples, 0.5 mL each. Authentic, commutable, single donor samples.	Examinations: <i>B. burgdorferi</i> IgG, IgM and total antibodies, post-analytical clinical interpretation													
5620 <i>Chlamydia pneumoniae</i>, antibodies		■			■			■			■			EQA ³
Specimens: 1 single plasma or serum and 1 paired plasma or serum samples, 0.4 mL each	Examinations: <i>C. pneumoniae</i> IgA, IgG, IgM antibodies, post-analytical clinical interpretation													
5860 <i>Helicobacter pylori</i>, antibodies			■			■			■			■		EQA ³ POCT
Specimens: 2 liquid human serum or plasma samples, 0.4 mL each	Examinations: <i>H. pylori</i> IgA, IgG and total antibodies, quantitative and qualitative tests, post-analytical clinical interpretation Notes: For clinical laboratories and POCT sites													
5980 <i>Mycoplasma pneumoniae</i>, antibodies		■			■				■		■			EQA ³ POCT
Specimens: 2 liquid human serum or plasma samples, 0.3 mL each. Authentic, commutable, single donor samples.	Examinations: <i>M. pneumoniae</i> IgG, IgM and total antibodies, post-analytical clinical interpretation Notes: For clinical laboratories and POCT sites													
5880 Syphilis serology		■				■				■		■		EQA ³
Specimens: 2 liquid human serum samples, 0.6 mL each. Authentic, commutable, single donor samples.	Examinations: Cardiolipin, <i>Treponema pallidum</i> antibodies, post-analytical clinical interpretation													

Microbiology » Bacteriology

	1	2	3	4	5	6	7	8	9	10	11	12
5050 Bacteriological staining, direct				■						■		
Specimens: 3 cases, 3–9 digital images	Examinations: Interpretation of digital images taken from direct bacteriological Gram staining of clinical samples											
5100 Blood culture			■		■					■		■
Specimens: 2 lyophilized samples. Brief case histories also given. Fresh blood is needed for specimen preparation. The samples intended for susceptibility testing may include both international quality control strains and susceptible or resistant clinical strains.	Examinations: Culture, identification, antimicrobial susceptibility Notes: Fresh blood is needed but not included in the shipment											
5101 Blood culture, screening			■		■					■		■
Specimens: 2 lyophilized samples. Brief case histories also given. Fresh blood is needed for sample preparation.	Examinations: Culture, preliminary identification using Gram staining. The scheme is also suitable for stem cell banks screening only for possible growth. Notes: Fresh blood is needed but not included in the shipment											
5150 Cerebrospinal fluid, culture		■			■				■			■
Specimens: 2 lyophilized samples. Brief case histories also given. Examinations: Culture and identification. The scheme is also suitable for laboratories performing screening and reporting merely a preliminary identification.	Notes: See also scheme 5303 Meningitis-encephalitis multiplex, nucleic acid detection											
5612 <i>Chlamydia trachomatis</i> and <i>Neisseria gonorrhoeae</i> nucleic acid detection				■		■			■			■
Specimens: 3 simulated swab/urine samples Examinations: Detection of <i>C. trachomatis</i> and <i>N. gonorrhoeae</i> nucleic acid	Notes: See also scheme 5302 Sexually transmitted diseases multiplex, nucleic acid detection											
5200 <i>Clostridium difficile</i>, culture and toxin detection		■			■			■			■	
Specimens: 2 lyophilized mixtures of bacteria.	Examinations: This scheme includes <i>C. difficile</i> culture, antigen detection (GDH), toxin detection and direct nucleic acid detection. Hypervirulent <i>C. difficile</i> strains also included.											
5202 <i>Clostridium difficile</i>, extra set of samples		■			■			■			■	
Specimens: 2 lyophilized mixtures of bacteria	Notes: Only in connection with scheme 5200											
5201 <i>Clostridium difficile</i>, nucleic acid detection		■			■			■			■	
Specimens: 2 lyophilized mixtures of bacteria. Hypervirulent <i>C. difficile</i> strains also included.	Notes: 5200 includes also this examination											
5191 Faecal bacterial pathogens multiplex, nucleic acid detection				■		■				■		■
Specimens: 2 lyophilized mixtures of bacteria Examinations: Direct nucleic acid detection. Pathogens included are <i>Aeromonas</i> , <i>Campylobacter</i> , <i>Plesiomonas</i> , <i>Salmonella</i> , <i>Shigella</i> and <i>Yersinia</i> .	Notes: 5190 includes also this examination											

	1	2	3	4	5	6	7	8	9	10	11	12
5190 Faecal culture				■		■				■		■
Specimens: 2 lyophilized mixtures of bacteria	Examinations: Culture and direct nucleic acid detection. Pathogens included are <i>Aeromonas</i> , <i>Campylobacter</i> , <i>Plesiomonas</i> , <i>Salmonella</i> , <i>Shigella</i> and <i>Yersinia</i> .											

