Proficiency testing provider no. 7004 accredited by CAI in accordance with ISO/IEC 17043

SEKK s.r.o., EQA Division

EQA Plan 2024

Methodology of providing and offer of the programmes of external quality assessment (EQA)

www.sekk.cz

Place of business	*EQA Division*	*Economics Department*
SEKK spol. s r.o. Arnošta z Pardubic 2605 530 02 Pardubice Czech Republic	EQA manager: phone: +420 466 530 230 e-mail: sekk@sekk.cz info@sekk.cz	Economist: phone: +420 466 500 165 e-mail: ekonom@sekk.cz

This document has been prepared with the maximum care and it is published on www.sekk.cz.
If a modification will be made, a new version will be published.

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Ing. MAREK BUDINA
Digitally signed by Ing. MAREK BUDINA
Date: 2024.07.11 13:05:15 +02'00'

Dear friends!

In this document, you will find comprehensive information about the methodology of providing EQA, about particular EQA programmes and rounds, the time schedule of their realisation, prices, tests included, and so on.

Scientific supervision is guaranteed by specialists (supervisors) nominated by professional societies, and organisation is completely managed by SEKK.
SEKK is a regular member of the *European committee for External Quality Assurance Programmes in Laboratory Medicine* (EQALM; www.eqalm.org) and continues and extends cooperation with other EQA providers. That is why this plan contains some programmes provided either directly by foreign providers or in close cooperation with them.

If you aim to participate in the EQA system, read this document carefully as the first step. Then start the web application Cibule (see www.sekk.cz) and:

- Log in and place an order in the menu ***Orders – Services***.
- If you forget your login details, select ***Forgotten password*** in the menu or contact us.
- If you do not have an account in the Cibule app yet, select ***New participant*** in the menu and send us your request.

We look forward to cooperating with you.

Marek Budina
SEKK

You can send us your 2024 order at any time.

However, keep in mind that the capacity of some rounds is limited.

We therefore recommend submitting your order as soon as possible (preferably before 30.11.2023).
The application deadline of the programmes **CRC** and **PDL1** is specified in their time schedules.

Formal rules:	Dates are written in the format: `day.month.year` Comma is used as a decimal separator.

The most important news of 2024

- A new programme **Cytochemical Staining in Haematology** (CSH, page 23) was included in the EQA Plan, which includes 2 stains – myeloperoxidase and iron.
- The programmes Reticulocytes (analyser) (RC) and Reticulocytes (microscope) (RET) were merged into one programme **Reticulocytes** (**RET**, page 26) and, in addition to the number of reticulocytes measured by the machine and counted microscopically, other tests were newly included in this programme. The samples sent are full blood, which must be processed immediately after the delivery.
- In the programme **Detection of Monoclonal Components** (**GP**, page 29) you can now order plasma samples and/or urine samples (as separate sets of the samples) according to your needs.
- The time schedule of most EQA rounds has been adjusted so that we send out samples on Monday or Tuesday and the deadline is the following week on Friday. There are only a few exceptions to this rule, e.g. for programs where we send out samples with very short stability (fresh blood), the processing time is shorter.
- We **strongly remind you** that it is absolutely necessary to take appropriate measures to ensure that the e-mails sent by SEKK (contain important information, such as information on the processing of your requests or accounting documents) **are not blocked on your site** - for more details see the ***Communication*** section in the chapter *Relations with participants* on page 4.

CONTENTS

1. Methodology of providing EQA

EQA is among those processes which aim to ensure that laboratory examinations provide accurate and credible results that are comparable at least within the state. EQA represents part of the process of education and teaching health care workers and checking their necessary knowledge and skills.

As an accredited EQA provider, SEKK performs this activity in accordance with the requirements of the ISO 17043 standard.

EQA is organised in the form of rounds. Each EQA round consists of sending unknown samples to participants. Participants are required to perform certain measurements, examinations or tests on these samples and send the results together with other additional information to SEKK. Some rounds can be supplemented by other tasks relating to the pre- or post- analytical phase, the interpretation of results, etc.

We send the parcels containing control materials and documentation to all participating laboratories by means of courier services.

Participants submit their results to SEKK electronically (via the web application Cibule).

The deadline is defined for each round as the date by which participants must submit their results.

SEKK processes the collected results and issues final reports on the round to all participants. From these final reports participants will learn how they have "turned out", meaning whether their test results were evaluated as successful.

This document (the EQA Plan) is available for all potential EQA participants so that they can choose which rounds they want to participate in.

The EQA Plan lists all the programmes available for the given year, including the measured/tested parameters (i.e. a list of the tests), the time schedule for the realisation of each round of the programme, prices, etc.

Participants plan and order their participation in EQA for the whole calendar year based on the data in the EQA Plan.

In exceptional cases, new programmes and/or rounds can be included in the EQA Plan during the year (for example, after the completion of studies, in case of high interest in some programme, etc. – in such a case, the EQA Plan is updated and the participants are informed by e-mail).

SEKK shall not reimburse participants for the costs of any analyses, measurements or other activities related to participation in EQA.

Accreditation of the provider

The EQA division of SEKK is the accredited provider of proficiency testing schemes in the field of laboratory medicine (EQA for short). The accreditation certificate was issued by the Czech Accreditation Institute, o.p.s. (www.cia.cz), based on assessment of compliance with accreditation criteria according to ČSN EN ISO/IEC 17043:2010. The copy of the Certificate of accreditation (in Czech, Slovak and English), including its appendix, can be found on www.sekk.cz in the section *About us* (these documents fully describe the subject and scope of the accreditation). Not all EQA programmes were included in the accreditation process. If an EQA programme is accredited, this is stated in the EQA Plan.

The EQA division of SEKK, which is an EQA provider, is abbreviated herein as *SEKK* or *company SEKK*.

1.1. Terminology

Basic terms in alphabetical order:

Additional evaluation (V+)

The additional evaluation (denoted as V+) is a service that saves the participant's costs.

By default, an EQA participant can report only one set of results, i.e. one result for each test and sample, unless a different rule is explicitly specified for a particular EQA programme.

V+ is a service which provides the participant with the opportunity to order an additional evaluation of additional results for a particular round (on condition that the results are obtained with different measurements systems or using different procedures at the participant's workplace).

This service is not available for all EQA programmes (see description of each programme). If the participant orders the V+ for a round, they automatically receives additional participant codes (so-called derived codes, such as A001+1 and A001+2) in addition to his own code (the so-called mother code, for example A001) to enter additional sets of results. The number of derived codes which the participant has is determined by the number of V+ he ordered. V+ can be ordered **a maximum of 9 times** for a specific round. The participant must enter the results of the mother and derived codes in the web application Cibule.

Subsequently, the participant receives a separate evaluation of each set of results (for all of above mentioned codes).

In programmes where V+ is not available and the participant performs one test on several measuring systems and wants to obtain EQA for all of these systems, they has to join the EQA multiple times under the separate codes (as many codes as there are systems).

A description of V+ including examples can be found on the web – see the relevant link in the chapter *Additional information sources* (page 37).

Cibule

Cibule is a web application designed for communication with EQA participants. Cibule is not an e-shop and only active EQA participants have access to the Cibule app. Brief information about this application can be found in the chapter *Web application Cibule* (page 38).

Customer

This is the organization (economical subject) of which the participant is a part. One customer can have multiple participants in the EQA system (e.g. a hospital has a number of laboratories and each of them is an EQA participant).

EQA (external quality assessment)

EQA is proficiency testing (evaluation of participant performance against pre-established criteria by means of interlaboratory comparisons) in the field of laboratory medicine.

EQA programme (scheme)

The EQA programme defines how EQA is performed in a specific area – a description of the set of performed tests, the number of samples, the method of evaluating the results, the number of rounds per year, the form of the final reports, etc. The EQA programme is realised by EQA rounds.

EQA provider

The provider is SEKK, EQA division. SEKK is responsible for all tasks in the preparation and implementation of EQA programmes, and also for the work of its subcontractors.

EQA round (survey)

This term refers to one run of proficiency testing, which consists of these basic steps:

- **Distribution of samples to all participating laboratories**
  see chapter *Delivery of parcels to participants* (page 6)
- **Sample processing by participants and the sending of results**
  see chapter *Results from participants* (page 6)
- **Evaluation of participants' results**

see chapter *Evaluation of participant's performance* (page 6)

- **Sending of final reports to participants**
  see chapter *Reports for participants* (page 7)

General instructions

This document forms part of the documentation of the round. It contains instructions for the participant on how to carry out the given round (the storage and processing of the samples, safety instructions, testing instructions, contact information, etc.)

Key basic information (KBI)

KBI is mandatory information that the participant has to send to SEKK along with the results of the EQA round. If the participant does not provide this information, the results of the test for which KBI is missing are not processed.

Participants who enter their results in the web application Cibule enjoy many advantages. This application automatically rejects the results where KBI is missing, or alerts the user to situations that could lead to the rejection of the results.

A complete description of KBI, including examples, can be found on the website – see the relevant link in the chapter *Additional information sources* (page 37).

Participant

A participant is a specific workplace (laboratory) which performs EQA tests, sends results and receives an evaluation. Individual participants are uniquely identified in the EQA system by the participant code assigned by SEKK. The identification of the participant in some documents (Confirmation of attendance, Certificates, and Result sheet) includes also the name and address of the organisation and the name of responsible person in addition to the participant's code.

Result form

This document forms part of the documentation of the round and contains brief instructions on how to enter the results in the Cibule application and also the access data for the first login.

Set of samples (or "set" for short)

This is the set of samples that are intended for a round and which a participant needs to perform the required tests. In some programmes the tests are divided into groups and separate sets of samples are supplied for each group.

The participant orders sets of samples based on two considerations:

- What tests the participant intends to perform in a given round.
- What volume of samples the participant needs to perform the tests (if the standard sample volume is not sufficient to perform measurements (i.e. EQA tests) at the participant's workplace, they can order more sets).

The participant can order a **maximum of 6 sets of samples.** Detailed information describing the number of samples, their expected volume and the composition of the sets of samples can be found in this EQA Plan for each EQA programme.

Ordering multiple sets of samples does not entitle the participant to send more results to SEKK (for this purpose, the Additional evaluation (V+) serves – see below).

Supervisor

A supervisor is a specialist who has been authorised by the professional society to carry out scientific supervision of a given EQA programme. A supervisor takes part in both the preparation and final statistical evaluation of EQA programmes and has access to the results of individual participants.

Test

This general term represents a particular and independently evaluated element in the survey – thus it is an analyte, parameter, component, identification, property description, etc.

1.2. Relations with participants

Criteria for the inclusion of a participant in EQA

We apply these constraints to EQA participants:

- The participant cannot be a private person (EQA programmes are intended for professionals).
- Participants who have outstanding financial obligations to SEKK (debtors) are not included in EQA.
- Specific restrictions can be stated for particular EQA programmes (some EQA programmes are available only for participants from Czechia (CZ) and Slovakia (SK), some programmes are intended only for POCT users, etc.).

Communication

The web application **Cibule** is the basic tool of communication between SEKK and participants. This application allows participants to manage their individual personal data, send requests to change their identification information, place orders and post test results to SEKK.

Send all other information to us by **e-mail**, preferably, and do not forget to specify your **participant code** and name.

SEKK sends all important information (information about requests processing, accounting documents, etc.) to the participants by e-mail to the e-mail addresses listed in the Cibule application – therefore please specify in Cibule the active e-mail addresses that you read regularly.

Each participant is fully responsible for setting up their technical means (incoming mail filter, black list, white list, etc.) so that e-mails sent by SEKK are not classified as unsolicited (spam) and subsequently blocked. We strongly recommend you to sort the ***sekk.cz*** and ***eqa.cz*** domains as trusted.

Business relations

SEKK provides services based on participant orders that are sent to SEKK using the Cibule application.

Data confidentiality

Participant-related data is considered confidential (it can be accessed by SEKK staff and supervisors).

We give the addresses of participants (including their telephone numbers and e-mails) to a courier service that delivers the parcels with samples, in order to allow them to communicate with the participants as part of the delivery process.

Identification data (inspection, changes)

Each participant can view his identification data in the Cibule application in the menu ***Setup – Address***.

In principle, SEKK maintains the following data in two records, labelled A1 and A2:

- A1 is the participant identification (who performs the EQA tests). Parcels with rounds and final reports will be sent to A1, so this address has to be fully and accurately listed. Avoid using P.O. Boxes, compartments, etc. – keep in mind that we distribute EQA rounds by courier service and it is therefore absolutely necessary to accept the parcel personally and confirm it with the recipient's signature!
- A2 is the identification of the customer (who pays for the services), if he is not identical with the participant (A1). The customer is identified by identification number, VAT and registered office and name (for legal entities) or name and surname (for individual users). If you provide A2, it will be used on your accounting documents (invoices). If you do not specify A2, the accounting documents will be issued and sent to A1.

It is the responsibility of each participant to ensure that the identification data provided is up to date and correct.

If identification data changes, this must be reported to SEKK immediately. We recommended that you send us all changes using the Cibule application (menu ***Setup – Address***) or by e-mail.

Every worker who has an account in the Cibule application can check and change his personal data (name, surname, e-mail address, telephone number) at any time (menu ***Setup – Users***). It is not necessary to contact SEKK. It is not possible to create anonymous accounts without the information above.

SEKK will send an e-mail to all participants, usually once a year, to verify that their e-mail addresses are working.

Complaints and comments

It is necessary to inform us about all unexpected situations in time. For instance, if you receive a damaged sample, inform us as soon as possible – this is the only way to solve the problem without missing the deadline.

If the participant receives a damaged (e.g. broken) sample, it is necessary to retain the damaged consignment including the broken sample and the shipping envelope with its barcode for the subsequent complaint procedure organised by the courier company. **Damaged or incomplete shipments must be reported by participants within 3 days of their delivery!** It will be very helpful if you attach a photo of the damaged material to the complaint.

When you are reporting mistaken information in the final reports (e.g. wrong name of responsible person), always state exactly what information is wrong. We will correct the information and send you the relevant documents. It is your responsibility to destroy or mark as invalid the previous documents (containing the mistake).

Complaints are generally accepted within 1 month of the event that they relate to (exceptions may be made in justified cases). If you have a comment on the scientific design of an EQA round, then you can consult these suggestions directly with the supervisor of the round (for their contacts see *Additional information sources*, page 37; supervisors prefer to communicate by e-mail).

If you send scientific comments to SEKK, we shall forward them to the supervisor.

Guarantees

SEKK is responsible for carrying out each EQA round in accordance with the rules described in this document.

An EQA round with less than 10 participants may be cancelled. An EQA round can be also cancelled for other reasons (e.g. the unavailability of samples due to the discontinuation of their production). In these cases, the participants will be informed by e-mail and, if they have already paid, the money will be refunded in full in the form of a credit note.

In exceptional cases, SEKK is entitled to change the date of the round (e.g. due to extreme weather, transport problems, etc.) – in these cases, the participants will be informed by e-mail.

If there is the exceptional situation that a round which has already been sent to participants needs to be cancelled and then repeated, the process is as follows:

- SEKK will organise a replacement round of the same EQA programme as soon as possible.
- SEKK will include all participants of the cancelled round in the new round for free.
- Participants are not entitled to compensation for the costs of tests they performed in the cancelled round.

SEKK makes no guarantee, explicitly expressed or implied, regarding the suitability of particular samples and services for any particular purpose. SEKK is never liable for any damages (damage of equipment, loss of profits, additional costs, etc.) arising directly or indirectly from the services that SEKK provides.

SEKK does not refund money to customers for services that were delivered to them but not used (e.g. a participant orders a round, SEKK delivers it but the participant does not send the results; or a participant orders V+ but does not send another set of results to SEKK, etc.)

