

Part B
September 2009

External Quality Assessment Services 2010—2011

- **Andrology**
- **Genetics**
- **Haematology**



Labquality is EQA Organizer

Labquality provides External Quality Assessment (EQA) programmes for clinical laboratories and point-of-care tests performed in social and health care units.

Labquality is an independent and impartial organization. It was founded in 1971 by the Finnish Society of Clinical Chemistry, Finnish Red Cross, Hospital League, central hospitals and some professional associations.

Office

Labquality's office is in Helsinki, Finland. Labquality has 23 full-time employees, and a hundred experts are involved running the quality assessment programmes. The scheme experts for each scheme are indicated in survey reports. The working groups consist of various specialists.

Quality system

Labquality's quality system has been certified to ISO 9001:2008 standard.



Participating laboratories

Currently, about 4000 laboratories in 42 countries participate in Labquality's EQA schemes. Laboratories outside Finland are served by 17 distributors in different countries.

International cooperation

Labquality is a member of the European Committee for External Quality Assessment Programmes in Laboratory Medicine (EQALM) and cooperates with other EQA organizers in Europe.

Pictures by

Labquality: A2, A8, A9, B3, B4, B7, C3, C5, C6, C12, C14, D3, D10 and E3, Markku Koskela: D4, Taru Meri: D7, Olli Salo: front covers (A-F), A7, B5 and C4, ScandinavianStockPhoto: A3, A5, B2, C2, D2, D4 and E2.

Labquality's Programme is made up of six parts

- A General information
- B Andrology, Genetics and Haematology**
- C Clinical Chemistry and Instruments
- D Immunology and Microbiology (bacterial serology, bacteriology, mycology, parasitology and virology).
- E Pathology
- F Point-of-care

Delivery months are listed in the Order Form (on the Internet and paper).


Prices are in the separate Price List.



Andrology

6400	Semen analysis
Delivery	1 time/year
Specimens	2—3 ejaculates for concentration evaluation, slides or pictures for morphological evaluation, 1 DVD to evaluate semen motility
Examinations	Concentration, morphology and motility

Genetics

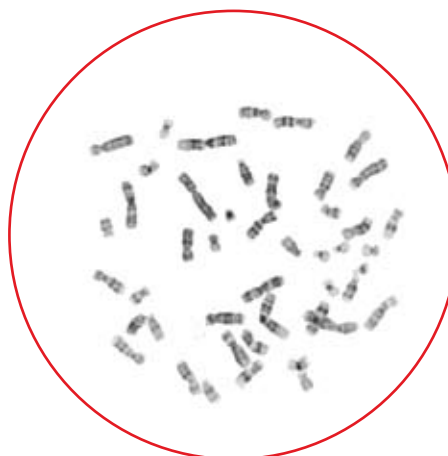
 Scheme that will be arranged in cooperation with another EQA organizer

 [EQUALIS]

3865	DNA analysis
Delivery	Spring and autumn (Participation is not possible for less than 2 times)
Specimens	4 whole blood or extracted DNA specimens/genotype
Examinations	A participant can choose the genes to be analysed as follows: DNA(B)-Apolipoprotein E (Apo E), genotype, DNA(B)-CYP2C9, genotype, DNA(B)-CYP2C19, genotype, DNA(B)-CYP2D6, genotype, DNA(B)-Factor 2 (F2) g.20210 G>A, DNA(B)-Factor 5 (F5) c.1691 G>A, DNA(B)-Hemochromatosis (HFE) c.187 C>G, DNA(B)-Hemochromatosis (HFE) c.845 G>A, DNA(B)-Lactase gene (LCT) g.-13910 C>T, DNA(B)-Methyltetrahydrofolate reductase (MTHFR)c.677 C>T, DNA(B)-Methyltetrahydrofolate reductase (MTHFR)c.1298 A>C

3840	Molecular cytogenetics
Delivery	1 time/year
Specimens	Lymphoid cell suspension in fixative
Examinations	Fluorescence-in-situ-hybridization (FISH) with locus- or chromosome-specific probes

3830	Standard cytogenetics Only via the Internet
Delivery	1 time/year
Specimens	Series of metaphase images of cultured, dividing lymphocytes from peripheral blood of two different individuals. The images can be exported as a .jpg file, which is a suitable file format for most of the imaging systems for karyotyping. The survey specimens are presented at Labquality's website. A participant opens the Participant services using the individual client code and password.
Examinations	Standard cytogenetic analyses in both cases. The assessment will be focused on the karyotype, report and interpretation of the results. The statement should include the case number, type of sample, the karyotype description in ISCN format, and a written geneticist's report describing the aberration(s) and its clinical significance.