	1	2	3	4	5	6	7	8	9	10	11	12
5080 General Bacteriology 1 (aerobes and anaerobes)			■		■				■			■
Specimens: 4 lyophilized mixtures of microbes: both pathogens and normal flora. The samples intended for susceptibility testing may include both international quality control strains and susceptible or resistant clinical strains. Brief case histories are also given. Pre- and/or post-analytical cases in part of the rounds.	Examinations: Isolation of pathogens and antimicrobial susceptibility testing, pre- and/or post-analytical cases Notes: 5080 includes 5081, General Bacteriology 2											

EQA³

	1	2	3	4	5	6	7	8	9	10	11	12
5081 General Bacteriology 2 (aerobes)			■		■				■			■
Specimens: 2 lyophilized mixtures of microbes: both pathogens and normal flora. The specimens intended for susceptibility testing may include both international quality control strains and susceptible or resistant clinical strains. Brief case histories are also given. Pre- and/or post-analytical cases in part of the rounds.	Examinations: Isolation of pathogens and antimicrobial susceptibility testing, pre- and/or post-analytical cases Notes: 5080 General Bacteriology 1 includes 5081											

EQA³

	1	2	3	4	5	6	7	8	9	10	11	12
5041 Gram stain, blood culture	■			■			■			■		
Specimens: 2-3 air-dried, unfixed microbe suspensions on slides. Brief case histories also given.	Examinations: Staining and microscopy											

	1	2	3	4	5	6	7	8	9	10	11	12
5040 Gram stain, colonies	■			■			■			■		
Specimens: 3 air-dried, unfixed microbe suspensions on a slide	Examinations: Staining and microscopy											

	1	2	3	4	5	6	7	8	9	10	11	12
5596 <i>Helicobacter pylori</i>, antigen detection in faeces			■			■			■			■
Specimens: 3 lyophilized faecal samples Examinations: Antigen detection	Notes: For clinical laboratories and POCT sites											

POCT

	1	2	3	4	5	6	7	8	9	10	11	12
5597 Legionella, antigen detection in urine			■		■				■			■
Specimens: 3 simulated urine samples	Examinations: Legionella antigen detection											

POCT

	1	2	3	4	5	6	7	8	9	10	11	12
5220 Mycobacterial culture and stain			■			■			■			■
Specimens: 2 lyophilized samples and 2 fixed smears on slides	Examinations: Detection of <i>Mycobacterium tuberculosis</i> , <i>Mycobacterium tuberculosis</i> complex and atypical mycobacteria: culture, direct nucleic acid detection, acid-fast staining and microscopy.											

	1	2	3	4	5	6	7	8	9	10	11	12
5221 Mycobacterial nucleic acid detection and stain			■			■			■			■
Specimens: 2 lyophilized samples and 2 fixed smears on slides Examinations: Direct nucleic acid detection, acid-fast staining and microscopy	Notes: 5220 includes also this examination. For additional set of samples, order scheme 5222.											

NEW	5222 Mycobacteria, extra set of samples	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 2 lyophilized samples and 2 fixed smears on slides	Notes: Only in connection with scheme 5220 or 5221											
	5240 Mycobacterial stain	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 2 fixed smears on slides	Examinations: Acid-fast staining and microscopy											
	5120 <i>Neisseria gonorrhoeae</i> (Gc), culture and susceptibility testing	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 2 lyophilized mixtures of microbes. The samples intended for susceptibility testing may include both international quality control strains and susceptible or resistant clinical strains.	Examinations: Culture, identification and antimicrobial susceptibility testing. Also suitable for laboratories performing preliminary screening.											
	5180 Salmonella culture	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 2 lyophilized mixtures of bacteria Examinations: Culture	Notes: 5190 also includes 5180											
POCT	5595 <i>Streptococcus</i> group A, antigen detection	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 3 simulated pharyngeal samples Examinations: Antigen detection	Notes: For clinical laboratories and POCT sites											
	5593 <i>Streptococcus</i> group A, nucleic acid detection	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 3 simulated pharyngeal samples	Examinations: Nucleic acid detection											
POCT	5594 <i>Streptococcus</i> group B (GBS), detection	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 2 lyophilized samples. Samples include pathogens and/or normal flora.	Examinations: Culture, direct nucleic acid detection and antigen detection											
POCT	5598 <i>Streptococcus pneumoniae</i> , antigen detection in urine	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 3 simulated urine specimens	Examinations: <i>S. pneumoniae</i> antigen detection											
	5073 Surveillance culture for multidrug resistant bacteria, gramnegative rods	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 1 lyophilized mixture of microbes; including pathogens and/or normal flora	Examinations: The scheme is intended for laboratories performing screening of multidrug resistant gramnegative rods (e.g. CPE, ESBL, MDR <i>Acinetobacter</i> and <i>P. aeruginosa</i>) by culture and/or direct nucleic acid detection method											
	5071 Surveillance culture for multidrug resistant bacteria, MRSA	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 1 lyophilized mixture of microbes; including pathogens and/or normal flora	Examinations: The scheme is intended for laboratories performing screening of MRSA (methicillin resistant <i>Staphylococcus aureus</i>) by culture and/or direct nucleic acid detection method											