Innovations

SEKK reserves the right to continuously improve and innovate the system. Innovations may consist of modifications of the Cibule application, changes in terminology or the organisation and content of final reports, the inclusion of pilot studies and surveys in individual EQA rounds, etc.

Long-term cooperation

SEKK is interested in long-term, stable and fair cooperation with all EQA participants in adherence to the rules defined in this document. These rules apply both to SEKK and the participants. If a participant fails to comply with the rules, SEKK will send a written notice to him; if the situation is not rectified, SEKK will terminate the cooperation.

SEKK is entitled to suspend the provision of services to the participant if the customer/participant fails to pay the invoice within the set deadline and within 30 days of SEKK sending a written reminder.

Formal rules

The dates are written in the format: day.month.year

The comma is used as a decimal separator.

1.3. Samples

Proficiency test items are generally referred to as samples, although in some cases they are, for example, photographs or forms.

Use: The samples that participants receive within each EQA round are intended for the performance of the appropriate EQA tests and are not intended for bilateral comparisons.

Origin: We use both commercial samples and samples prepared by subcontractors, and we do not disclose the identity of the samples used.

Form: Samples are most often liquid or lyophilized and EQA participants are expected to be able to process both types of sample.

Capacity limitations: The capacity of some rounds is limited by the number of samples available - see chapter *SEKK review of the orders* (page 8) for more information.

Safety: In most cases, samples are tested for the absence of selected infectious markers (if not, participants are warned). If a sample was found to be positive in an infectious marker test, participants will be notified by e-mail, but this is not a cause for concern or even a reason for stopping the round or refusing to participate. Therefore, all samples should be handled as potentially infectious.

Division into sets: In this document the splitting of samples into multiple sets is scheduled for some programmes. In exceptional cases, the realisation of the division into sets may be different from the way it is described in this document, but participants will always receive a sample volume that corresponds to the volume declared in the EQA Plan.

Sample processing (the realisation of EQA tests)**:** We encourage all participants to process EQA samples as soon as they receive them. Moreover, in some cases (explicitly pointed out in the description of particular EQA programmes), the shelf life of the distributed samples is short (stability in the order of days). Such samples must be processed immediately after delivery! In the event that these samples are not delivered to the address of the participant within 48 hours of distribution, it is not usually possible to send a parcel with replacement samples. If the samples were not delivered due to courier service failure, the participant will be included (free of charge) in the next

available round of the programme and will be notified by e-mail.

Photographs on the web: The photographs which are routinely placed on the web are submitted to the participants as part of the assignment in some EQA rounds. We encourage participants always to view photos on the web - printed images are designed primarily for archival purposes (with lower resolution and contrast).

Blood serum vs. plasma: If the IVD device documentation states that the assay can be performed both in serum and plasma then EQA results obtained from blood serum measurements can also be used for the participant's measurements in blood plasma (therefore blood serum measurements can be approximated to blood plasma measurements).

1.4. Delivery of parcels to participants

SEKK will send samples to all registered participants together with documentation (general instructions and result form) on the start date of the round (indicated in the schedule as the dispatch date).

Shipments with EQA rounds are sent to the participants via courier services which perform **delivery in accordance with their general transportation conditions.**

It is necessary for the participant to await the shipment at their workplace on the day of the intended delivery. If the first delivery is not successful, it may be repeated on subsequent days. Please make a note of the ordered EQA rounds in your calendar and then await and check their delivery.

The recipient is obliged to accept the shipment and it is imperative that he opens it immediately on delivery and follows the instructions given in the received documentation. There are 3 reasons for doing this:

1) In the event that the contents of the shipment are damaged, the participant must contact SEKK immediately after delivery (**no later than within 3 days**; the courier does not take into account later complaints).
2) Multiple EQA rounds may be delivered in a single shipment and instructions for each round (e.g. sample storage or the deadline) may vary.
3) The instructions indicate how to handle the contents of the shipment (sample storage, the deadline, the need for immediate sample processing, etc.).

Shipments are not transported under controlled storage temperature conditions. The storage temperature specified in the documentation of the round must be assured by the recipient after delivery.

1.5. Results from participants

Participants enter their results in the Cibule application.

- Cibule alerts you to some errors that you may make when entering the results, and allows you to supplement or correct the results.
- Please pay attention to the information provided in Cibule help.
- To simplify the entering of results and to save your time, the Cibule app remembers the basic information that you entered for each test in the previous EQA round (measurement principles, manufacturers, systems), and offers it as predefined in the next round. Always check the data copied from the previous EQA round and correct it if necessary.
- Pay close attention to the correct completion of **all data** (not only the results but also other information) required for the test. For some tests, key basic information (KBI) may be defined, which is mandatory. For details, see ***General instructions***

  This document forms part of the documentation of the round. It contains instructions for the participant on how to carry out the given round (the storage and processing of the samples, safety instructions, testing instructions, contact information, etc.)
- ***Key basic information*** (page 4).
- **Only one result** may be given for each participant code, sample and test (unless otherwise stated in the EQA round documentation).
- **The deadline** is specified for each EQA round. All results submitted after this date will be considered as late submissions (the date of entry in Cibule is decisive). The deadline can sometimes fall on a non-working day. **Late submissions** will be processed as follows:
  - The results sent to SEKK before the date of publication of the round results on www.sekk.cz will be evaluated in a standard way, but the participant will not receive the Confirmation of attendance and/or the Certificate.
  - Results sent on the day of publication of the round evaluation on www.sekk.cz or later will not be processed at all.
- Give **quantitative results** using 3 significant digits. The result must be unambiguous, it cannot be given either as an interval or as an inequality (please see the application Cibule help for details).
- The results must be given in **the units** prescribed for a particular test, other units are not allowed.
- Reporting the **uncertainty** of quantitative results does not affect the assessment of the participant's success and is included in some EQA rounds as their educational component. Uncertainties can only be reported by participants in EQA rounds of the first half of the year. If the participant gives uncertainty for only one result of a given test (only for one sample), we assign the same uncertainty to the remaining results (for other samples). Put the uncertainties in 2 significant digits.
- Please note that we are not entitled to correct any (even obvious) errors in the results caused by incorrect entry by the participant.
- The result of one test should be obtained in all samples with one measurement system/procedure (unless the use of different measurement systems is explicitly permitted for the EQA round).
- If the participant makes a text note for the round and the data in the note is inconsistent with the data entered for the tests, the information in the note is ignored.
- After the deadline for the round, participants can no longer edit or delete their results as sent to SEKK.
- A number of measuring systems can also be used to measure parameters that have not been validated by the manufacturer for routine measurement of patient samples and the issuance of the obtained results to clinicians (these are parameters referred to as, for example, RUO). Participants are requested not to report the results of these parameters in the EQA.
- We do not receive results via data box.

Questionnaires and surveys

SEKK may include (or send to participants entirely outside EQA rounds) a survey or additional questions with some tests in any round. We organise such additional inquiries almost exclusively in the Cibule application.

1.6. Evaluation of participant's performance

The results are evaluated by SEKK after the deadline of the relevant EQA round. The necessary statistics are calculated, the results of the participants are compared with the assigned

values, and the supervisor generally summarises the results in a commentary.

Each evaluated test is always evaluated as a whole - the overall evaluation of the test therefore summarizes the results of the test for all samples. Only 3 conclusions are possible:

- success (+)
- failure (−)
- not evaluated (±)

In general, a test is judged to have been passed if it has been successfully (correctly) performed for all samples (unless explicitly stated otherwise).

In some cases, there may be situations where the results of the participant (and hence the whole test) cannot be evaluated. This is most common in 2 cases:

a) When there is no consensus where the assigned value is determined as consensual.
b) When results are evaluated within homogeneous groups (e.g. groups arranged according to the reagent manufacturer) and the group does not reach the minimum size (typically n = 5) required for the evaluation.

In this case, the test is marked as not evaluated. A detailed description of test evaluation including many examples can be found on our website - see chapter *Additional information sources* (page 37).

Consensual assigned values

Quantitative results: We determine the consensus assigned values as robust averages. These are calculated according to the number of results in the file (n) as follows:

For n ≥ 10: Robust estimates of the mean and dispersion are calculated according to ISO 13528 (Annex C, algorithm A). This document presents a recursive algorithm involving the substitution of outliers (winsorisation). The estimate of the uncertainty of the robust mean is done according to ISO 13528.

For 5 ≤ n ≤ 9: Robust estimates of the mean and dispersion are calculated according to Horn's procedure (Paul S. Horn: Some Easy t Statistics, Journal of the American Association, December 1983, Volume 78, Number 384, 930-936). The estimate of the uncertainty of the robust mean is done according to the same work.

For n < 5: We do not evaluate such a low number of results.

Qualitative results: Consensus is reached if at least 80 % of the participants who gave a valid result match.

1.7. Reports for participants

Each round ends in the sending of final reports to the participants and placing a summary evaluation of the results on the web. SEKK usually sends final reports within 4 weeks of the deadline of the relevant round. The list of the documents making up the final report can be found in this Plan for each EQA programme. You can find the examples of many documents on the web – see chapter *Additional information sources* (page 37).

Confirmation of attendance and certificate

Each participant who sends results to SEKK in due time will receive a **Confirmation of attendance**. Conditions for granting the confirmation of attendance are:

1. The participant will send the data to SEKK in due time.
2. Confirmation of attendance shall indicate the tests for which the participant gave the results and the KBI (regardless of the correctness of the results).

For selected EQA programmes and tests (see more in chapter *Additional information sources*, page 37) the participant may also receive a **Certificate**. Conditions for granting the certificate are:

1. The participant shall fulfil the conditions for issuing the confirmation of attendance.
2. The certificate is issued for the given test if the participant passed the test successfully.

The confirmation of attendance and the certificate are valid for 1 year unless otherwise stated for a particular EQA programme.

Long-term overviews

We send to all participants an overview of the success of their tests for the past calendar year at the end of the year (usually in the second half of December or in the first half of January). This overview consists of 2 parts:

- Overview of tests
- Overview of certificates

We do not send these reports to participants who participated in a small number of rounds. If the participant has ordered an additional evaluation, the results of the derived codes are joined to the mother code in these reports.

Results on the web

A summary evaluation of each EQA round is available on www.sekk.cz (this archive is updated continuously after the evaluation of each EQA round). In addition, you will find here some data that participants do not normally receive (e.g. statistical evaluation with different arrangements of homogeneous groups; participants from Slovakia will find a separate evaluation for Slovak laboratories if at least 10 of them participate in the given EQA round; for programmes that include photos, you will find these photos here, including description, etc.). Evaluations of EQA rounds for the last 5 years are available on the web.

Repeated printing of EQA reports

Final reports, confirmations of attendance and certificates can be printed by the participants themselves at any time in the web application Cibule.

In general, we print on demand only those documents that have not yet expired, up to a maximum of one year after the deadline of the round to which they relate.

1.8. Ordering services

Services should be ordered in the Cibule application. Before ordering, read the EQA Plan carefully.

Each participant chooses from the Plan the EQA rounds that he is interested in **for the whole year**.

Check all contact details very carefully!

If you wish to order a round, enter number one in the column Set - Order (thus you will order the round with one set of samples). By ordering a set of samples, the participant automatically orders the respective round. If you need more sets, write down the required number.

Leave the V+ column blank if you do not want to order any additional evaluation, or write the required number of V+ in this column.

It is not possible to order a set/sets of samples without a round, and it is not possible to order a V+ without ordering a set of samples.

1.8.1. Agreement

We do not conclude any contracts/agreements with the participants - we provide services on the basis of the order.

1.8.2. Ordering in the Cibule application

A link to the Cibule application can be found on www.sekk.cz.

New participant

If you do not have access to the Cibule application yet, select ***New Participant*** in the menu and send us your request. SEKK staff will process your request, set up the account in Cibule and

send you login data by e-mail – then follow the instructions in the next paragraph. If you do not place an order within 1 year of the account being set up, access to the Cibule application will be blocked (if necessary, we will re-open the application again on your request).

Existing participant

If you already have a user account set up in the Cibule application, log in and then navigate to the menu ***Orders - Services***. In Cibule, place an order as a service request which the SEKK staff will subsequently process.

The active year is the year for which you will be ordering EQA services (always make sure you order the services for the correct year).

Follow the instructions on the screen and the Cibule application will guide you through creating a request in several steps.

If you ordered services in previous year, Cibule will copy your order to the new year and you can edit this pre-printed data as you wish.

There are two ways to finish the entry of the request:

- **Save and confirm** – you send the signal to SEKK that the request is complete and SEKK can process it.
- **Save as unfinished** – the request is saved, but SEKK ignores it and does not process it (SEKK waits for your confirmation). You must return to the unfinished request at a later time to complete it (edit, confirm) or cancel it.

An overview of requests can be found in the ***Requests*** menu.

1.8.3. Paper order

We accept orders only in the web Cibule app. There is no way to order using a paper form.

1.8.4. POCT users

We provide some special services to POCT (point of care testing) users (doctor's office).

- When ordering in the Cibule application they can use a button to highlight POCT programmes.
- If lyophilized samples are used in the given programme (see information for particular programs later in this text) and the participant does not have suitable means for measuring the diluent (usually volumes of 1 to 2 mL), we offer the possibility to order a simple pipette kit (calibrated plastic 2 mL pipette divided in 0,2 mL gradations + silicone bulb). The kit can be used repeatedly; its life is at least 1 year if stored in a dry place, away from UV radiation and at a temperature from +15 to +25 °C.

1.8.5. Delivery notes

A "delivery note" should be part of the participant's address A1. It is intended to help the courier with the delivery process by specifying additional details of the address of the participant.

The delivery note should contain, for example: *Blue building, entrance A*.

1.8.6. SEKK review of the orders

SEKK will review the request (order) sent and notify the participant of its processing, and then provide services based on this order to the participant. In some cases (such as late orders or rounds where a limited number of samples are available), we may not fully satisfy the order due to the capacity of a round. If a round's capacity is exhausted, we automatically move the participants who ordered it to other rounds of the same programme that are available. If there is no more round of the programme available, the participant's order will remain unsatisfied. If SEKK modifies the participant's order, then the participant is notified by e-mail.

1.8.7. Changing the order during the year

The participant can change an order (order an additional round, a set of samples, an additional evaluation, or cancel the round) during the year in the Cibule application (the menu ***Orders - Services***).

- We accept new orders throughout the year if the capacity of the round is not exhausted.
- The order for an EQA round can be changed not later than 21 days before the start of the round.

1.9. Invoicing, prices, discounts

1.9.1. Invoicing

SEKK issues invoices in accordance with customer requests (orders).

- The customer pays **in advance** for all the services ordered. The invoice will be issued by SEKK after the receipt of the order from the participant.

The due date of the invoices issued by SEKK is 30 days from the date of issue.

1.9.2. Prices

All prices in this document are without VAT (VAT will be charged according to valid and effective legal regulations):

- in CZK and EUR in the Czech version of the EQA Plan
- in EUR in the English version of the EQA Plan

Prices in CZK apply to the customers from the Czech Republic. Prices in EUR apply to foreign participants. Prices are listed in the price list for particular EQA programmes as unit prices, as follows:

- Round and V+: Represents the price of the round without samples and at the same place the price of the additional evaluation (V+) as the price of the V+ is identical to the price of the round without samples.
- Set of samples: If the programme has more sets of the samples and their prices are different, they are listed in separate lines; otherwise the price is stated only once and applies to all sets.

The prices are separated as shown above because participants can order different combinations and numbers of rounds, sample sets and additional evaluations. The total price of the service (provision of the round) depends on the sets of samples ordered and on the number of additional evaluations ordered (the total price is determined as the sum of the prices of individual items).

Participants from countries other than the Czechia and Slovakia will additionally be charged for the price of the transport of the samples to their laboratories. This price depends on the price charged by courier service for one transport multiplied by the number of distributions (consignments). The number of consignments that they receive per year is visible to the participant when placing the order in the web application Cibule. In the event that the price of transport to a specific country significantly exceeds the list price, we will contact the participant and ask for their consent to increase the price of transport.