Haematology

BLOOD TRANSFUSION SEROLOGICAL TESTS

4420	ABO and Rh grouping
Deliveries	3 times/year
Specimens	2 cases
Examinations	Reaction strengths and interpretation

4460	Antibody screening and compatibility testing
Deliveries	3 times/year
Specimens	2 cases
Examinations	Antibody screening and compatibility: reaction strengths and interpretation

4440	Antiglobulin test, direct
Deliveries	3 times/year
Specimens	2 cases
Examinations	Reaction strengths and interpretation

Haematology

CELL COUNT AND CELL MORPHOLOGY

	e-scheme
4100	Basic blood count, one specimen
4110	Basic blood count, two specimens
Deliveries	12 times (monthly)
Specimens	1 blood cell suspension or 2 different blood cell suspensions
Examinations	Hb, HCT, MCH, MCHC, MCV, PLT, RBC, RDW (red cell distribution width), WBC, cumulative patient means of MCH, MCHC and MCV
Results	Results from two analysers are included in the price. A participant sends the results via Labquality's website. The report releasing date will be announced on the data input site.

4260	Bone marrow morphology Only via Internet. Virtual microscopy also available*.
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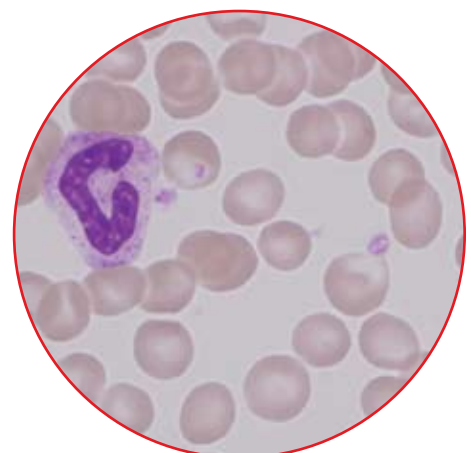
Delivery	1 time/year
Specimens	Digital and virtual images of stained bone marrow and blood smears; brief case histories
Examinations	Statement
Further details	Participants will be given instructions and access to website.
*Note	The link for testing the virtual connection is at Labquality's website.

4180	Leucocyte differential count and evaluation of blood cell morphology Please note that there is a separate scheme for Malaria (5460 and 5461).
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Deliveries	2 times/year
Specimens	2 - 3 stained (MGG) or unstained blood smears
Further details	The diagnoses will be published 5 days after the closing date on Labquality's website. The final report also includes pictures of the expected findings.

5460	Parasites in blood, Giemsa stain
5461	Parasites in blood, May-Grünwald-Giemsa stain

Deliveries	4 times/year
Specimens	2 Giemsa stained smears or 2 MGG stained smears or both of them; brief case histories will be given
Examinations	Screening and identification of malaria plasmodia and other blood parasites



Leucocyte differential count, 3-part, automated:

4200	ABX, Advia, Cell-Dyn, Coulter, Nihon Kohden
4201	Sysmex
Deliveries	2 times/year
Specimens	1 blood cell suspension à 1—2 mL
Examinations	Absolute numbers of leucocytes, lymphocytes, mononuclear cells and granulocytes
Further details	Results from two analysers are included in the price.

Leucocyte differential count, 5-part, automated

4234	ABX Pentra
4230	Bayer
4231	Cell-Dyn
4232	Coulter
4235	Coulter ACT5-diff
4233	Sysmex
Deliveries	2 times/year
Specimens	2 blood cell suspension à 1—2 mL
Examinations	Leucocytes, basophils, eosinophils, granulocytes, lymphocytes and monocytes
Further details	Results from two analysers are included in the price.



Only via internet Co [NOKLUS]

8701	Post-analytical automated haematology
Delivery	1 time/year
Specimens	One haematological plot, a short case history and a questionnaire available on the Internet.
Further details	Each laboratory is allowed to participate only with one analyser. The scheme is not suitable for Beckman Coulter analysers or any leucocyte 3-part analysers.