	1	2	3	4	5	6	7	8	9	10	11	12
5072 Surveillance culture for multidrug resistant bacteria, VRE		■				■			■		■	
Specimens: 1 lyophilized mixture of microbes; including pathogens and/or normal flora	Examinations: The scheme is intended for laboratories performing screening of VRE (vancomycin-resistant enterococci) by culture and/or direct nucleic acid detection method											

	1	2	3	4	5	6	7	8	9	10	11	12
5140 Throat streptococcal culture			■		■			■			■	
Specimens: 3 lyophilized mixtures of bacteria	Examinations: Culture and identification of group A, C and G streptococci											

	1	2	3	4	5	6	7	8	9	10	11	12
5060 Urine culture, quantitative screening			■			■			■			■
Specimens: 2 lyophilized samples and dilutor. Brief case histories also given. Pre- and/or post-analytical cases in part of the rounds.	Examinations: Culture and quantitation, pre-and/or post-analytical indicators											

EQA³

	1	2	3	4	5	6	7	8	9	10	11	12
5065 Urine culture, quantitative screening, identification and susceptibility			■			■			■			■
Specimens: 2 lyophilized samples and dilutor. Brief case histories also given. The samples intended for susceptibility testing may include both international quality control strains and susceptible or resistant clinical strains. Pre- and/or post-analytical cases in part of the rounds.	Examinations: Culture, quantitation, identification and antimicrobial susceptibility testing, pre-and/or post-analytical indicators											

EQA³

Microbiology » Mycology

	1	2	3	4	5	6	7	8	9	10	11	12
5260 Fungal culture			■		■				■		■	
Specimens: 3 lyophilized samples. Brief case histories also given. The samples include moulds, dermatophytes and yeasts.	Examinations: Culture and identification. Antimicrobial susceptibility testing of yeast strains.											

Microbiology » Parasitology

	1	2	3	4	5	6	7	8	9	10	11	12
5472 Faecal parasites multiplex, nucleic acid detection				■				■				■
Specimens: 3 lyophilized samples	Examinations: Nucleic acid detection of <i>Cryptosporidium</i> , <i>Dientamoeba fragilis</i> , <i>Entamoeba dispar</i> , <i>Entamoeba histolytica</i> , <i>Giardia lamblia</i> .											

	1	2	3	4	5	6	7	8	9	10	11	12
5430 Malaria, antigen and nucleic acid detection		■			■			■			■	
Specimens: 3 whole blood samples	Notes: For clinical laboratories and POCT sites											
Examinations: Antigen and nucleic acid detection. Target antigens: HRP2 and/or pLDH and/or aldolase.												

POCT

	1	2	3	4	5	6	7	8	9	10	11	12
5460 Parasites in blood, Giemsa stain		■			■			■			■	
Specimens: 2 methanol fixed or Giemsa stained smears. Brief case histories also given. Authentic samples.	Examinations: Screening and identification of malaria plasmodia and other blood parasites											

	1	2	3	4	5	6	7	8	9	10	11	12
5470 Parasites in blood, Giemsa stain, virtual microscopy										■		
Specimens: Virtual whole slide images of Giemsa stained smears prepared by using a scanner microscope. Brief case histories also given. Authentic samples.	Examinations: Screening and identification of malaria plasmodia and other blood parasites											

VIRTUAL

	1	2	3	4	5	6	7	8	9	10	11	12
5461 Parasites in blood, May-Grünwald-Giemsa stain		■			■			■			■	
Specimens: 2 methanol fixed or May-Grünwald-Giemsa stained smears. Brief case histories are also given. Authentic samples.	Examinations: Screening and identification of malaria plasmodia and other blood parasites											

VIRTUAL	1	2	3	4	5	6	7	8	9	10	11	12
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 also given. Authentic samples.	Examinations: Screening and identification of malaria plasmodia and other blood parasites											

	1	2	3	4	5	6	7	8	9	10	11	12
5440 Parasites in faeces		■			■			■			■	
Specimens: 3 stool samples in formalin. Brief case histories also given.	Examinations: Screening and identification of intestinal parasites (ova and parasites)											