1.9.3. Discounts

Currently we offer no discounts to the participants from the abroad.

1.9.4. Price list EUR

EQA programmes are listed alphabetically by the abbreviation.

EQA programme		Unit prices	
Abbrev.	Name	Round and V+	Set of samples
ABR	Acid-base Status and Electrolytes	30	19
AIH	Autoimmune Liver Diseases	30	32
AIM	Autoimmunity	30	-
	Set of samples	-	10
AKS	Basic Clinical Chemistry - Serum	30	40
AL	Allergy Control Scheme (Specific IgE)	48	53
ALB	Albumin in Urine	30	34
AM	Basic Clinical Chemistry - Urine	30	37
AP	Antithrombotic Agents	30	-
	Set of samples	-	33
APLA	Antiphospholipid Antibodies	30	33
AT	Autoantibodies in Thyroid Diseases	30	-
	Set of samples 1	-	13
	Set of samples 2	-	16
BIL	Bilirubin Neonatal	30	35
BM	Bone Markers	30	112
CC	Cystatin C	30	54
CD34	Population of CD34+ Cells	30	52
CRC	Colorectal Carcinoma	30	175
CRP	C-Reactive Protein	30	41
CRPP	C-Reactive Protein POCT	30	28
CS	Immunosuppressives	42	-
	Set of samples 1	-	37
	Set of samples 2	-	20
CSFB	Cerebrospinal Fluid Analysis	30	47
CSFC	Cerebrospinal Fluid Cytology	20	-
	Set of samples 1	-	0
	Set of samples 2	-	5
CSFF	Isoelectric focusing of CSF	20	21
CSFK	Cerebrospinal Fluid Diagnostics	20	11
CSH	Cytochemical Staining in Haematology	25	5
DD	D Dimers	30	41
DGP	Urine Strip Tests Analysis	30	37
DIF	Peripheral Blood Morphology Evaluation	30	19
DS	Drug Screening in Urine	51	44
DT	CD Transferrin	41	42
E1	Hormones 1	30	45
E2	Hormones 2	30	30
ET	Ethanol	47	27
FC	Calprotectin in Stool	30	15
FOB	Faecal Occult Blood	30	66
GHP	Glycated Haemoglobin POCT	30	31
GLC	Glucose (including glucometers)	30	23
GP	Detection of Monoclonal Components	30	-
		-	22
HCB	Histological and Cytological Staining	34	21
HIL	Serum Indices	30	42
HKG	Haemocoagulation Tests	30	32
HR	Hormonal Receptors	30	21
HS	Haemocoagulation Special	30	-
	Set of samples	-	16
IDDM	Type 1 Autoimmune Diabetes	30	37
IF8	Factor VIII inhibitor	30	60
IF9	Factor IX inhibitor	30	60
IFT	Immunophenotypisation	30	50
IGIT	Immunopathology of GIT	30	-
	Set of samples	-	11
IH	Blood Group Serology	34	-
	Set of samples 1	-	45
	Set of samples 2	-	58
	Set of samples 3	-	19
IHC	Immunohistochemistry - Detection of HER-2/neu	30	21
INRP	INR measurement on POCT	30	-
	Set of samples	-	25
KD	Glycated Haemoglobin	30	55
KM	Cardiac Markers	30	-
	Set of samples 1	-	67
	Set of samples 2	-	32
KO	Blood Count	30	36
LA	Lupus anticoagulant	30	15
LMWH	Low Molecular Weight Heparin	30	38
MG1	Molecular genetics 1	28	-
	Set of samples	-	61
MG2	Molecular genetics 2	28	-
	Set of samples	-	61
MK	Urinary Calculi Analysis	47	25
MS	Urinary Sediment Morphology	25	-
	Set of samples 1	-	0
	Set of samples 2	-	5
NF	Peripheral Blood Smears - Photos	25	-
	Set of samples 1	-	0
	Set of samples 2	-	5
NKDF	Bone Marrow Aspirate Film	25	-
	Set of samples 1	-	0
	Set of samples 2	-	5
PAT	Direct Antiglobulin Test	30	45
PDL1	Programmed Death Ligand 1	30	-
	Set of samples	-	55
PIG	IgG subclasses	30	27
PRO	Specific Proteins	30	54
RET	Reticulocytes (Microscopy)	30	25
RF	Diagnostics of Rheumatoid Arthritis and ASLO	30	-
	Set of samples 1	-	20
	Set of samples 2	-	11
RFA	Risk Factors for Atherosclerosis	30	42
SED	Erythrocyte Sedimentation Rate	30	69
TDM	Therapeutic Drugs	30	-
	Set of samples	-	38
TE	Trace Elements	30	-
	Set of samples	-	42
TIE	Allergy Control Scheme (Total IgE)	30	11
TM	Tumour Markers	30	40
VIB	General Immunohistochemistry - Staining	34	35
VVV	Maternal Diagnostic Screening	30	-
	Set of samples	-	25
ZY	Cytokines	40	36

Other services

Name	Unit price
Annual fee ECAT	147
Transport of one parcel with samples to the participant:	
Czech Republic and Slovak Republic	free of charge
other countries	30

2. EQA programmes and rounds

The following chapters provide following information for each programme:

Abbreviation and name of the programme

Individual rounds of the programme are labelled the same way as the programme.

Accreditation

The word ACCREDITED appears to the right of the name if it is an accredited programme. This label applies only to the programmes that are provided by SEKK (for details, see the paragraph *Accreditation of the provider* on page 3). For information on the accreditation of the programmes of other providers (ECAT, RfB), visit their websites.

List of tests

The tests whose results may be reported by the participants within the programme are listed. If a given programme contains multiple tests, the participant is not required to report the results of all tests - each participant reports only the results of those tests that he actually performs at his workplace.

If the programme also includes tests that are not assessed (those that do not influence the participant's success - for example, the tests included in the programme for educational purposes), these are listed here.

Samples

A description of the sample sets (number of samples in the set, volume, matrix, etc.) that the participants can order. If the sample volume specified is not sufficient for your needs, you can order more sets of samples.

If the sample volume is declared, this is the minimum volume (the volume will be kept with a tolerance of 10 %).

Reports for participants

The participant will receive the final report (which includes the supervisor's comments) as the evaluation of the round, accompanied by other documents listed in this paragraph.

In addition, any participant may receive individual commentary on the results of the round, which is included in the results sheet or attached separately. All reports expire 1 year after the deadline of the given EQA round (unless explicitly stated otherwise). Sample reports, along with the explanation of their content, are available on the web - see chapter *Additional information sources* (page 37).

Scientific supervision

Supervisors of individual programmes are listed here only by name. A complete list of all supervisors, including their contact details, can be found on the web - see chapter *Additional information sources* (page 37).

Participants

Possible restrictions or recommendations concerning programme participants (e.g. only workplaces in Czechia and Slovakia, only POCT users, etc.) are listed here.

Minimum participation

This means the smallest number of rounds that can be ordered per calendar year.

Additional evaluation

It is mentioned here whether an additional evaluation (V+) service is available for the programme.

Further information

This paragraph contains further specific information relevant to the given programme.

Time schedule

For each EQA round (the round code consists of a programme abbreviation and a number indicating the round serial number in the calendar year), the table contains:

- the dispatch date (the day when SEKK dispatches the samples), and
- the deadline (the day by which participants must send us their results).

Where to find more information?

If you are not familiar with a particular programme (you have not participated in it yet) and you are considering whether to order it, look at the evaluation of the rounds of this programme from previous years - these evaluations are freely available on www.sekk.cz in the EQA section under the *Archive of the evaluations* link.

2.1. Biochemistry

Professional supervision:

Czech Society of Clinical Biochemistry ČLS JEP (www.cskb.cz)

ABR - Acid-base Status and Electrolytes — ACCREDITED

Tests: potassium ionised (ISE), glucose, chloride ionised (ISE), lactate, pCO_2, pH, pO_2, sodium ionised (ISE), calcium ionised (ISE)

Samples: aqueous solution, 1 set containing 2 samples of about 1,5 mL each

Reports for participants: confirmation of attendance, certificate, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: MUDr. Petr Kubáč

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** no

EQA round	ABR1/24	ABR2/24	ABR3/24
Dispatch date	12.3.2024	16.7.2024	12.11.2024
Deadline	22.3.2024	26.7.2024	22.11.2024

AKS - Basic Clinical Chemistry - Serum — ACCREDITED

Tests: α-AMS,α-AMS pancreatic,γ–globulin - elpho, albumin, albumin - elpho, ALP, ALT, AST, bilirubin total, bilirubin direct, total protein, CK, potassium, inorganic phosphate, GGT, glucose, magnesium, chloride, cholesterol, cholinesterase, creatinine, uric acid, lactate, LD, lipase, lithium, urea, osmolality, sodium, triacylglycerides, calcium, calcium ionised, iron,

Samples: serum, 1 set containing 2 samples of about 5 mL each

Reports for participants: confirmation of attendance, certificate, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: Ing. Květa Pelinková, MBA

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: This programme is not suitable for the determination of the cholinesterase using Siemens Dade reagents (the use of these reagents will not be taken into account when evaluating the results).

EQA round	AKS1/24	AKS2/24	AKS3/24	AKS4/24
Dispatch date	16.1.2024	25.3.2024	16.7.2024	1.10.2024
Deadline	26.1.2024	5.4.2024	26.7.2024	11.10.2024

ALB - Albumin in Urine — ACCREDITED

Tests: ACR (albumin/creatinine ratio) , albumin, creatinine

Samples: urine, 1 set containing 2 samples of about 2 mL each

Reports for participants: confirmation of attendance, certificate, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: Ing. Luděk Šprongl

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: This programme is not intended for analysis using test strips or other semi-quantitative methods.

EQA round	ALB1/24	ALB2/24
Dispatch date	25.3.2024	1.10.2024
Deadline	5.4.2024	11.10.2024

AM - Basic Clinical Chemistry - Urine — ACCREDITED

Tests: total protein, potassium, inorganic phosphate, glucose, magnesium, chloride, creatinine, uric acid, urea, osmolality, pH, sodium, calcium

Samples: urine, 1 set containing 2 samples of about 5 mL each

Reports for participants: confirmation of attendance, certificate, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: Ing. Květa Pelinková, MBA

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: This programme is not intended for analysis using test strips (for these, the *DGP - Urine Strip Tests Analysis*, page 13, is intended).

EQA round	AM1/24	AM2/24
Dispatch date	25.3.2024	1.10.2024
Deadline	5.4.2024	11.10.2024

BIL - Bilirubin Neonatal — ACCREDITED

Test: bilirubin total (neonatal), bilirubin direct

Samples: serum, 1 set containing 2 samples of about 1 mL each

Reports for participants: confirmation of attendance, certificate, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: Ing. Luděk Šprongl

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	BIL1/24	BIL2/24
Dispatch date	30.1.2024	13.8.2024
Deadline	9.2.2024	23.8.2024

BM - Bone Markers

Tests: 25-hydroxyvitamin D , osteocalcin, P1NP, PTH, PTH 1-84, collagen telopeptide CTx-β

Samples: serum, 1 set containing 2 samples of about 1 mL each

Reports for participants: confirmation of attendance, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: RNDr. Zdeněk Švagera, Ph.D., EuSpLM

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	BM1/24	BM2/24
Dispatch date	2.4.2024	15.10.2024
Deadline	12.4.2024	25.10.2024

CC - Cystatin C — ACCREDITED

Test: cystatin C

Samples: serum, 1 set containing 2 samples of about 1 mL each

Reports for participants: confirmation of attendance, certificate, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: MUDr. Tomáš Šálek, Ph.D., EuSpLM

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	CC1/24	CC2/24
Dispatch date	30.1.2024	13.8.2024
Deadline	9.2.2024	23.8.2024

CRP - C-Reactive Protein — ACCREDITED

Test: C-reactive protein

Samples: serum, 1 set containing 2 samples of about 1 mL each

Reports for participants: confirmation of attendance, certificate, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: RNDr. Pavlína Kušnierová, Ph.D.

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: CRP concentrations in samples will be higher than 5 mg/L. This programme is not suitable for the determination by means of dry chemistry (the use of this measurement principle will not be taken into account in the evaluation of results).

EQA round	CRP1/24	CRP2/24	CRP3/24	CRP4/24
Dispatch date	30.1.2024	23.4.2024	13.8.2024	19.11.2024
Deadline	9.2.2024	3.5.2024	23.8.2024	29.11.2024

CRPP - C-Reactive Protein POCT — ACCREDITED

Test: C-reactive protein

Samples: serum, 1 set containing 2 samples of about 1 mL each

Reports for participants: confirmation of attendance, result sheet (quantitative results), complex statistics

Supervision: RNDr. Pavlína Kušnierová, Ph.D.

Participants: POCT participants **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: CRP concentration in samples will be in the interval 5 mg/L – 100 mg/L (meaning the concentration in the blood serum). This survey is intended only for POCT systems.

EQA round	CRPP1/24	CRPP2/24	CRPP3/24	CRPP4/24	CRPP5/24	CRPP6/24
Dispatch date	15.1.2024	19.2.2024	27.5.2024	26.8.2024	7.10.2024	25.11.2024
Deadline	26.1.2024	1.3.2024	7.6.2024	6.9.2024	18.10.2024	6.12.2024

CSFB - Cerebrospinal Fluid Analysis — ACCREDITED

Tests: albumin, total protein, glucose, IgA, IgG, IgM, lactate

Samples: cerebrospinal fluid simulation, 1 set containing 2 samples of about 1 mL each

Reports for participants: confirmation of attendance, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: MUDr. Kateřina Mrázová

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	CSFB1/24	CSFB2/24
Dispatch date	12.3.2024	12.11.2024
Deadline	22.3.2024	22.11.2024

CSFC - Cerebrospinal Fluid Cytology — ACCREDITED

Tests: morphological identification of elements, syndromological classification of finding, etiological diagnosis

Samples: 2 coloured photos with description of anamnesis

Set 1	Photos available on the web
Set 2	Photos printed on paper

Reports for participants: confirmation of attendance, result sheet (quantitative results)

Supervision: MUDr. Kateřina Mrázová

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** no

Further information: The assigned values are determined as the consensus of the experts on this programme (the list of the experts is available on www.sekk.cz in the EQA section).

EQA round	CSFC1/24	CSFC2/24
Dispatch date	12.3.2024	12.11.2024
Deadline	22.3.2024	22.11.2024

CSFF - Isoelectric focusing of CSF

Tests: number of IgG bands in CSF, number of IgG bands in plasma, the resulting formula, the presence of intrathecal IgG synthesis

Not assessed tests: number of bands

Samples: 1 set containing 1 sample of Cerebrospinal Fluid and 1 sample of serum, of about 0,1 mL each

The samples used are not tested for the presence of infectious markers.