The scheme is developed by NOKLUS and conducted only via the Internet using a specific username and password. The participants will interpret results and a plot from their main haematology instrument and a short case history will be given. The questionnaire asks e.g. if you would have trusted the results given by your instrument on the requested parameters, whether you would have reported additional parameters (not requested), whether you would have validated the results (and how) if other constituents had been requested, and how the results are reported. The participants will receive a report where they can compare their own responses to the questions from the case history with the response from other laboratories. Earlier surveys conducted in Norway have shown that there are large differences between laboratories concerning what results they report and what actions they take before reporting them.

Reticulocyte count, automated

4150	Bayer
4151	Cell Dyn 3200, 4000
4155	Cell Dyn 3500, 3700
4152	Coulter Gens, LH750
4153	Sysmex
Deliveries	2 times/year
Specimens	2 stabilized red blood cell suspensions à 1—2 mL

4140 Reticulocyte count, manual methods

Deliveries	2 times/year
Specimens	1 stabilized red blood cell suspension à 2 mL

Haematology

COAGULATION

4330 **e-scheme** **Activated partial thrombo- plastin time and Fibrinogen**

Deliveries	4 times/year
Specimens	2 lyophilized plasmas à 0.5—1 mL
Examinations	Coagulation time in seconds, fibrinogen
Results	A participant enters the results via Labquality's website. The report releasing date will be announced on the data input site.

4388 **e-scheme** **D-dimer**

Deliveries	4 times/year
Specimens	2 serum specimens à ~1 mL
Results	A participant enters the results via Labquality's website. The report releasing date will be announced on the data input site.

4387 **e-scheme** **LMW-Heparin/antiFXa**

Deliveries	4 times/year
Specimens	2 lyophilized plasmas à 0.5—1 mL
Results	A participant enters the results via Labquality's website. The report releasing date will be announced on the data input site.

4300 **e-scheme** **Prothrombin time** **(Thromboplastin time)**

Deliveries	4 times/year
Specimens	2 lyophilized plasmas à 0.5—1.5 mL
Examinations	Coagulation in INR units
Results	A participant enters the results via Labquality's website. The report releasing date will be announced on the data input site.

4386 **e-scheme** **Special coagulation**

Deliveries	4 times/year
Specimens	2 lyophilized plasmas à 0.5—1 ml
Examinations	Antithrombin, Factor VIII, Protein C, Protein S,
Results	A participant enters the results via Labquality's website. The report releasing date will be announced on the data input site.

How to return results to Labquality?

ELECTRONIC TRANSMISSION OF THE RESULTS

MS Excel result sheet for general clinical chemistry

General clinical chemistry results (serum A, Hb, CRP, bilirubin and Daytrol) can be sent via email by using an Excel result form. Excel result forms are available on the Internet (participant services). Email addresses to be used are included in the result forms. Labquality cannot guarantee statistical evaluation of the results if a result form is sent to any other email address of Labquality.

Internet schemes

Labquality has several Internet schemes. These schemes are labelled as "Only via Internet" in the Programme. For these schemes there are Internet-based result forms on the Internet (participant services). The number of Internet schemes will increase in coming years. Participants will be informed about new Internet schemes in survey letters.

E-schemes

There are 20 e-schemes available in Labquality's Programme. These schemes are labelled as "e-scheme" in the service catalogue. Result entry and report viewing are available only via the Internet in e-schemes. The result forms for e-schemes are available on the Internet (participant services). Please find the instructions for e-schemes on Labquality's website.

MANUAL TRANSMISSION OF THE RESULT FORM

By mail

Printed result forms can be mailed to Labquality. Please send the mail early enough to be received in Labquality before the deadline of the survey. Labquality's mailing address is included in the survey letter.

By fax

Printed result forms can be faxed to Labquality. Labquality's fax automatically sends a notification of successful transmission. Please always include your fax number in every transmission. Labquality's fax number is included in the survey letter. Please always ensure that the result form is not upside down and all necessary information is entered in the result form.

Scanned result form as an email attachment

It is also possible to scan the result form and send it as an email attachment to Labquality. The email address is info@labquality.fi. Labquality cannot guarantee statistical evaluation of the results if a result form is sent to any other email address of Labquality.

Remember to fill in your client code

One example of result form



Laboratory name	Client code
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Streptococcus group A antigen detection 1, 2009

T:nrc 5595

RESULT FORM

SPECIMEN	METHOD	RESULT
001		
002		

Results:
1 = Negative
3 = Weakly positive
4 = Positive

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