VIRTUAL	1	2	3	4	5	6	7	8	9	10	11	12
5450 Parasites in faeces, virtual microscopy				■						■		
Specimens: Virtual whole slide images of stool samples in formalin prepared by using a scanner microscope. Brief case histories also given.	Examinations: Screening and identification of intestinal parasites (ova and parasites)											

EQA ³	1	2	3	4	5	6	7	8	9	10	11	12
5420 Toxoplasma, antibodies		■			■			■			■	
Specimens: 3 liquid human plasma samples, 0.7 mL each. Brief case histories also given. Authentic commutable samples: Each sample batch originates from a single human donor.	Examinations: Toxoplasma IgA, IgG, IgM and total antibodies, IgG avidity, post-analytical clinical interpretation											

	1	2	3	4	5	6	7	8	9	10	11	12
5473 <i>Trichomonas vaginalis</i>, antigen and nucleic acid detection				■							■	
Specimens: 3 lyophilized samples	Examinations: Detection of <i>Trichomonas vaginalis</i> antigen and nucleic acid (NAT)											

Microbiology » Virology

EQA ³	1	2	3	4	5	6	7	8	9	10	11	12
5650 Cytomegalovirus, antibodies		■			■				■			■
Specimens: 3 liquid human plasma samples, 0.5 mL each. Authentic commutable samples: each batch originates from a single human donor.	Examinations: Cytomegalovirus IgG, IgM and total antibodies, IgG avidity and post-analytical clinical interpretation											

EQA ³	1	2	3	4	5	6	7	8	9	10	11	12
5635 Dengue virus, antibodies and antigen detection					■				■			
Specimens: 3 human serum or plasma samples, ≥ 0.5 mL each. Authentic, commutable samples from a single human donor or occasionally simulated samples.	Examinations: Dengue virus IgG and IgM antibodies, Dengue virus antigen (NS1) and post-analytical clinical interpretation											

POCT	1	2	3	4	5	6	7	8	9	10	11	12
5640 EBV mononucleosis, heterophile antibodies		■			■				■			■
Specimens: 3 liquid human plasma samples, 0.5 mL each. Authentic commutable samples: each batch originates from a single human donor.	Examinations: MonAb, heterophile antibodies Notes: For clinical laboratories and POCT sites											

EQA ³	1	2	3	4	5	6	7	8	9	10	11	12
5641 EBV mononucleosis, specific antibodies		■			■				■			■
Specimens: 3 liquid human plasma samples, 1.4 mL each. Authentic commutable samples: each batch originates from a single human donor.	Examinations: EBNAAb, EBVAb, EBVAbG, EBVAbM, EBVAvi and post-analytical clinical interpretation											

	1	2	3	4	5	6	7	8	9	10	11	12	
5092 Hepatitis A, antibodies			■			■			■			■	EQA³
Specimens: 3 liquid human plasma samples, ≥ 0.6 mL each. Authentic commutable samples: each batch originates from a single human donor.		Examinations: HAVAb, HAVAbM, HAVAbG and post-analytical clinical interpretation											
5094–5096 Hepatitis B and C, serology, specimen volume 0.6 mL / 1.2 mL / 2.0 mL			■			■			■			■	EQA³
Specimens: 3 liquid human plasma samples, 0.6 / 1.2 or 2.0 mL. Authentic commutable samples: each batch originates from a single human donor.		Volume specific product codes: 5094: for 0.6 mL human plasma specimens 5095: for 1.2 mL human plasma specimens 5096: for 2.0 mL human plasma specimens											
Examinations: HBcAb, HBcAbM, HBeAb, HBeAg, HBsAb (qual), HBsAg, HCVAb, HCVAbCt and post-analytical clinical interpretation													
5093 Hepatitis B, s-antigen antibodies, quantitative	■			■			■			■			
Specimens: 2 liquid human plasma or serum samples, ≥ 0.5 mL each. Authentic commutable samples: each batch originates from a single human donor.		Examinations: HBsAb (anti-HBs), quantitative											
5679 Hepatitis B virus, nucleic acid detection (DNA)					■					■			
Specimens: 3 lyophilized or liquid plasma samples, ≥ 1.2 mL each		Notes: Delivered together with schemes 5678 and 5680											
Examinations: HBV DNA, quantitative and/or qualitative nucleic acid detection													
5678 Hepatitis C virus, nucleic acid detection (RNA)					■					■			
Specimens: 3 lyophilized or liquid plasma samples, ≥ 1.2 mL each		Notes: Delivered together with schemes 5679 and 5680											
Examinations: HCV RNA, quantitative and/or qualitative nucleic acid detection													
5682 Hepatitis E, antibodies					■							■	EQA³
Specimens: 3 liquid human plasma samples, ≥ 0,5 mL each. Authentic commutable samples: each batch originates from a single human donor.		Examinations: Hepatitis E virus IgG and IgM antibodies, post-analytical clinical interpretation.											
5555 Herpes simplex 1 and 2, antibodies		■			■			■				■	
Specimens: 3 liquid human plasma or serum samples, ≥ 0.5 mL each. Authentic commutable samples: each batch originates from a single human donor.		Examinations: HSV IgG (qualitative/quantitative), HSV IgM, HSV-1 IgG, HSV-2 IgG											
5680 HIV-1, nucleic acid detection (RNA)					■					■			
Specimens: 3 lyophilized or liquid plasma samples, ≥ 1.2 mL each		Notes: Delivered together with schemes 5678 and 5679											
Examinations: HIV-1 RNA, quantitative and/or qualitative nucleic acid detection													
5091 HIV, antibodies and antigen detection			■			■			■			■	EQA³
Specimens: 4 liquid human plasma samples, ≥ 0.7 mL each		Examinations: HIVAgAb (combo), HIVAb, HIVAg, HIVAbCt: primary and confirmatory tests, post-analytical clinical interpretation. Positive specimens may include HIV-1 or HIV-2.											