Reports for participants: confirmation of attendance, result sheet (quantitative results)

Supervision: MUDr. Kateřina Mrázová

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** no

EQA round	CSFF1/24	CSFF2/24
Dispatch date	12.3.2024	12.11.2024
Deadline	22.3.2024	22.11.2024

CSFK - Cerebrospinal Fluid Diagnostics — ACCREDITED

Tests: albumin, glucose, IgA, IgG, IgM, intrathecal synthesis (presence and quantification of intrathecal immunoglobulin synthesis by Reiber calculation), lactate, evaluation of permeability of blood-CSF barrier by albumin quotient

Samples: cerebrospinal fluid simulation, 1 set containing 1 sample of about 1 mL

Reports for participants: confirmation of attendance, result sheet (quantitative results), result sheet (qualitative results), histograms

Supervision: MUDr. Kateřina Mrázová

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** no

EQA round	CSFK1/24	CSFK2/24
Dispatch date	12.3.2024	12.11.2024
Deadline	22.3.2024	22.11.2024

DGP - Urine Strip Tests Analysis — ACCREDITED

Tests: bilirubin, total protein, glucose, hCG, ketone bodies, blood, WBC, nitrite, pH, urobilinogen

Samples: urine, 1 set containing 2 samples of about 5 mL each

Reports for participants: confirmation of attendance, result sheet (qualitative results)

Supervision: Ing. Jana Špirková

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	DGP1/24	DGP2/24	DGP3/24
Dispatch date	6.2.2024	23.4.2024	19.11.2024
Deadline	16.2.2024	3.5.2024	29.11.2024

E1 - Hormones 1 — ACCREDITED

Tests: 17-OH-progesterone, aldosterone, DHEA-sulphate, estradiol, ferritin, cortisol, progesterone, T3 total, T3 free, T4 total, T4 free, testosterone, TSH

Samples: serum, 1 set containing 2 samples of about 3 mL each

Reports for participants: confirmation of attendance, certificate, result sheet (quantitative results) with comparability (for all tests) and traceability (for selected tests) assessment, complex statistics, overview of the results with uncertainties

Supervision: Ing. Vladimír Bartoš, Ph.D.

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: The programme is provided in cooperation with the Referenzinstitut für Bioanalytik (Bonn, Germany). Statistical processing and evaluation of results is carried out on a common set of results RfB + SEKK.

EQA round	**E11/24**	**E12/24**	**E13/24**	**E14/24**
Dispatch date	23.1.2024	16.4.2024	9.7.2024	24.9.2024
Deadline	2.2.2024	26.4.2024	19.7.2024	4.10.2024

E2 - Hormones 2 — ACCREDITED

Tests: C peptid, ferritin, FSH, hGH, IGF-I, IGF-BP3, insulin, folic acid, LH, prolactin, PTH, PTH 1-84, renin, SHBG, vitamin $B_{12,}$ vitamin B_{12} (active)

Samples: serum, 1 set containing 2 samples of about 3 mL each

Reports for participants: confirmation of attendance, certificate, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: Ing. Vladimír Bartoš, Ph.D.

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: The programme is provided in cooperation with the Referenzinstitut für Bioanalytik (Bonn, Germany). Statistical processing and evaluation of results is carried out on a common set of results RfB + SEKK.

EQA round	**E21/24**	**E22/24**	**E23/24**	**E24/24**
Dispatch date	23.1.2024	16.4.2024	9.7.2024	24.9.2024
Deadline	2.2.2024	26.4.2024	19.7.2024	4.10.2024

FOB - Faecal Occult Blood

Test: haemoglobin (quantitative determination)

Samples: liquid or lyophilized, 1 set containing 2 samples of about 1 mL each

Reports for participants: confirmation of attendance, result sheet (quantitative results), complex statistics

Supervision: MUDr. Petr Kocna, CSc.

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: This programme is exclusively intended for quantitative determination of haemoglobin concentration. It is not intended for qualitative or semi-quantitative methods. We shall send, together with the samples, plastic pipettes intended to transfer the EQA sample to the POCT measuring system, to all general practitioners who are expected to use POCT systems. We send these pipettes to laboratory participants only if they indicate they are using the QuikRead or iChroma measuring systems or if they order these pipettes.

EQA round	**FOB1/24**	**FOB2/24**
Dispatch date	23.4.2024	19.11.2024
Deadline	3.5.2024	29.11.2024

GHP - Glycated Haemoglobin POCT

Test: glycated haemoglobin A_{1C} (HbA_{1C})

Samples: 1 set containing 2 samples of native blood of about 0,2 mL each
The samples used are not tested for the presence of infectious markers

Reports for participants: confirmation of attendance, result sheet (quantitative results), complex statistics

Supervision: Mgr. Ondřej Wiewiorka, Ph.D.

Participants: only CZ and SK, only POCT users **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: This programme is exclusively for POCT systems.
The stability of the samples is short, so pay close attention to the information in the *Samples* section, page 5.

EQA round	**GHP1/24**	**GHP2/24**
Dispatch date	19.2.2024	7.10.2024
Deadline	1.3.2024	18.10.2024

GLC - Glucose (including glucometers) — ACCREDITED

Test: glucose

Samples: serum, 1 set containing 2 lyophilized samples of about 2 mL each

Reports for participants: confirmation of attendance, certificate, result sheet (quantitative results), complex statistics, overview of the results with uncertainties, certificate will not be issued for results of POCT systems

Supervision: doc. Ing. Drahomíra Springer, Ph.D., prof. MUDr. Tomáš Zima, DrSc.

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** no

Further information: This programme is designed for all glucose measuring systems, including POCT systems. Each participant can test up to 10 glucometers in this programme. If you use this option we recommend that you always list one specific glucometer at all times (in all rounds) at the same position (i.e. in the same line) - then the long-term success reported in the result sheet will describe this particular glucometer. If you report particular glucometers in a different order or if you alternate glucometers, then you must monitor the long-term success of each glucometer in your own records.

EQA round	**GLC1/24**	**GLC2/24**
Dispatch date	9.4.2024	22.10.2024
Deadline	23.4.2024	5.11.2024

HIL – Serum Indices

Tests: bilirubin total, haemolytic index, icteric index, lipemic index - for all tests, participants may report both quantitative (preferred) and qualitative (ordinal scale) results

Educational part (post-analytical phase): Application tasks that monitor the publication of results depending on the measured values of indices (without affecting the evaluation of the participant's success).

Not assessed tests: the questions from the educational part

Samples: serum, 1 set containing 2 lyophilised samples of about 1 mL each

Reports for participants: confirmation of attendance, result sheet (quantitative results) , result sheet (qualitative results), complex statistics

Supervision: Ing. Květa Pelinková, MBA

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	**HIL1/24**	**HIL2/24**
Dispatch date	9.4.2024	22.10.2024
Deadline	19.4.2024	1.11.2024

KD - Glycated Haemoglobin — ACCREDITED

Test: glycated haemoglobin A_{1C} (HbA_{1C})

Samples: blood preparation or native blood, 1 set containing 2 samples of about 0,2 mL each

Reports for participants: confirmation of attendance, certificate, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: Mgr. Ondřej Wiewiorka, Ph.D.

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: If native blood will be used in a round, a small shift in the dispatch date is possible in the order of units of days - in such case we will inform the participants by e-mail.

EQA round	**KD1/24**	**KD2/24**	**KD3/24**	**KD4/24**
Dispatch date	16.1.2024	25.3.2024	16.7.2024	22.10.2024
Deadline	26.1.2024	5.4.2024	26.7.2024	1.11.2024

KM - Cardiac Markers — ACCREDITED

Tests are divided into 2 groups:

Group 1	CK-MB mass, homocysteine, myoglobin, NT-proBNP, troponin I, troponin T
Group 2	BNP

Samples: serum, for each test group 1 set containing 2 samples of about 1 mL each

Reports for participants: confirmation of attendance, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: doc. Ing. Karel Kotaška, Ph.D.

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: We do not recommend participating if your measurement system is unable to measure troponins concentrations about 10 ng/L (even such samples will be used in the rounds). The results obtained on such systems will not be evaluated. The samples are not suitable for the determination of homocysteine by separation methods.

EQA round	**KM1/24**	**KM2/24**
Dispatch date	30.1.2024	13.8.2024
Deadline	9.2.2024	23.8.2024

MS - Urinary Sediment Morphology — ACCREDITED

Tests: identification of cells and elements of urinary sediment

Samples: 4 coloured photos of urinary sediment (stained or unstained) with description of clinical status of patient

Set 1	Photos available on the web
Set 2	Photos printed on the paper

Reports for participants: confirmation of attendance, certificate, result sheet (qualitative results)

Supervision: MUDr. Petr Kubáč

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** no

Further information: The assigned values are determined as the consensus of the experts on this programme (the list of the experts is available on www.sekk.cz in the EQA section).

EQA round	MS1/24	MS2/24	MS3/24
Dispatch date	6.2.2024	23.4.2024	19.11.2024
Deadline	16.2.2024	3.5.2024	29.11.2024

RFA - Risk Factors for Atherosclerosis — ACCREDITED

Tests: lipoprotein apo AI, lipoprotein apo B, cholesterol, cholesterol HDL, cholesterol LDL, lipoprotein (a), triacylglycerides

Samples: serum, 1 set containing 2 samples of about 1 mL each

Reports for participants: confirmation of attendance, certificate, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: RNDr. Marek Vecka, Ph.D.

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	RFA1/24	RFA2/24
Dispatch date	25.3.2024	1.10.2024
Deadline	5.4.2024	11.10.2024

TDM - Therapeutic Drugs — ACCREDITED

Tests are split in 2 groups:

Group 1	digoxin, ethosuximide, phenobarbital, phenytoin, carbamazepine, valproic acid, lithium, primidone, theophylline
Group 2	amikacin, gentamicin, methotrexate, vancomycin

Samples: serum, for each test group 1 set containing 2 samples of about 3 mL each

Reports for participants: confirmation of attendance, certificate, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: MUDr. Tomáš Šálek, Ph.D., EuSpLM

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	TDM1/24	TDM2/24
Dispatch date	16.4.2024	24.9.2024
Deadline	26.4.2024	4.10.2024

TE - Trace Elements

Tests are split in 2 groups:

Group 1 (plasma)	Al, Co, Cr, Cu, Mg, Mn, Se, Zn
Group 2 (blood)	Cd, Hg , Mn, Pb
Group 3 (urine)	Al, Cd, Cr, Cu, Hg , I, Mn, Ni, Pb, Se, Zn

Samples: for each test group 1 set as follows:

Set 1 (for tests of group 1)	plasma, 2 samples of about 3 mL each
Set 2 (for tests of group 2)	blood, 2 samples of about 3 mL each
Set 3 (for tests of group 3)	urine, 2 samples of about 5 mL each

Reports for participants: confirmation of attendance, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: PharmDr. Magdalena Holečková

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: The programme provided in cooperation with the Institute for Occupational-, Social- and Environmental Medicine of the University of Erlangen-Nuremberg (Erlangen, Germany), where target values are determined.

EQA round	TE1/24	TE2/24
Dispatch date	20.2.2024	10.9.2024
Deadline	5.3.2024	24.9.2024

TM - Tumour Markers — ACCREDITED

Tests: β-2-microglobulin, AFP, CA 15-3, CA 19-9, CA 72-4, CA 125, CEA, CYFRA 21-1, hCG, calcitonin, NSE, p2PSA, PSA total, PSA free, S-100, SCCA, TPA, thyroglobulin

Samples: serum, 1 set containing 2 samples of about 2,5 mL each

Reports for participants: confirmation of attendance, certificate, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: doc. Ing. Drahomíra Springer, Ph.D., doc. RNDr. Kristian Šafarčík, Ph.D.

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: The programme is provided in cooperation with the Referenzinstitut für Bioanalytik (Bonn, Germany). Statistical processing and evaluation of results is carried out on a common set of results RfB + SEKK.

EQA round	**TM1/24**	**TM2/24**	**TM3/24**	**TM4/24**
Dispatch date	23.1.2024	16.4.2024	9.7.2024	24.9.2024
Deadline	6.2.2024	30.4.2024	23.7.2024	8.10.2024

VVV - Maternal Diagnostic Screening (Triple Tests) — ACCREDITED

Tests are split in 2 groups:

Group 1 (1st trimester)	free β-hCG, PAPP-A (both absolute units and MoM), PlGF (placental growth factor) risk estimation of M.Down and M.Edwards
Group 2 (2nd trimester)	AFP, hCG, estriol free (both absolute units and MoM) risk estimation of M.Down, M.Edwards and NTD

Not assessed tests: MoM results, risk estimates

Samples: serum, for each tests group 1 set containing 2 samples of about 0,5 mL each; the round will also include additional data about mothers that are needed to calculate the risk estimates

Reports for participants: confirmation of attendance, result sheet (quantitative results), result sheet (qualitative results), complex statistics

Supervision: doc. Ing. Drahomíra Springer, Ph.D., MUDr. Monika Koudová

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: This programme is focused on the analytes used to estimate the risk of chromosomal disorders and foetal neural tube defect based on the biochemical analysis of maternal blood serum (1st and 2nd trimester). The programme is designed especially for workplaces that carry out laboratory tests, the results of which are then used to calculate risk estimates. If the concentrations of the analytes to be determined in the samples used in a particular round so permit, participants will also be able to provide estimates of individual risks. However, since the individual risk assessments are often carried out by other sites, the MoM results and the risk estimates calculated do not affect the participant's performance assessment.

EQA round	**VVV1/24**	**VVV2/24**
Dispatch date	9.4.2024	22.10.2024
Deadline	19.4.2024	1.11.2024

2.2. Biochemistry and immunology RfB

Provider: **Referenzinstitut für Bioanalytik, Germany (www.dgkl-rfb.de)**

The following programmes cover some specific tests that SEKK does not offer.
SEKK only acts as a mediator, collecting requests, ordering rounds from RfB for the participants and paying for all RfB services.
Please pay attention to the general terms and conditions of RfB: www.rfb.bio/agb-en.pdf
All participants who participate in the rounds listed below will receive sample shipments directly from RfB (Germany). Participants will send their results to RfB (the results can be submitted to the RfB only via the Internet) and the participants will also receive an evaluation of their results from RfB (in English). If a participant in any of the rounds of RfB does not receive the shipment with samples (e.g due to loss of shipment during transport) at the time of the round, they must report it immediately (you can contact RfB or SEKK). It is essential to make any changes in the order of RfB rounds ordered via SEKK also through SEKK.
When ordering, keep in mind that the rules in RfB are stricter than in SEKK, and the period of validity of the confirmation of attendance and certificate issued by RfB is as follows:

The number of rounds of a given programme in a year	*Validity of Confirmation and Certificate*
2	1 year
4 and more	6 months *)

Price for the transport

The transport price charged by the RfB for sending samples to the participants located outside Germany is already included in this plan in the prices of the rounds provided by the RfB.

AL - Allergy Control Scheme (Specific IgE)

Test: specific IgE against selected allergens (approx. 6 allergens per round)
Samples: serum, lyophilized, 1 set containing 2 samples of about 1 mL each
Reports for participants: participants receive standard RfB evaluation (in English)
Participants: only CZ and SK **Minimum participation:** 2 rounds **Additional evaluation:** no
Further information: If you do not identify all the allergens available in a given round in the AL programme, this does not affect your overall success - you only determine those that belong to your routine spectrum.
Although this programme has 4 rounds per year, the RfB issues a confirmation of attendance valid for 1 year.
List of allergens published by RfB for each round (changes possible):
AL1: Ragweed (w1), Been venom (i1), Ash pollen (t25), Hazelnut (f17), Dog dander (e5), Milbe (d2)
AL2: A. fumigatus (m3), Mugwort (w6), Birch pollen (t3), C. herbarum (m2), Milk protein (f2), Wasp venom (i3)
AL3: Pear (f94), Alder pollen (t2), Mite (d1), Plantain (w9), Tomato (f25), Wasp venom (i3)
AL4: Maple pollen (t1), Bee venom (i1), Strawberry (f44), House dust (h1), Horse dander (e3), Rey flour (f5)

EQA round	**AL1/24**	**AL2/24**	**AL3/24**	**AL4/24**
Dispatch date	6.2.2024	30.4.2024	23.7.2024	24.9.2024
Deadline	24.2.2024	18.5.2024	10.8.2024	12.10.2024

CS - Immunosuppressives

Tests are split in 2 groups:

Group 1	cyclosporine, sirolimus, tacrolimus
Group 2	everolimus

Samples: haemolysed blood, for each tests group 1 set as follows:

Set 1 (for tests of group 1)	4 samples of about 1,5 mL each
Set 2 (for tests of group 2)	2 samples of about 1,5 mL each

Reports for participants: participants receive standard RfB evaluation (in English)
Participants: only CZ and SK **Minimum participation:** 1 round **Additional evaluation:** no

EQA round	**CS1/24**	**CS2/24**
Dispatch date	6.2.2024	20.8.2024
Deadline	17.2.2024	31.8.2024

DS - Drug Screening in Urine

Tests:

amphetamine (about 30 different)	methadon / metab.
barbiturates (about 30 different)	methylphenidate
benzodiazepines (about 50 different)	opiates/opioide (about 30 different)
buprenorphine	phencyclidine
cannabinoids	pregabalin
cocain / metab.	tramadol
fentanyl	tricyclic antidepressants (about 10 different)
LSD	

Samples: urine, lyophilized, 1 set containing 2 samples of about 10 mL each

Reports for participants: participants receive standard RfB evaluation (in English)

Participants: only CZ and SK **Minimum participation:** 2 rounds **Additional evaluation:** no

Further information: In a particular round, samples contain selected drugs selected from a number of substances of the respective drug group. The analytes contained in the samples of this programme should be primarily determined qualitatively by immunoassay methods. In this programme, users of chromatographic methods are required to provide only confirmatory analysis of one major component.