POCT	5090 HIV, antibodies, POCT	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 3–4 liquid human plasma samples, ≥ 0.5 mL each Examinations: HIVAb and HIVAgAb primary tests (POCT)			■			■			■			■
		Notes: Scheme 5091 is for clinical laboratories											
EQA ³	5086 Human papillomavirus, nucleic acid detection	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: Simulated samples Examinations: High-risk human papillomavirus NAT, hrHPVNAT				■							■	
		Notes: Suitable for nucleic acid methods used in cervical cancer screening											
EQA ³	5089 Human T-cell lymphotropic virus, antibodies	1	2	3	4	5	6	7	8	9	10	11	12
	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, post-analytical clinical interpretation. Positive samples may include HTLV-1 or HTLV-2.											
POCT	5670 Influenza virus A+B and RS virus, nucleic acid detection	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 5 artificial samples, 0,5 mL each Examinations: InfANAT, InfBNAT, RSVNAT	■										■	
		Notes: See also scheme 5300 Respiratory infections multiplex, nucleic acid detection											
POCT	5671 Influenza virus A+B, antigen detection	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 3 artificial samples, 0,5 mL each Examinations: InfAAg, InfBAg	■										■	
		Notes: For clinical laboratories and POCT sites											
EQA ³	5668 Measles virus, antibodies	1	2	3	4	5	6	7	8	9	10	11	12
	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 post-analytical clinical interpretation											
EQA ³	5669 Mumps virus, antibodies	1	2	3	4	5	6	7	8	9	10	11	12
	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 post-analytical clinical interpretation											
POCT	5675 Norovirus, nucleic acid detection	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 3 simulated samples, ≥ 0,5 mL each			■			■			■			■
		Examinations: Norovirus NAT, genogroups GI and GII											
EQA ³	5660 Parvovirus B19, antibodies	1	2	3	4	5	6	7	8	9	10	11	12
	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 post-analytical clinical interpretation											
POCT	5560 Puumala virus, antibodies	1	2	3	4	5	6	7	8	9	10	11	12
	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 post-analytical clinical interpretation Notes: For clinical laboratories and POCT sites											
POCT	5098 Rotavirus and adenovirus, detection	1	2	3	4	5	6	7	8	9	10	11	12
	Specimens: 3 simulated samples, ≥ 0.5 mL each			■			■			■			■
		Examinations: Rotavirus and adenovirus antigen and nucleic acid detection											

	1	2	3	4	5	6	7	8	9	10	11	12	
5672 RS virus, antigen detection	■										■		POCT
Specimens: 3 artificial samples, 0.5 mL each Examinations: RSVAg	Notes: For clinical laboratories and POCT sites												

	1	2	3	4	5	6	7	8	9	10	11	12	
5667 Rubella virus, antibodies	■			■			■			■			EQA ³
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 post-analytical clinical interpretation												

	1	2	3	4	5	6	7	8	9	10	11	12	
5099 Tick-borne encephalitis virus, antibodies		■			■			■			■		EQA ³ POCT
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 post-analytical clinical interpretation Notes: For clinical laboratories and POCT sites												

	1	2	3	4	5	6	7	8	9	10	11	12	
5665 Varicella-zoster virus, antibodies		■			■			■			■		EQA ³
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 post-analytical clinical interpretation												

EQA schemes including **Antimicrobial Susceptibility Testing**

Bacteriology and mycology

- | | |
|--|---|
| 5100 Blood culture | 5073 Surveillance culture for multidrug resistant bacteria, gramnegative rods |
| 5260 Fungal culture | 5071 Surveillance culture for multidrug resistant bacteria, MRSA |
| 5080 General Bacteriology 1 | 5072 Surveillance culture for multidrug resistant bacteria, VRE |
| 5081 General Bacteriology 2 | 5065 Urine culture, quantitative screening, identification and susceptibility |
| 5120 <i>Neisseria gonorrhoeae</i> (Gc), culture and susceptibility testing | |

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

Multiplex

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

Parasitology

- 5472 Faecal parasites multiplex, nucleic acid detection
- 5430 Malaria, antigen and nucleic acid detection
- 5473 *Trichomonas vaginalis*, antigen and 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
- 5098 Rotavirus and adenovirus, detection

Multiplex

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

	1	2	3	4	5	6	7	8	9	10	11	12
5191 Faecal bacterial pathogens multiplex, nucleic acid detection				■		■				■		■
Specimens: 2 lyophilized mixtures of bacteria												
Examinations: Direct nucleic acid detection. Pathogens included are <i>Aeromonas</i> , <i>Campylobacter</i> , <i>Plesiomonas</i> , <i>Salmonella</i> , <i>Shigella</i> and <i>Yersinia</i> .												
	Notes: 5190 includes also this examination. Pathogens are covered during annual scheme: participation to all rounds required.											
5472 Faecal parasites multiplex, nucleic acid detection				■				■				■
Specimens: 3 lyophilized samples												
	Examinations: Nucleic acid detection of <i>Cryptosporidium</i> , <i>Dientamoeba fragilis</i> , <i>Entamoeba dispar</i> , <i>Entamoeba histolytica</i> , <i>Giardia lamblia</i> .											
5303 Meningitis-encephalitis multiplex, nucleic acid detection				■					■			
Specimens: 2-4 simulated samples												
	Examinations: Direct multiplex nucleic acid detection. Most common bacterial, viral and fungal agents causing meningitis and encephalitis are included. A detailed list will be published later.											
5300 Respiratory infections multiplex, nucleic acid detection		■			■				■			■
Specimens: 4 simulated samples, ≥ 0.5mL each												
Examinations: Direct multiplex nucleic acid detection. Pathogens included are <i>C. pneumoniae</i> , <i>M. pneumoniae</i> , <i>B. pertussis</i> , <i>B. paraptussis</i> , 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 <i>C. trachomatis</i> , <i>M. genitalium</i> , <i>N. gonorrhoeae</i> , <i>T. vaginalis</i> and <i>U. urealyticum</i> .												
	Notes: Pathogens are covered during annual scheme: participation to all rounds required											

Note also our minipanel

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

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

5098 Rotavirus and adenovirus, detection

Pathology

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

	1	2	3	4	5	6	7	8	9	10	11	12	
6700 Gynaecological cytology (smear), virtual microscopy			■										VIRTUAL
<p>Specimens: Virtual images of at least 5 Papanicolaou stained slides of conventional pap smear samples. The samples are selected from routine cytological material. Diagnostics of cellular atypias in samples taken from</p> <p>gynaecological loci is assessed. Brief case histories and instructions are provided.</p> <p>Examinations: Observations and diagnoses</p>													
6701 Gynaecological cytology (liquid based), virtual microscopy					■								VIRTUAL
<p>Specimens: Virtual images of at least 5 Papanicolaou stained slides of liquid based cytology (LBC) samples (ThinPrep). Diagnostics of cellular atypias in samples taken from gynaecological loci is assessed. Brief case histories and</p> <p>instructions are provided.</p> <p>Examinations: Observations and diagnoses</p>													
6702 Non-gynaecological cytology, virtual microscopy										■			VIRTUAL
<p>Specimens: Virtual images of Papanicolaou stained slides of non-gynaecological cytosentrifuge (CCF) or smear preparations or May-Grünwald-Giemsa stained smears or imprint preparations. Images of at least 5 cases from representative loci. Brief case histories and instructions are provided.</p> <p>Examinations: Observations and diagnoses</p>													
6542 Histopathology, virtual microscopy			■								■		VIRTUAL
<p>Topics in 2019: Mar: Skin pathology, Oct: Endometrial and ovarian pathology</p> <p>Specimens: Virtual images of at least 5 slides of miscellaneous tissue. Brief case histories and instructions are provided.</p> <p>Examinations: Observations and diagnoses</p> <p>Notes: Topics may vary annually</p>													