EQA round	**DS1/24**	**DS2/24**	**DS3/24**	**DS4/24**
Dispatch date	6.2.2024	30.4.2024	16.7.2024	22.10.2024
Deadline	24.2.2024	18.5.2024	3.8.2024	9.11.2024

DT - CD Transferrin

Test: CDT (Carbohydrate Deficient Transferrin))

Samples: serum, lyophilized, 1 set containing 2 samples of about 0,5 mL each

Reports for participants: participants receive standard RfB evaluation (in English)

Participants: only CZ and SK **Minimum participation:** 1 round **Additional evaluation:** no

EQA round	**DT1/24**	**DT2/24**
Dispatch date	27.2.2024	6.8.2024
Deadline	23.3.2024	31.8.2024

ET - Ethanol

Test: ethanol

Samples: serum, liquid, 1 set containing 2 samples of about 2 mL each

Reports for participants: participants receive standard RfB evaluation (in English)

Participants: only CZ and SK **Minimum participation:** 2 rounds **Additional evaluation:** no

EQA round	**ET1/24**	**ET2/24**	**ET3/24**	**ET4/24**
Dispatch date	16.1.2024	16.4.2024	16.7.2024	8.10.2024
Deadline	3.2.2024	4.5.2024	3.8.2024	26.10.2024

MG1 - Molecular genetics 1

Tests are split in groups:

Group 1 (Set A)	- FV-Leiden (F5, NM_000130.5:c.1601G>A, rs6025) - FII g20210a (F2, NM_000506.5:c.*97G>A, rs1799963) Methylenetetrahydrofolate reductase (MTHFR) - MTHFR C677T (MTHFR, NM_005957.5:c.665C>T, rs1801133) - MTHFR A1298C (MTHFR, NM_005957.5:c.1286A>C, rs1801131) - PAI-I 4G5G (SERPINE1, NM_000602.5:c.-820G[(4_5)], rs1799762)
Group 2 (Set B)	- FXIII V34L (F13A1, NM_000129.4:c.103G>T, rs5985) - GPIIIa (ITGB3, NM_000212.3:c.176T>C, rs5918) - beta-Fibrinogen g-455a (FGB, NM_005141.4:c.-463G>A, rs1800790) Vitamin K epoxide reductase complex subunit 1 (VKORC1) - VKORC1 G-1639 (VKORC1, NM_024006.6:c.-1639G>A, rs9923231) - VKORC1 C1173T (VKORC1, NM_024006.6:c.174-136C>T, rs9934438) - FXII c46t (F12, NM_000505.4:c.-4T>C rs1801020) - FV-H1299R (F5, NM_000130.5:c.3980A>G, rs1800595)
Group 3 (Set C)	Alpha-1-Antitrypsin, (serpin family A member1) - AAT-PI*S (SERPINA1, NM_000295.5:c.863A>T, rs17580) - AAT-PI*Z (SERPINA1, NM_000295.5:c.1096G>A, rs28929474) - AAT- (Alpha-1-Antitrypsin-Genotyping) Apolipoprotein E (APOE) - ApoE2 (APOE, NM_000041.4:c.526C>T, rs7412) - ApoE4 (APOE, NM_000041.4:c.388T>C, rs429358) - ApoE (Apolipoprotein E – Genotyping) - ApoB100 (APOB, NM_000384.3:c.10580G>A, rs5742904) - ACE I/D (ACE, NM_000789.3:c.2306-117_2306-116insAF118569.1:g.14094_14382, rs1799752) - CETP B1/B2 (CETP, NM_000078.3:c.118+279G>A, rs708272)
Group 4 (Set D)	Aldolase, fructose-bisphosphate B (ALDOB) - AldoB 149 (ALDOB, NM_000035.4:c.448G>C, rs1800546) - AldoB 174 (ALDOB, NM_000035.4:c.524C>A, rs76917243) - AldoB 334 (ALDOB, NM_000035.4:c.1005C>G, rs78340951) Hereditary Hemochromatosis (HFE) - HFE H63D (HFE, NM_000410.4:c.187C>G, rs1799945) - HFE S65C (HFE, NM_000410.4:c.193A>T, rs1800730) - HFE C282Y (HFE, NM_000410.4:c.845G>A, rs1800562) - LCT c-13910t (LCT, NM_005915.6:c.1917+326C>T, rs4988235) Nucleotide binding oligomerization domain containing 2 (NOD2) - NOD R702W (NOD2, NM_001370466.1:c.2023C>T, rs2066844) - NOD G908R (NOD2, NM_001370466.1:c.2641G>C, rs2066845) - NOD L1007finsC (NOD2, NM_001370466.1:c.2938dup, rs2066847)
Group 5 (Set E)	- ATP7B-C3207A (ATP7B, NM_000053.4:c.3207C>A, rs76151636) - FSAP Marburg-I (HABP2, NM_004132.5:c.1601G>A, rs7080536) - ITGA2 GpIaIIa C807T (ITGA2, NM_002203.4:c.759C>T, rs1126643) - Col1A1 SP1 (Col1A1, NM_000088.4:c.104-441G>T, rs1800012) Vitamin D receptor (VDR) - VDR BsmI (VDR, NM_000376.3:c.1024+283G>A, rs1544410) - VDR ApaI (VDR, NM_000376.3:c.1025-49G>T, rs7975232) - VDR TaqI (VDR, NM_000376.3:c.1056T>C, rs731236)
Group 6 (Set F)	- Faktor VII (R353Q) (F7, NM_019616.4:c.1172G>A, rs6046) - AT3 Cambridge Typ I/II (SERPINC1, NM_000488.4:c.1246G>C>T, rs121909548) - CYP3A5*3 (CYP3A5, NM_000777.5:c.219-237A>G, rs776746)

Samples: DNA preparation, lyophilized, for each tests group 1 set of samples; sets are labelled Set A through Set F

Reports for participants: participants receive standard RfB evaluation (in English)

Participants: only CZ and SK **Minimum participation:** 1 round **Additional evaluation:** no

EQA round	**MG11/24**	**MG12/24**
Dispatch date	12.3.2024	27.8.2024
Deadline	6.4.2024	21.9.2024

MG2 - Molecular genetics 2

Tests are split in groups:

Group 1 (Set A)	Thiopurine S-methyltransferase (TPMT) - TPMT*2 (TPMT, NM_000367.5:c.238G>C, rs1800462) - TPMT*3B (TPMT, NM_000367.5:c.460G>A, rs1800460) - TPMT*3C (TPMT, NM_000367.5:c.719A>G, rs1142345) - Thiopurine S-methyltransferase (TPMT –Genotyping) - CYP2C8*3 (CYP2C8, NM_000770.3:c.1196A>G, rs10509681) Cytochrom P450 2C9 (CYP2C9) - CYP2C9*2 (CYP2C9, NM_000771.4:c.430C>T, rs1799853) - CYP2C9*3 (CYP2C9, NM_000771.4:c.1075A>C, rs1057910) - CYP2C9 (2C9 – Genotyping) - UGT1A1*28 (UGT1A1, NM_000463.3:c.-41_-40dupTA, rs3064744) Dihydropyrimidine dehydrogenase (DPYD) - DPYD*2A (DPYD, NM_000110.4:c.1905+1G>A, rs3918290) - DPYD*13 (DPYD, NM_000110.4:c.1679T>G, rs55886062) - DPYD p.D949V (DPYD, NM_000110.4:c.2846A>T, rs67376798) - DPYD c.1129-5923C>G (DPYD, NM_000110.4:c.1129-5923C>G, rs75017182) - DPYD c.1236G>A (DPYD, NM_000110.4:c.1236G>A, rs56038477) - DPYD HapB3 (DPYD, NM_000110.4:c.1129-5923C>G, rs75017182, NM_000110.4:c.1236G>A, rs56038477) - DPD activity score acc. to CPIC - DPD activity score acc. to DGHO - BCHE A (D70G) (BCHE, NM_000055.4:c.293A>G, rs1799807) - BCHE K (A567T) (BCHE, NM_000055.4:c.1699G>A, rs1803274)
Group 2 (Set B)	KRAS proto-oncogene, GTPase (KRAS) - KRAS p.G12/p.G13 (KRAS, NP_004976.2:p.G12/G13) - KRAS p.G12 (KRAS, NM_004985.5:c.34G>T>C>A, rs121913530) - KRAS p.G12 (KRAS, NM_004985.5:c.35G>T>C>A, rs121913529) - KRAS p.G13 (KRAS, NM_004985.5:c.37G>T>C>A, rs121913535) - KRAS p.G13 (KRAS, NM_004985.5:c.38G>T>C>A, rs112445441) - KRAS p.G12 (KRAS, NP_004976.2:p.G12) - KRAS p.G12 (KRAS, NM_004985.5:c.34G>T>C>A, rs121913530) - KRAS p.G12 (KRAS, NM_004985.5:c.35G>T>C>A, rs121913529) - KRAS p.G13 (KRAS, NP_004976.2:p.G13) - KRAS p.G13 (KRAS, NM_004985.5:c.37G>T>C>A, rs121913535) - KRAS p.G13 (KRAS, NM_004985.5:c.38G>T>C>A, rs112445441) - KRAS p.Q61 (KRAS, NP_004976.2:p.Q61) - KRAS p.Q61 (KRAS, NM_004985.5:c.181C>G>A, rs121913238) - KRAS p.Q61 (KRAS, NM_004985.5:c.182A>T>G>C, rs121913240) - KRAS p.Q61 (KRAS, NM_004985.5:c.183A>T>C, rs17851045) BRAF p.V600 (BRAF, NP_004324.2:p.V600E/K, rs113488022, rs121913227) - NM_004333.6:c.1799T>A, rs113488022 - NM_004333.6:c.1798_1799delinsAA, rs121913227 - cKIT p.D816V (KIT, NM_000222.3:c.2447A>T, rs121913507) NRAS (NRAS, NP_002515.1:p.Q61) - NRAS (NRAS, NM_002524.5:c.181C>T>G>A, rs121913254) - NRAS (NRAS, NM_002524.5:c.182A>T>G>C, rs11554290) - NRAS (NRAS, NM_002524.5:c.183A>T>C, rs121913255)
Group 3 (Set C)	- HLA-B*27 (HLA-B, NM_005514.8) - TNF alpha 238 (TNF, NM_000594.3:c.-418G>A, rs361525) - TNF alpha 308 (TNF, NM_000594.3:c.-488G>A, rs1800629)
Group 4 (Set D)	Cytochrome P450 2D6 (CYP2D6) - CYP2D6*2-296 (CYP2D6*2, NM_000106.6:c.886C>T, rs16947) - CYP2D6*2-486 (CYP2D6*2, NM_000106.6:c.1457G>C, rs1135840) - CYP2D6*3 (CYP2D6*3, NM_000106.6:c.775del, rs35742686) - CYP2D6*4 (CYP2D6*4, NM_000106.6:c.506-1G>A, rs3892097) - CYP2D6*6 (CYP2D6*6, NM_000106.6:c.454del, rs5030655) - CYP2D6*7 (CYP2D6*7, NM_000106.6:c.971A>C, rs5030867) - CYP2D6*8 (CYP2D6*8, NM_000106.6:c.505G>T, rs5030865) - CYP2D6*9 (CYP2D6*9, NM_000106.6:c.841_843del, rs5030656) - CYP2D6*10 (CYP2D6*10, NM_000106.6:c.100C>T, rs1065852) - CYP2D6*17 (CYP2D6*17, NM_000106.6:c.320C>T, rs28371706) - CYP2D6*35 (CYP2D6*35, NM_000106.6:c.31G>A, rs769258)

	- CYP2D6*41 (CYP2D6*41, NM_000106.6:c.985+39G>A, rs28371725) - CYP2D6*5 (CYP2D6, Deletion) - CYP2D6*xN (CYP2D6, Duplication/Amplification) Cytochrome P450 2C19 (CYP2C19) - CYP2C19*2 (CYP2C19, NM_000769.4:c.681G>A, rs4244285) - CYP2C19*3 (CYP2C19, NM_000769.4:c.636G>A, rs4986893) - CYP2C19*17 (CYP2C19, NM_000769.4:c.-806C>T, rs12248560) - CYP2C19 Genotyping
Group 5 (Set E)	- HLA B*57:01 (HLA-B, NM_005514.8) Cytochrome P450 2B6 (CYP2B6) - CYP2B6*4 (CYP2B6, NM_000767.5:c.785A>G, rs2279343) - CYP2B6*9 (CYP2B6, NM_000767.5:c.516G>T, rs3745274) - CYP2B6*6 (CYP2B6, NM_000767.5:c.785A>G, rs2279343 + NM_000767.5:c.516G>T, rs3745274) - ABCB1 c.3435T>C (ABCB1, NM_001348946.2:c.3435T>C, rs1045642) - CCR5-del32bp (CCR5, NM_001394783.1:c.554_585del, rs333)
Group 6 (Set F)	- IL28B (C/T Polymorphism) (IFNL4, NM_001276254.2:c.151-152G>A, rs12979860) - IL6 G(-174)C (IL6, NM_000600.4:c.-237C>G, rs1800795) - CYP3A4*22 (CYP3A4, NM_017460.6:c.522-191C>T, rs35599367)

Samples: DNA preparation, lyophilized, for each tests group 1 set of samples; sets are labelled Set A through Set F
Reports for participants: participants receive standard RfB evaluation (in English)
Participants: only CZ and SK **Minimum participation:** 1 round **Additional evaluation:** no

EQA round	**MG21/24**	**MG22/24**
Dispatch date	12.3.2024	27.8.2024
Deadline	6.4.2024	21.9.2024

MK - Urinary Calculi Analysis

Tests: determining components of urinary calculi
Samples: 1set containing 4 samples of pulverized urinary calculus components, (pure, mixed, human stones)
Reports for participants: participants receive standard RfB evaluation (in English)
Participants: only CZ and SK **Minimum participation:** 1 round **Additional evaluation:** no
Further information: Participants will be included in the RfB **Harnsteine / Urinary Calculus (HS)** programme.

EQA round	**MK1/24**	**MK2/24**
Dispatch date	6.2.2024	30.7.2024
Deadline	24.2.2024	17.8.2024

ZY - Cytokines

Tests: interleukin-1 β (IL-1 β), interleukin-6 (IL-6), interleukin-8 (IL-8), interleukin-10 (IL-10), lipopolysaccharide-binding-protein (LBP) , procalcitonin (PCT), soluble IL-2 receptor (sIL-2R), tumour necrosis factor-alpha (TNFα), PCT-POCT, IL-6-POCT
Samples: serum, lyophilized, 1 set containing 2 samples of about 2 mL each
Reports for participants: participants receive standard RfB evaluation (in English)
Participants: only CZ and SK **Minimum participation:** 2 rounds **Additional evaluation:** no
Further information: In addition, PCT can be determined by semi-quantitative methods.