Pathology » Technology

	1	2	3	4	5	6	7	8	9	10	11	12	
6543 Histological staining techniques				■						■			
<p>Topics in 2019: Apr: Kongo, PAS, E-PAS (E=enzyme), Oct: HE, Leder</p> <p>Specimens: Unstained paraffin sections or smears</p> <p>Examinations: Staining of the slides. A set of stained slides is returned to Labquality for evaluation by an expert board.</p> <p>Notes: Stains vary annually</p>													
6600, 6600S Immunohistochemical staining methods			■						■		■		
<p>Topics in 2019: Mar: Lymphoma: CD23, BCL2, BCL6, CD10, kappa/lambda* (*primarily cish, and if ish is not in use then ihc, also double stain accepted)</p> <p>Sep: Breast cancer: ER, PR, Ki-67, HER2, CK7</p> <p>Nov: Unknown tumour (brain): IDH1, ATRX, p53, GFAP, CD34</p> <p>Specimens: Unstained paraffin embedded tissue from different tissue blocks or from one multiblock</p> <p>Examinations: Staining of the slides. A set of stained slides is returned to Labquality for evaluation by an expert board.</p> <p>Notes: Changes in frequency, antibodies and sample type. Three rounds with distinct topics available annually. Multiblock samples are now included. Participants can select 3 or 5 antibodies of their choice in each round (6600S for 3 antibodies, 6600 for 5).</p>													

Preanalytics

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

	1	2	3	4	5	6	7	8	9	10	11	12
8817 HIL-index [DEKS]			■							■		
Specimens: 2 serum samples, 2 mL each	Examinations: Selected components are asked to be analysed. One of the samples is haemolysed, icteric or lipemic.											

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

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

POCT		1	2	3	4	5	6	7	8	9	10	11	12
	7801 Preanalytics, urine and blood sample collection			■									
	Specimens: 3 cases with preanalytical error(s) Examinations: Participants are asked to find preanalytical error(s) in the cases	Notes: The scheme is intended for personnel performing blood and urine sample collection. Scheme is carried out online.											

POCT		1	2	3	4	5	6	7	8	9	10	11	12
	7804 Preanalytics, POCT in chemistry										■		
	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.											

Others

Others » Andrology

	1	2	3	4	5	6	7	8	9	10	11	12
6400 Semen analysis										■		
Specimens: 3–6 digital videos and/or digital images		Notes: Scheme is carried out online										
Examinations: Concentration, morphology and motility												

Others » Clinical physiology

	1	2	3	4	5	6	7	8	9	10	11	12
7130 ECG, interpretation				■						■		
Specimens: 3 digital ECG registrations (images)		Notes: Scheme is designed for nurses and general practitioners as well as for personnel in POCT units. Participants are evaluated on their responses on technical quality, findings or both if given.										
Examinations: Technical quality and findings												

EOA³

Others » Genetics

	1	2	3	4	5	6	7	8	9	10	11	12
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 tetrahydrofolate reductase (MTHFR) c.677C>T; c.1298A>C										

Others » Laboratory instruments

	1	2	3	4	5	6	7	8	9	10	11	12
8814 ELISA reader photometry control [DEKS]												
		Circulation starts in March										
Specimens: An ELISA-plate with built-in gray glass filters		Notes: Absorbance traceable to NIST Control of the absorbance scale of ELISA readers										
Examinations: Control for the absorbance scale in ELISA reader												

Others » Veterinary EQA

	1	2	3	4	5	6	7	8	9	10	11	12
8610 Veterinary basic blood count										■		
Specimens: 2 animal blood cell suspensions. Species vary from round to round.		Examinations: Most common examinations in use										

	1	2	3	4	5	6	7	8	9	10	11	12
8530 Veterinary basic chemistry											■	
Specimens: 2 animal serum samples. Species vary from round to round.		Examinations: Most common examinations in use										



Labquality - EQAS

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.



Available globally
No shipping costs
No stability or homogeneity issues

Digital EQA programs

Anatomic pathology

Histopathology and cytology digital schemes use virtual microscopy technology for diagnostics (digital pathology).

- **Non-gynaecological cytology (VIRTUAL)**
- **Gynaecological cytology, liquid based (VIRTUAL)**
- **Gynaecological cytology, smear (VIRTUAL)**
- **Histopathology (VIRTUAL)**

Clinical chemistry and haematology

Visual evaluation of cell morphology or motility of sperm cells using digital images, digital video and/or virtual microscopy technology as sample material. Several cases are provided in each round.

- **Column agglutination methods: grading of reactions and patient cases**
- **Down's syndrome screening, data analysis (LifeCycle, Prisca)**
- **Leucocyte differential count and evaluation of blood cell morphology (VIRTUAL)**
- **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**

Clinical immunology and clinical microbiology

Interpretation and evaluation of IFA and Gram stain are made from high quality digital images.

- **Autoimmune diagnostics, IFA interpretation**
- **Bacteriological staining, direct, evaluation**

Parasites in blood and parasites in faeces digital schemes use virtual microscopy technology.