EQA round	**ZY1/24**	**ZY2/24**	**ZY3/24**	**ZY4/24**
Dispatch date	13.2.2024	23.4.2024	23.7.2024	22.10.2024
Deadline	2.3.2024	11.5.2024	10.8.2024	9.11.2024

2.3. Haematology

Professional supervision: **Czech Society of Haematology ČLS JEP (www.hematology.cz)**

AP – Antithrombotic Agents

Tests are split in groups:

Group 1	apixaban
Group 2	dabigatran
Group 3	rivaroxaban

Samples: plasma, for each tests group 1 set containing 2 lyophilised samples of about 1 mL each

Reports for participants: confirmation of attendance, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: MUDr. Petr Kessler

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	**AP1/24**	**AP2/24**
Dispatch date	19.3.2024	3.9.2024
Deadline	29.3.2024	13.9.2024

CSH - Cytochemical Staining in Haematology

Tests: based on the task assignment (clinical descriptions, blood count values and photos of the blood smear and bone marrow aspirate) the participants answer several questions concerning the morphology of the cells in the smear
The stainings included: myeloperoxidase, iron

Samples: the task assignment will be available on the web

Reports for participants: confirmation of attendance, result sheet

Supervision: MUDr. Alena Buliková, Ph.D., MUDr. Dana Mikulenková

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** ne

Further information: The participants themselves choose which stainings they will process.

EQA round	**CSH1/24**	**CSH2/24**
Dispatch date	13.5.2024	14.10.2024
Deadline	24.5.2024	25.10.2024

DD - D Dimers

Tests: D Dimers (quantitative)

Samples: plasma, 1 set containing 2 lyophilised samples of about 0,75 mL each

Reports for participants: confirmation of attendance, result sheet (quantitative results), complex statistics

Supervision: RNDr. Ingrid Hrachovinová, Ph.D.

Participants: no limits **Minimum participation:** 4 rounds **Additional evaluation:** yes

Further information: The programme is intended only for measurement systems that provide **quantitative results**. With the Axis-Shield NycoCard system, users have experienced difficulty in absorbing the sample in the past - so we do not recommend that users participate in this programme.

The programme is provided in cooperation with the ECAT Foundation (Leiden, The Netherlands). We send the results of our participants in an anonymous form to the ECAT provider and we receive the results of ECAT's participants. Statistical processing and evaluation of results is carried out by SEKK using the complete set of ECAT + SEKK results.

EQA round	**DD1/24**	**DD2/24**	**DD3/24**	**DD4/24**
Dispatch date	19.3.2024	4.6.2024	3.9.2024	5.11.2024
Deadline	29.3.2024	14.6.2024	13.9.2024	15.11.2024

DIF - Peripheral Blood Morphology Evaluation — ACCREDITED

Tests: leukocyte differential count, leukocyte morphology, RBC morphology, platelets morphology, clinical recommendations, appraisal of diagnosis

Samples: 1 set containing 2 stained smears of native peripheral blood, each of them with a description of patient's clinical status. As standard we deliver stained smears to the participants. Additionally, each laboratory can order one set of unstained smears.

Reports for participants: confirmation of attendance, result sheet (with scoring), histograms and Youden graphs (for leukocyte budget)

Supervision: MUDr. Miloslava Matýšková, CSc., MUDr. Dana Mikulenková

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** no

Further information: The number of participants in each round is limited for fundamental reasons related to sample preparation (see chapter *SEKK review of the orders*, page 8).

The assigned values in this programme are determined by the consensus of experts (a list of expert workplaces is available on www.sekk.cz in the EQA section).

The scoring rules for the results along with some important advice and guidance regarding this programme can be found on www.sekk.cz, in the *Infoservis* section of the DIF part.

An educational supplement and extension of this programme is the programme *Peripheral Blood Smears - Photos* (NF, page 26*)*

EQA round	**DIF1/24**	**DIF2/24**	**DIF3/24**	**DIF4/24**
Dispatch date	4.3.2024	13.5.2024	2.9.2024	14.10.2024
Deadline	15.3.2024	24.5.2024	13.9.2024	25.10.2024

HKG - Haemocoagulation Tests — ACCREDITED

Tests: antithrombin, APTT-ratio, fibrinogen, prothrombin test (INR and ratio), thrombin time (time and ratio)

Samples: plasma, 1 set containing 2 samples of about 1 mL each

Reports for participants: confirmation of attendance, certificate, result sheet (qualitative results), complex statistics, overview of the results with uncertainties

Supervision: RNDr. Ingrid Hrachovinová, Ph.D.

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	**HKG1/24**	**HKG2/24**	**HKG3/24**	**HKG4/24**
Dispatch date	19.3.2024	4.6.2024	3.9.2024	5.11.2024
Deadline	29.3.2024	14.6.2024	13.9.2024	15.11.2024

HS - Haemocoagulation Special — ACCREDITED

Tests are split in 4 groups:

Group 1	factor VIII, factor von Willebrand
Group 2	factor IX, factor XI , factor XII
Group 3	APC - resistance (qualitative), ProC Global, (normalized ratio), protein C, protein S
Group 4	factor II, factor V, factor VII, factor X

Samples: plasma, for each tests group 1 set containing 1 sample of about 0,5 mL

Reports for participants: confirmation of attendance, result sheet (quantitative results), result sheet (qualitative results), histograms

Supervision: RNDr. Ingrid Hrachovinová, Ph.D.

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	**HS1/24**	**HS2/24**
Dispatch date	4.6.2024	5.11.2024
Deadline	14.6.2024	15.11.2024

INRP - INR measurement on POCT — ACCREDITED

Test: prothrombin test

The educational part of the programme is a set of questions focused on the clinical interpretation of results (interpretation, dose adjustment and date of next control) in relation to predefined model data of 2 patients.

Not assessed tests: questions from the educational part

Samples: 1 set containing 2 samples for the participant's POCT system as follows:

Set 1	Roche CoaguChek (all types)	You can order any 2 rounds
Set 2	*reserved*	These sets can be ordered only in rounds INRP1 and INRP3 (it is explained below)
Set 3	iLine microINR	
Set 4	*reserved*	
Set 5	Siemens Xprecia	

Reports for participants: confirmation of attendance, result sheet (quantitative results), result sheet (qualitative results for educational part), complex statistics

Supervision: MUDr. Petr Kessler

Participants: only POCT participants **Minimum participation:** 2 rounds **Additional evaluation:** no

Further information: This programme is exclusively for POCT systems.

Participants order sample sets based on their **measurement system**. This is necessary for you to receive appropriate samples from us - suitable for your instrument. This programme is not intended for measuring systems other than those listed above.

Participants with **MicroINR** and **Xprecia** can participate only in INRP1 and INRP3 rounds - this is to ensure a sufficient number of results for evaluation. If these participants accidentally order participation in other rounds, we will automatically move them to the appropriate rounds.

EQA round	**INRP1/24**	**INRP2/24**	**INRP3/24**	**INRP4/24**
Dispatch date	19.2.2024	27.5.2024	26.8.2024	7.10.2024
Deadline	1.3.2024	7.6.2024	6.9.2024	18.10.2024

KO - Blood Count — ACCREDITED

Tests: WBC (count), RBC (count), haemoglobin, HCT, MCV, platelets (count), immature platelet fraction, RDW, MPV, PDW and parameters of 5-population differential count (neutrophiles, lymphocytes, monocytes, eosinophils, basophiles)

Samples: l set containing 2 samples of native blood of about 1 mL each

The samples used are not tested for the presence of infectious markers.

Reports for participants: confirmation of attendance, certificate, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: RNDr. Soňa Vytisková, Ph.D.

Participants: only CZ and SK **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: The number of participants in each round is limited for fundamental reasons related to sample preparation (see chapter *SEKK review of the orders*, page 8).

The stability of the samples is short, so pay close attention to the information in the chapter *Samples*, page 5.

This programme **is not intended** for results of three-population differential measurements.

EQA round	**KO1/24**	**KO2/24**	**KO3/24**	**KO4/24**	**KO5/24**	**KO6/24**	**KO7/24**	**KO8/24**
Dispatch date	4.3.2024	8.4.2024	13.5.2024	17.6.2024	2.9.2024	16.9.2024	30.9.2024	14.10.2024
Deadline	8.3.2024	12.4.2024	17.5.2024	21.6.2024	6.9.2024	20.9.2024	4.10.2024	18.10.2024

LMWH - Low Molecular Weight Heparin

Test: low molecular weight heparin

Samples: serum, 1 set containing 2 samples of about 1 mL each

Reports for participants: confirmation of attendance, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: RNDr. Ingrid Hrachovinová, Ph.D.

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	**LMWH1/24**	**LMWH2/24**
Dispatch date	19.3.2024	3.9.2024
Deadline	29.3.2024	13.9.2024

NF - Peripheral Blood Smears - Photos — ACCREDITED

Tests: nuclear elements determination and basic morphology description, erythrocyte morphology, platelets morphology,

Samples: 1 set containing 4 coloured photos

Set 1	Photos available on the web
Set 2	Photos printed on paper

Reports for participants: confirmation of attendance, result sheet (with scoring)

Supervision: MUDr. Miloslava Matýšková, CSc., MUDr. Dana Mikulenková

Participants: no limits **Minimum participation:** 1 round **Additional evaluation:** no

Further information: The assigned values are determined as the consensus of the experts on this programme (the list of the experts is available on www.sekk.cz in the EQA section).

This programme does not replace the programme *Peripheral Blood Morphology Evaluation* (DIF, page 24). It is a supplement and extension of the DIF programme.

The rules for scoring the results can be found on www.sekk.cz in the *Infoservis* section, the NF part.

EQA round	**NF1/24**	**NF2/24**
Dispatch date	4.3.2024	2.9.2024
Deadline	15.3.2024	13.9.2024

NKDF - Bone Marrow Aspirate Film

Tests: nuclear elements determination and basic morphology description of cells, general description of smear, estimation of diagnosis

Samples: 1 set containing 4 coloured photos (in these photos participants carry out a description)

Set 1	Photos available on the web In addition, other photographs of bone marrow and peripheral blood will be posted on the site and are not available in printed form.
Set 2	Photos printed on paper

Reports for participants: confirmation of attendance, result sheet (with scoring)

Supervision: MUDr. Alena Buliková, Ph.D., MUDr. Dana Mikulenková

Participants: no limits **Minimum participation:** 1 round **Additional evaluation:** no

Further information: The assigned values are determined as the consensus of the experts on this programme (the list of the experts is available on www.sekk.cz in the EQA section).

The rules for scoring the results can be found on www.sekk.cz in the *Infoservis* section of the NKDF part.

EQA round	**NKDF1/24**	**NKDF2/24**
Dispatch date	15.4.2024	23.9.2024
Deadline	26.4.2024	4.10.2024

RET - Reticulocytes — ACCREDITED

Tests: reticulocyte count, (analyser), reticulocyte count (microscope), immature reticulocyte fraction , mean reticulocyte volume, mean amount of haemoglobin in reticulocytes

Samples: 1 set containing 2 stained smears

Reports for participants: confirmation of attendance, certificate, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: MUDr. Dana Mikulenková

Participants: only CZ and SK **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: The stability of the samples is short, so pay close attention to the information in the chapter *Samples*, page 5.

EQA round	**RET1/24**	**RET2/24**
Dispatch date	15.4.2024	23.9.2024
Deadline	19.4.2024	27.9.2024

SED - Erythrocyte Sedimentation Rate — ACCREDITED

Tests: sedimentation in 1 hour, sedimentation in 2 hours

Samples: blood specimens, 1 set containing 2 samples of about 5 mL each

Reports for participants: confirmation of attendance, result sheet (quantitative results), complex statistics

Supervision: Mgr. Filip Vrbacký, Ph.D.

Participants: no limits **Minimum participation:** 1 round **Additional evaluation:** yes

Further information: The programme is not suitable for instruments that measure dynamic fluidity values (e.g. Alifax TEST 1).

EQA round	**SED1/24**	**SED2/24**
Dispatch date	19.3.2024	3.9.2024
Deadline	29.3.2024	13.9.2024

2.4. Haematology ECAT

Provider: **ECAT Foundation, The Netherlands (www.ecat.nl)**

The following programmes cover some specific tests that SEKK does not offer.
SEKK only acts as a mediator, collecting requests, ordering rounds from ECAT for our participants and paying for all ECAT services.
All participants who participate in the rounds listed below will receive samples directly from ECAT (The Netherlands). Participants will send their results electronically to ECAT (not to SEKK) and participants will also receive the evaluation of their results from ECAT (only electronically, in English). If a participant in any of the ECAT rounds does not receive the shipment with samples (e.g. due to loss of shipment during transport) at the time of the round, they must report it immediately (you can contact ECAT or SEKK). It is essential to make any changes in the order (e.g. address changes) of ECAT rounds ordered via SEKK also through SEKK.
Please note that ECAT:

- **Sends the samples by post, and delivery times typically range from 4 to 10 days.**
- **Does not allow cancelling the order – once you order an EQA round it will be delivered to you and you have to pay it.**

ECAT – Annual participation fee

This fee must be paid by all participants who ordered an ECAT programme. This fee will be added on the invoice to the price of the rounds that the participant ordered (regardless of their number - this fee is charged once and you pay it only once a year).

IF8 - Factor VIII inhibitor

Test: Factor VIII inhibitor
Samples: plasma, 1 set containing 2 lyophilised samples of about 1,0 mL
Reports for participants: participants receive ECAT evaluation (electronically, in English)
Participants: only CZ and SK **Minimum participation:** 2 rounds **Additional evaluation:** no

EQA round	**IF81/24**	**IF82/24**
Dispatch date	21.5.2024	5.11.2024
Deadline	24.6.2024	9.12.2024

IF9 - Factor IX inhibitor

Test: Factor IX inhibitor
Samples: plasma, 1 set containing 2 lyophilised samples of about 1,0 mL
Reports for participants: participants receive ECAT evaluation (electronically, in English)
Participants: only CZ and SK **Minimum participation:** 2 rounds **Additional evaluation:** no

EQA round	**IF91/24**	**IF92/24**
Dispatch date	5.3.2024	27.8.2024
Deadline	8.4.2024	30.9.2024

LA - Lupus anticoagulant

Tests: Lupus anticoagulant, antiphospholipid antibodies
Samples: plasma, 1 set containing 2 identical lyophilised samples of about 0,75 mL
Reports for participants: participants receive ECAT evaluation (electronically, in English)
Participants: only CZ and SK **Minimum participation:** 4 rounds **Additional evaluation:** no

EQA round	**LA1/24**	**LA2/24**	**LA3/24**	**LA4/24**
Dispatch date	5.3.2024	21.5.2024	27.8.2024	5.11.2024
Deadline	8.4.2024	24.6.2024	30.9.2024	9.12.2024

2.5. Immunology

Professional supervision: **Czech Society of Allergology and Clinical Immunology ČLS JEP (www.csaki.cz)**

AIH - Autoimmune Liver Diseases — ACCREDITED

Tests:

AMA (anti-mitochondrial antibodies)
AMA-M2 (anti-mitochondrial antibodies M2)
anti-gp210 (anti-glycoprotein complex 210 nuclear pores antibodies)
anti-LC-1 (anti-hepatic cytosol type 1 antigen antibodies)
anti-LKM (anti-liver/kidney microsome antibodies)
anti-LKM1 (anti-cytochrome P450 2D6 antibodies LKM)
anti-SLA (anti-soluble liver antibodies, also referred as anti-SLA/LP)
anti-Sp100 (anti-Sp100 nuclear antigen)
SMA (anti-smooth muscle antibodies)

Samples: 1 set containing 2 samples of about 0,3 mL each
Reports for participants: confirmation of attendance, result sheet (qualitative results)
Supervision: Mgr. Martina Fialová, Mgr. Jan Martinek
Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	**AIH1/24**	**AIH2/24**
Dispatch date	27.2.2024	8.10.2024
Deadline	8.3.2024	18.10.2024

AIM - Autoimmunity — ACCREDITED

Tests are split in 5 groups:

Group 1	ANA screening (antibodies against cell nucleus), ANA - type of fluorescence - nucleus ANA screening (antibodies against cytoplasm), ANA - type of fluorescence - cytoplasm
Group 2	ANCA, ANCA – fluorescence type, anti-myeloperoxidase, anti-proteinase III
Group 3	anti-ENA antigens, anti-centromers
Group 4	anti-dsDNA
Group 5	anti-nucleosomes IgG

Unassessed tests: semi-quantitative results in titers

Samples: serum, for each tests group one set containing 2 samples of about 0,3 mL each
Reports for participants: confirmation of attendance, result sheet (qualitative results)
Supervision: RNDr. Kateřina Kopřivová, Ph.D.
Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes
Further information: The recommended measurement principle for ANA remains NIF, event. ELISA, there is no further limitation for ENA except agglutination reactions.

EQA round	**AIM1/24**	**AIM2/24**
Dispatch date	5.3.2024	17.9.2024
Deadline	15.3.2024	27.9.2024

APLA - Antiphospholipid Antibodies — ACCREDITED

Tests: anti-kardiolipin screening, anti-kardiolipin IgG, anti-kardiolipin IgM, anti-β2-glykoprotein 1 screening, anti-β2-glykoprotein 1 IgG, anti-β2-glykoprotein 1 IgM
Sample: 1 set containing 2 samples of about 0,3 mL each
Reports for participants: confirmation of attendance, result sheet (qualitative results)
Supervision: Ing. Ivana Stiborová, Ph.D.
Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	**APLA1/24**	**APLA2/24**
Dispatch date	5.3.2024	17.9.2024
Deadline	15.3.2024	27.9.2024

AT - Autoantibodies in Thyroid Diseases — ACCREDITED

Tests are split in 2 groups:

Group 1	anti-microsomes (TPO), anti-thyreoglobulin
Group 2	anti-TSH receptor (TRAK)

Samples: serum, for each tests group one set containing 2 samples of about 0,3 mL each

Reports for participants: confirmation of attendance, result sheet (qualitative results), result sheet (quantitative results), complex statistics

Supervision: Mgr. Eliška Halamová, RNDr. Kateřina Kopřivová, Ph.D.

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	**AT1/24**	**AT2/24**
Dispatch date	2.4.2024	15.10.2024
Deadline	12.4.2024	25.10.2024

CD34 - Population of CD34+ Cells

Tests: CD34+ (absolute and relative count), WBC (count)

Samples: a sample of human blood diluted with a preservative, 1 set containing 2 samples of about 1,2 mL each

Reports for participants: confirmation of attendance, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: doc. MUDr. Daniel Lysák, Ph.D.

Participants: only CZ and SK **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: The distribution date will be on a business day in the month specified below. The dispatch date of the samples will be communicated to all participants on the day of sending the samples **by e-mail only** (please check your e-mail address carefully in the contact details), and we will also publish this information on our website.

The stability of the samples is short, so pay close attention to the information in the chapter *Samples* on page 5.

EQA round	**CD341/24**	**CD342/24**
Dispatch date	April 2024	October 2024
Deadline	always on the 7th day after the dispatch date	

FC – Calprotectin in Stool

Test: calprotectin

Samples: 1 set containing 2 samples, stool of about 0,8 mL each

The samples used are native patient samples and are not tested for infectious markers.

Reports for participants: confirmation of attendance, result sheet (quantitative results), result sheet (qualitative results), complex statistics or histograms

Supervision: Ing. Miroslav Hinďoš

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	**FC1/24**	**FC2/24**
Dispatch date	20.2.2024	10.9.2024
Deadline	1.3.2024	20.9.2024

GP - Detection of Monoclonal Components — ACCREDITED

Tests are split in 2 groups:

Group 1 (plasma)	determination and quantification of monoclonal immunoglobulin, total protein, FLC kappa, FLC lambda, index FLC kappa / FLC lambda
Group 2 (urine)	determination and quantification of monoclonal immunoglobulin, total protein

Not assessed tests: monoclonal immunoglobulin quantification, FLC

Samples: for each tests group one set containing 2 samples, for group 1 plasma of about 0,3 mL each, for group 2 urine of about 3 mL each

Reports for participants: confirmation of attendance, certificate, result sheet (quantitative results), result sheet (qualitative results), complex statistics

Supervision: prof. MUDr. Vladimír Maisnar, Ph.D., Ing. Jaroslava Vávrová, Ph.D.

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: According to the recommendations of SLI CSACI, every laboratory that performs monoclonal immunoglobulin tests should perform these laboratory tests in both serum (plasma) and urine.

EQA round	**GP1/24**	**GP2/24**
Dispatch date	20.2.2024	10.9.2024
Deadline	1.3.2024	20.9.2024

IDDM - Type 1 Autoimmune Diabetes — ACCREDITED

Tests:
anti-GAD (anti-glutamic acid decarboxylase antibodies)
anti-IA-2 (anti-islets cells antibody type 2 antibodies against tyrosin phosphatase antigen ICA 512)

Samples: serum, 1 set containing 2 samples of about 0,3 mL each

Reports for participants: confirmation of attendance, result sheet (qualitative results)

Supervision: Mgr. Jan Martinek

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	**IDDM1/24**	**IDDM2/24**
Dispatch date	27.2.2024	8.10.2024
Deadline	8.3.2024	18.10.2024

IFT - Immunophenotypisation — ACCREDITED

Tests: quantitative: subpopulations of T lymphocytes, B lymphocytes, NK cells
qualitative: HLA-B27
Not assessed tests: Quantitative results given as absolute counts.

Samples: human blood sample diluted with preservative, 1 set containing 2 samples of about 2 mL each
The samples used are not tested for the presence of infectious markers.

Reports for participants: confirmation of attendance, result sheet (quantitative results), result sheet (qualitative results), complex statistics, overview of the results with uncertainties

Supervision: MUDr. Helena Posová, CSc., Mgr. Karolína Jankovičová, Ph.D.

Participants: only CZ and SK **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: The distribution date will be on a business day in the month below. The dispatch date of the samples will be communicated to all participants on the day of sending the samples **only by e-mail** (please check your e-mail carefully in the contact details) and we will also publish this information on our website.
The programme is designed for flow cytometry only.
The stability of the samples is short, so pay close attention to the information in the chapter *Samples*, page 5.

EQA round	**IFT1/24**	**IFT2/24**
Dispatch date	April 2024	October 2024
Deadline	always on the 7th day after the dispatch date	

IGIT - Immunopathology of GIT — ACCREDITED

Tests are split in 3 groups:

Group 1	anti-gliadin (deamidated) IgA and IgG
Group 2	anti-endomysium IgA anti-transglutaminase IgA
Group 3	anti-Saccharomyces cerevisiae IgA and IgG

Samples: serum, for each tests group one set containing 2 samples of about 0,3 mL each

Reports for participants: confirmation of attendance, result sheet (qualitative results),

Supervision: prof. RNDr. Ctirad Andrýs, Ph.D.

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	**IGIT1/24**	**IGIT2/24**
Dispatch date	27.2.2024	8.10.2024
Deadline	8.3.2024	18.10.2024

PIG - IgG subclasses

Tests: total IgG, IgG1, IgG2, IgG3, IgG4

Samples: serum, 1 set containing 2 samples of about 0,3 mL each

Reports for participants: confirmation of attendance, result sheet (quantitative results), complex statistics

Supervision: prof. RNDr. Ctirad Andrýs, Ph.D., RNDr. Vlastimil Král, CSc.

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	**PIG1/24**	**PIG2/24**
Dispatch date	27.2.2024	8.10.2024
Deadline	8.3.2024	18.10.2024

PRO - Specific Proteins — ACCREDITED

Tests: α-1-antitrypsin, α-2-macroglobulin, albumin, C-3 complement, C-4 complement, total protein, ceruloplasmin, IgA, IgG, IgM, haptoglobin, orosomucoid, prealbumin, soluble transferrin receptor (sTfR), transferrin

Samples: serum, 1 set containing 2 samples of about 1 mL each

Reports for participants: confirmation of attendance, certificate, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: RNDr. Vlastimil Král, CSc., RNDr. Josef Kratochvíla

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	**PRO1/24**	**PRO2/24**
Dispatch date	20.2.2024	10.9.2024
Deadline	1.3.2024	20.9.2024

RF - Diagnostics of Rheumatoid Arthritis and ASLO — ACCREDITED

Tests are split in 2 groups:

Group 1	rheumatoid factor (screening, IgG, IgA, IgM) anti-CCP IgG (anti-cyclic citrullinated peptide) anti-MCV IgG (anti-mutated citrullinated vimentin) (qualitative results for all tests)
Group 2	anti-streptolysin O (ASLO) immunochemically (quantitative results)

Samples: serum, for each tests group one set containing 2 samples, set 1 about 0,5 mL, set 2 about 0,3 mL

Reports for participants: confirmation of attendance, result sheet (quantitative results), result sheet (qualitative results), complex statistics

Supervision: RNDr. Ivana Půtová

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

EQA round	**RF1/24**	**RF2/24**
Dispatch date	5.3.2024	17.9.2024
Deadline	15.3.2024	27.9.2024

TIE - Allergy Control Scheme (Total IgE) — ACCREDITED

Test: total IgE

Sample: serum, 1 set containing 2 samples of about 0,5 mL

Reports for participants: confirmation of attendance, certificate, result sheet (quantitative results), complex statistics, overview of the results with uncertainties

Supervision: RNDr. Jitka Pohořská

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: The programme *Allergy Control Scheme (Specific IgE)* can be found in the RfB programme section (AL, page 18).

EQA round	**TIE1/24**	**TIE2/24**
Dispatch date	20.2.2024	10.9.2024
Deadline	1.3.2024	20.9.2024

2.6. Pathology

Important notice common to all pathology programmes
To perform the sample processing as soon as possible after receiving the samples is of the highest importance. If you start processing the samples just before the deadline and the slide is destroyed, you will not be able to get a replacement sample from SEKK in time and you will not be able to complete the round in due time.

2.6.1. ESP

Professional supervision: **European Society of Pathology (www.esp-pathology.org)**

CRC – Colorectal Carcinoma **ACCREDITED**

Tests: detection of *KRAS*, *NRAS*, *BRAF* genes mutations

Samples: 1 set containing 15 unstained FFPE sections obtained from 5 primary samples (invasive colorectal adenocarcinomas, rarely a tissue without neoplastic cells should be used as a primary sample). Every participant receives 3 sections of each primary sample. One section is to be used for hematoxylin-eosin (HE) staining and the remaining 2 sections for DNA isolation and mutation detection.

Reports for participants: confirmation of attendance, certificate, result sheet (qualitative results)

Supervision: Prof. Dr. med. Daniela Aust (Germany), Prof. Magali Svrcek, M.D., PhD. (France)

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** no

Further information: The participants should identify and describe gene mutations (the participant can choose any combination of *KRAS, NRAS, BRAF* testing) clinically relevant to anti-EGFR therapy. It is assumed that:

- If the participant tests KRAS or NRAS then in minimum: codons 12, 13 (exon 2)
  codons 59, 61 (exon 3)
  codons 117, 146 (exon 4)
- If the participant tests BRAF then in minimum: codon 600 (exon 15)

The participant must (no later than on the day of deadline):

1. Process EQA samples received using the procedure routinely used in their laboratory.
2. Specify methods used, including analytical sensitivity (the term "method" refers to the reagents used; the measuring system/automat/instrument need not be specified).
3. For each sample, indicate whether it has been tested and, if so, add the additional information required, indicate the mutations found and indicate the methods used for individual genes.

Participants are not allowed to share EQA results with other participants or to enter the results into systems/databases that allow such sharing. Each participant must send their own results to SEKK without consulting other participants.

Performance evaluation

Each gene is evaluated separately.

Assigned values (AV), i.e. the mutations that the participants should find, are determined in the network of 3 expert laboratories in the Europe. From the point of view of the ISO 17043 it is CVE (consensus from experts) type of AV.

Detection of mutations: The participant's result (identified mutation) is compared to the AV for each sample. In the event that the method used by the participant does not allow the identification of a specific mutation and the participant indicates only the exon, such a result is accepted. Misreported mutations or false negative results will be evaluated as incorrect, regardless of the analytical system used by the participant. To be evaluated as successful in particular gene then the participant must correctly detect mutations of this gene in all samples.

Schedule

EQA round	**CRC1/24**	**CRC2/24**
Application deadline	2.2.2024	27.6.2024
Dispatch date	2.4.2024	27.8.2024
Deadline	30.4.2024	24.9.2024

Replacement samples

If the participant needs to obtain a replacement sample(s) (due to damage or deterioration of the original sample), the participant must order it by e-mail no later than 1 week after the delivery of the parcel with the original samples for the round (see the text box at the top of this chapter). SEKK will send replacement samples to the participant via a courier service for **12,5 EUR** for each FFPE section plus the **transport price** of the parcel.

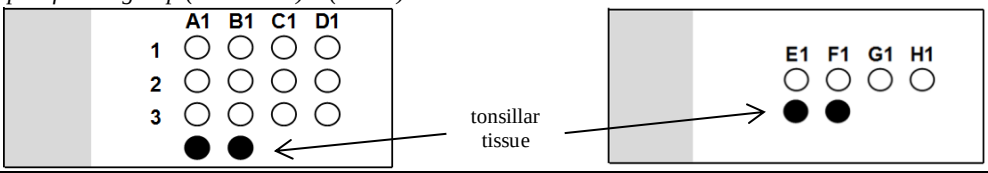
PDL1 – Programmed Death Ligand 1

Tests are split in groups (subschemes) this way:

Group (subscheme) 1	TNBC (triple-negative breast carcinoma)
Group (subscheme) 2	NSCLC (non-small cell lung cancer)
Group (subscheme) 3	UC (urothelial carcinoma)
Group (subscheme) 4	HNSCC (head and neck squamous cell carcinoma)

Samples: for each test group (subscheme) one set of samples containing 1 physical slide and 1 virtual slide.

Physical slide	***Virtual slide***
The participant will receive this slide in the parcel. One slide of the TMA block contains **unstained** FFPE samples made of 4 primary samples (carcinomas labelled Ax to Dx where x is the number of a group (subscheme)). The TMA contains 3 cores for each primary sample. *The examples for the group (subscheme) 1 (TNBC):*	This slide will be available through a web application. One slide of the TMA block contains **stained** FFPE samples made of 4 primary samples (carcinomas labelled Ex to Hx where x is the number of a group (subscheme)). The TMA contains one core for each primary sample.



Reports for participants: confirmation of attendance, certificate, result sheet (qualitative results), result sheet (quantitative results)

Supervision: Dr. Jan von der Thüsen MA MBBS PhD (The Netherlands)

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** no

Further information: The participants are free to order any combination of the groups (subschemes).