- **Parasites in blood (VIRTUAL)**
- **Parasites in faeces (VIRTUAL)**

Preanalytics

Preanalytical phase of laboratory investigations is evaluated from written cases or digital images on Labquality's website. Participants are asked to evaluate possible preanalytical errors from the cases.

- **Preanalytics, clinical chemistry**
- **Preanalytics, microbiology**
- **Preanalytics, urine and blood sample collection**
- **Preanalytics, POCT in chemistry**

Virtual microscopy demo

Please use our virtual microscopy demo site (www.labquality.com) to test that your internet connection and internet browser are compatible with the Aiforia cloud webmicroscope.

Alphabetical scheme directory, A – F

A

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

B

Bacteriological staining, direct, **22**
Basic blood count, one specimen, **15**
Basic blood count, two specimens, **15**
Basic chemistry, POCT analyzers, **6**
Bile acids, **10**
Bilirubin, conjugated, **10**
Bilirubin, neonatal, **10**
Blood culture, **22**
Blood culture, screening, **22**
Bordetella pertussis, antibodies, **21**
Borrelia burgdorferi, antibodies, European origin, **21**

C

Cerebrospinal fluid, culture, **22**
Chlamydia pneumoniae, antibodies, **21**
Chlamydia trachomatis and *Neisseria gonorrhoeae* nucleic acid detection, **22**
Chromogranin A [NKK], **10**
Clostridium difficile, culture and toxin detection, **22**
Clostridium difficile, nucleic acid detection, **22**
Coeliac disease, antibodies, **19**
Column agglutination methods: grading of reactions and patient cases, **15**
C-reactive protein (CRP) for analyzers, **12**
C-reactive protein (CRP), POCT, **12**
CRP, low concentration, **7**
Cystatin C [DEKS], **11**
Cytomegalovirus, antibodies, **26**

D

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

E

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

F

Faecal bacterial pathogens multiplex, nucleic acid detection, **22, 30**
Faecal calprotectin, **12**
Faecal culture, **23**
Faecal occult blood, **7**
Faecal parasites multiplex, nucleic acid detection, **25, 30**
Folate, erythrocytes, **11**
Fungal culture, **25**

Alphabetical scheme directory, G – N

G

General Bacteriology 1 (aerobes and anaerobes), **23**
General Bacteriology 2 (aerobes), **23**
Glucose meters, **8**
Gram stain, blood culture, **23**
Gram stain, colonies, **23**
Gynaecological cytology (liquid based), virtual microscopy, **31**
Gynaecological cytology (smear), virtual microscopy, **31**

H

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

I

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

L

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

M

Malaria, antigen and nucleic acid detection, **16, 25**
Measles virus, antibodies, **28**
Meningitis-encephalitis multiplex, nucleic acid detection, **30**
Methyl malonate [DEKS], **11**
Mumps virus, antibodies, **28**
Mycobacterial culture and stain, **23**
Mycobacterial nucleic acid detection and stain, **23**
Mycobacterial stain, **24**
Mycoplasma pneumoniae, antibodies, **21**
Myocardial markers, **7**
Myocardial markers and CRP, low concentration, **7**

N

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

Alphabetical scheme directory, P–W

P

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

R

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

S

Salmonella, culture, **24**
Semen analysis, **33**
Serum A, lyophilized samples, **9**
Serum B and C (2-level), **9**
Sexually transmitted diseases multiplex, nucleic acid detection, **30**
Special coagulation, **18**
Sputum cells, **11**
Streptococcus group A, antigen detection, **24**
Streptococcus group A, nucleic acid detection, **24**
Streptococcus group B (GBS), detection, **24**
Streptococcus pneumoniae, antigen detection in urine, **24**
Surveillance culture for multidrug resistant bacteria, gramnegative rods, **24**
Surveillance culture for multidrug resistant bacteria, MRSA, **24**
Surveillance culture for multidrug resistant bacteria, VRE, **25**
Synovial fluid crystals, **11**
Syphilis serology, **21**

T

Therapeutic drugs, **11**
Throat streptococcal culture, **25**
Thyroid gland antibodies, **20**
Tick-borne encephalitis virus, antibodies, **29**
Toxoplasma, antibodies, **26**
Trichomonas vaginalis, antigen and nucleic acid detection, **26**
Troponin I and Troponin T, detection, POCT, **8**
Tryptase [UK NEQAS], **6**
TSH receptor antibodies, **20**
Tumour markers, **13**

U

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

V

Varicella-zoster virus, antibodies, **29**
Veterinary basic blood count, **33**
Veterinary basic chemistry, **33**
Vitamin A, E and D metabolites, **11**

W

White blood cell count, HemoCue, POCT, **17**
White blood cell differential count: HemoCue, POCT, **17**

LABQUALITY DAYS

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International Congress on Quality in Laboratory Medicine

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