The participants will report both quantitative and qualitative results for each sample (Ax to Hx) this way:

Set	***Primary sample***	***Clone***	***Cut-off*** [1]	***Results reported by the participants***	
				quantitative [2]	***qualitative***
1	TNBC [3] (triple-negative breast carcinoma)	SP142	**1 %**	IC	negative inconclusive positive
		22C3	**10**	CPS	
2	NSCLC (non-small cell lung cancer)	any clone except SP142 (as we do not include scoring of this clone)	**1 % and 50 %**	TPS	negative (TPS < 1) inconclusive positive (TPS 1 - 49) positive (TPS ≥ 50)
3	UC (urothelial carcinoma)		**10**	CPS	negative inconclusive positive
4	HNSCC (head and neck squamous cell carcinoma)		**1**	CPS	negative inconclusive positive

[1] To determine qualitative results, use **exclusively the cut-offs** prescribed in the table. The cut-off prescribed means that you will evaluate the result as **positive** if the corresponding score is **greater than or equal** to the specified cut-off. Please note that there are 2 categories of a positive result in case of NSCLC.
When sorting the results into qualitative categories, do not take into account the uncertainty of the quantitative result (score) - consider the calculated score to be an "exact" number and compare it with the prescribed cut-off.

[2] The participants report the quantitative results as scores ranging from 0 to 100:

IC [%] = immune cells
IC = proportion of tumour area occupied by PD-L1 staining tumour-infiltrating immune cells of any intensity

TPS [%] = tumour proportion score
TPS = 100 × (number of PD-L1 staining tumour cells) / (total number of viable tumour cells)

CPS [dimensionless number] = combined positive score
CPS = 100 × (number of PD-L1 staining cells $_{[\text{tumour cells, lymphocytes, macrophages}]}$) / (total number of viable tumour cells)
(if the result of the CPS calculation is a number > 100, then 100 is reported)

[3] In case of the TNBC you are free to choose either the SP142 or the 22C3 clone. You will see 2 independent rows (tests labelled TNBC SP142 and TNBC 22C3) when entering the results in the web app Cibule – please fill in your results in the line that matches the clone you used. If you want to test both clones, order 2 sets of samples no. 1 (TNBC).

The participant must (no later than on the day of deadline):

1. Perform immunohistochemical staining of the physical slides using the procedure they routinely use in their laboratory.
2. Examine all primary samples (both on physical and virtual slides) – this includes calculation of the required score and final result (negative/positive).
3. Report the following information (using the web application):
   - The method used for staining.
   - Quantitative and qualitative results (see the table above).

Participants are not allowed to share EQA results with other participants or to enter the results into systems/databases that allow such sharing. Each participant must send their own results to SEKK without consulting other participants.

Performance evaluation

Each physical and virtual slide of each group (subscheme, carcinoma type) is evaluated separately.

The evaluation is based on the qualitative results. Assigned values (AV), i.e. expected results (negative/positive) are determined as a consensus.

Particular slide is evaluated as successful if the participant reports correct (i.e. equal to AV) results for at least 3 out of 4 primary samples presented on the slide.

In case of an appeal made by the participant regarding the evaluation of their results from the physical slide, the participant must provide the digital scan of this slide (or send the slide back) to the EQA provider to be reviewed.

Schedule

EQA round	**PDL11/24**	**PDL12/24**
Application deadline	14.3.2024	15.8.2024
Dispatch date	14.5.2024	15.10.2024
Deadline	11.6.2024	12.11.2024

Replacement samples

If the participant needs to obtain a replacement sample(s) (due to damage or deterioration of the original sample), the participant must order it by e-mail no later than 1 week after the delivery of the parcel with the original samples for the round (see the text box at the top of this chapter). SEKK will send replacement samples to the participant via a courier service for **40 EUR** for each slide plus the **transport price** of the parcel.

2.6.2. CSP

Professional supervision: **Czech Society of Pathology ČLS JEP (www.patologie.info)**

HCB – Histological and Cytological Staining

Tests: histological and cytological staining

Samples: 1 set containing 4 unstained slides made of tissue samples (2 histological and 2 cytological)

Reports for participants: confirmation of attendance, result sheet (qualitative results); we return the slides to the participants along with the reports

Supervision: doc. MUDr. Tomáš Jirásek, Ph.D.

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** no

Further information: For each slide, the staining that the participants are obliged to perform is prescribed (if the participant does not use the prescribed staining in his laboratory, they can choose an alternative prescribed staining). The tasks of the participants are:

1. Perform staining using a routine procedure.
2. Send the following 2 items to SEKK no later than on the day of deadline:
   a) completed result form (results of this programme cannot be entered in the Cibule application)
   b) stained slides

It is essential that participants send their glasses to SEKK using a shipping service that guarantees delivery within 5 days and the possibility of tracking the shipment.

Assessment of the participant's staining is performed by a team of 3 experts. This team evaluates the staining quality for each slide separately. The scores for individual samples from individual experts are summated and these sums are then evaluated.

EQA round	**HCB1/24**	**HCB2/24**
Dispatch date	14.5.2024	29.10.2024
Deadline	24.5.2024	8.11.2024

HR - Hormonal Receptors

Tests: estrogen receptor (ER), progesterone receptor (PgR)

Samples: 1 set containing 2 unstained histological slides made of TMA blocks, 1 slide for ER determination and 1 slide for PgR determination

Reports for participants: confirmation of attendance, result sheet (qualitative results)

Supervision: MUDr. Tetiana Shatokhina

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** no

Further information: Participants will receive unstained histological slides. The tasks of the participants are:

1. Perform staining using a routine procedure.
2. Carry out evaluation using a routine procedure.
3. Send the results to SEKK (using the web application Cibule, no slides are to be send back to SEKK)

The results of the participants are evaluated using a standard procedure for evaluating the qualitative results (comparing the participant's results for individual samples within the TMA with assigned values).

EQA round	**HR1/24**	**HR2/24**
Dispatch date	13.2.2024	27.8.2024
Deadline	23.2.2024	6.9.2024

IHC - Immunohistochemistry - Detection of HER-2/neu

Tests: immunohistochemical testing of HER-2/neu (human epidermal growth factor receptor 2, c-erbB-2)

Samples: 1 set containing 1 unstained histological slide made up of TMA block (EQA slide)

Reports for participants: confirmation of attendance, result sheet (qualitative results), along with the reports we return the slides to the participants

Supervision: MUDr. Pavel Fabian, Ph.D.

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** no

Further information: Participants will receive unstained histological slide. The tasks of the participants are:

1. Perform staining using a routine procedure.
2. Carry out evaluation using a routine procedure (qualitative results are mandatory).
3. Send the results to SEKK (using the web application Cibule, no slides are to be send back to SEKK)

The results of the participants are evaluated using a standard procedure for evaluating the qualitative results (comparing the participant's results for individual samples within the TMA with assigned values).

EQA round	**IHC1/24**	**IHC2/24**
Dispatch date	13.2.2024	27.8.2024
Deadline	23.2.2024	6.9.2024

VIB – General Immunohistochemistry - Staining

Tests: immunohistochemical staining

Samples: 1 set containing 5 unstained histological slides made of TMA blocks

Reports for participants: confirmation of attendance, result sheet (qualitative results), along with the reports we return the slides to the participants

Supervision: MUDr. Pavel Fabian, Ph.D.

Participants: no limits **Minimum participation:** 2 rounds **Additional evaluation:** no

Further information: For each slide, the staining that the participants are obliged to perform is prescribed (if the participant does not use the prescribed staining in the laboratory, they can choose an alternative prescribed staining - the staining schedule is shown below). The tasks of the participants are:

1. Perform staining using a routine procedure.
2. Send the following 2 items to SEKK no later than on the day of deadline:
   a) completed result form (results of this programme cannot be entered in the Cibule application)
   b) stained slides

It is essential that participants send their glasses to SEKK using a shipping service that guarantees delivery within 5 days and the possibility of tracking the shipment.

Assessment of participant's staining is performed by a team of 3 experts. This team evaluates the staining quality for each slide separately. The scores for individual samples from individual experts are summated and these sums are then evaluated.

EQA round	**VIB1/24**	**VIB2/24**
Dispatch date	14.5.2024	29.10.2024
Deadline	24.5.2024	8.11.2024
Planned prescribed staining (alternative stainings are indicated in brackets) for individual slides (labelled A to E)	A: TTF-1 (CK 7) B: PRAME (inhibin) C: SMA (desmin) D: MLH1 (Ki 67) E: CD 3 (CD 20, LCA)	A: BAP1 (CK AE1/AE3) B: SATB2 (CDX-2, CK 20) C: napsin A (CK 7) D: HMB 45 (Melan A) E: p53 (ER, PAX-8)

2.7. Transfusiology

Professional supervision: **Transfusion Medicine Society ČLS JEP (www.transfuznispolecnost.cz)**

IH - Blood Group Serology — ACCREDITED

Tests: determination of AB0 blood group using blood cells and serum, subgroups of AB0 system, Rh (D) determination, RBC antigens other than AB0 and Rh(D), direct Coombs test, antibody screening, antibody identification, antibody titre, compatibility test (cross test)

Not assessed tests: antibody titre, answers to the question "Is transfusion possible?

Samples:

Set 1 (volume **2 mL**)	4 samples: 2x RBC suspension (E1, E2) and 2x corresponding serum (S1, S2) *Note: Samples of Set 1 and Set 2 are identical except for volume.*
Set 2 (volume **3 mL**)	
Set 3	2 segments (K1, K2) intended to make 4 compatibility tests (K1xS1, K1xS2, K2xS1, K2xS2)

Reports for participants: confirmation of attendance, certificate, result sheet (qualitative results)

Supervision: MUDr. Martin Písačka

Participants: only CZ and SK **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: Order individual sample sets so that their volume and composition allows you to perform the intended tests. Set 1 or 2 must be ordered in any case. Order set 3 only when performing compatibility tests.

EQA round	**IH1/24**	**IH2/24**	**IH3/24**	**IH4/24**
Dispatch date	26.2.2024	20.5.2024	16.9.2024	4.11.2024
Deadline	8.3.2024	31.5.2024	27.9.2024	15.11.2024

PAT - Direct Antiglobulin Test

Tests: direct antiglobulin test - qualitative and semi-quantitative determination (PAT, erythrocyte sensitization specificity, quantification of IgG-PAT) and determination of erythrocyte antigens on PAT+ erythrocytes (AB0 blood group, Rh D antigen, other erythrocyte antigens)

Samples: mixture of erythrocytes and plasma, 2 samples of about 2 mL each

Reports for participants: confirmation of attendance, result sheet (qualitative results)

Supervision: MUDr. Martin Písačka

Participants: only CZ and SK **Minimum participation:** 2 rounds **Additional evaluation:** yes

Further information: This programme is focused on qualitative and semi-quantitative laboratory examination of sensitized erythrocytes (with positive PAT).

Note: PAT = direct antiglobulin test = direct Coombs test

EQA round	**PAT1/24**	**PAT2/24**
Dispatch date	20.5.2024	4.11.2024
Deadline	31.5.2024	15.11.2024

3. Additional information sources

To keep the scale of this document within acceptable limits, we provide selected information only in the form of links that point to additional important information.
All substantial information is available on **www.sekk.cz**, especially in the **EQA** and **Infoservis** sections.

Accreditation of the provider
A copy of SEKK's accreditation certificate (including attachments) can be found on www.sekk.cz in the *About Us* section.

Certification 2024 (criteria for issuing certificates)
Certificates of approval are issued only in selected EQA programmes and only for selected tests, and certificate issue is subject to certain criteria. Complete information (i.e. an overview of tests for which the certificate is issued and the relevant criteria) can be found on www.sekk.cz in the Infoservis section under the link *Certification 2024*.

Index of the manufacturers
Index of the manufacturers is common for all programmes and is available on www.sekk.cz in the EQA section.

Evaluation of the results of EQA participants
The description of the results evaluation, the concept of the test as the basic evaluated entity, the calculation of the success rate, the long-term evaluation and other information regarding the evaluation of performance and success can be found in the presentation on www.sekk.cz in the EQA section under the *Assessment of the EQA results* link.

Key basic information (KBI)
The description, including examples, can be found on www.sekk.cz in the EQA section under the *key basic information (KBI)* link.

Criteria for evaluating quantitative results - acceptable differences (D_{max})
Criteria for all quantitative tests included in EQA can be found on www.sekk.cz in the EQA section under the link *Criteria for evaluating quantitative results - acceptable differences (D_{max})*.

Uncertainties of measurement results
When calculating uncertainties, please follow the document *The recommendation for expressing uncertainties of quantitative measurement results in the medical laboratories*, which is available on www.sekk.cz in the EQA section.

Supervisors, expert laboratories, experts
In this plan, the supervisors of each EQA programme are listed only by name. A complete list of all supervisors, including contact information, can be found on www.sekk.cz in the EQA section under the *Supervisors of EQA programmes* link.
At the same location, under the *Expert laboratories* link, you will find workplaces whose results are used to determine assigned values in some EQA programmes.
In addition, under the *Experts* link there is a list of specialists who are involved in the determination of assigned values of the type "consensus from the experts" for some EQA programmes.

Additional evaluation (V+)
The methodology for providing this service, including examples, can be found on www.sekk.cz in the EQA section, under the link *additional valuation (V+)*.

Entering the results of the EQA tests
Instructions regarding the entry of basic information about tests and results can be found on www.sekk.cz in the EQA section, under the *Entering the results of tests* link (you will be redirected to the help of the Cibule app).

Reports for EQA participants
In the chapters dedicated to the description of particular programmes, you can find a brief list of documents that participants will receive as part of the evaluation of the EQA round for each programme (as an annex to the final report). An overview, samples and descriptions of selected documents can be found on www.sekk.cz, in the EQA section under the *Reports for EQA participants* link.

4. Web application Cibule

Here is the shortest possible guide to getting started with the Cibule application. For detailed information, see help.

Start the application

In your Internet browser, enter the address
www.sekk.cz
and then click the image of the onion.

Language

The application communicates with the user in Czech, Slovak or English.
Before login: The application sets the language according to the settings in the user's browser.
After login: The application sets the language according to the participant's country and the language cannot be changed.

Access to the application

SEKK controls access to the application according to the following rules:

- **New participant**
  The new participant must first **register** in the Cibule application. Select ***New participant*** in the menu and fill in the required information (the application contains a wizard). Once the data has been submitted, SEKK will process the request and send **access data** to the new participant.
- **Registered participant**
  Registered participants have unlimited access to the Cibule application in the years in which they have ordered EQA rounds.
  If the registered participant does not order any EQA rounds, his access to the application is blocked after several months. If you need to restore access, please e-mail us with your request and we will make the app available for you again. The access data you have used in the past does not change.

Login

Select ***Log in*** in the menu. Please note that all fields in the login form are case-sensitive.
The credentials of each user consist of 3 data items:

1. Participant code: the code is defined by SEKK and cannot be changed by the participant.
2. User: each participant code has a predefined administrator named *spravce* in the application, who cannot be deleted or renamed and that can create additional users if needed (see help for details).
3. Password: the password is set by each user as follows:

   First login

   The credentials that the new participant receives contain the generic password for the first login only. When you log in, the app will ask you to set your own password and you won't be able to continue working until you do so. It is recommended that you also fill in the information in the menu ***Setup - Users*** (see below why this is useful).

   Subsequent logins

   You will use your own password for all future logins.

   Forgotten password

   The application includes a feature to help you if you forget your password. To be able to use this feature, you must make a few arrangements in advance while signed in to the app. Select ***Setup - Users*** in the menu and enter all the required information. That is all. If you have forgotten your password, select ***Forgotten password*** in the menu, enter the required information, and the application will reset the generic password for the first login; it will also send you an e-mail with credentials (to the e-mail address you provided when you entered your personal information).
   If the procedure described in the previous paragraph fails, contact SEKK.

User identification

Many features (such as forgotten password or requests for orders and changes in workplace identification data) are tied to full user identification (full name, phone, and e-mail). If any of these data are missing, you cannot use these features. Everything can be found in the menu ***Setup - Users***.

Entering requests

Some data stored in the application cannot be changed directly by the user, but by creating a request in the application; SEKK reviews the request and sends a message to the user. Using requests, the user can change:

- Identification data of the workplace (address, billing information, e-mail, telephone, etc.) in the menu ***Setup*** – ***Address.***
- Ordered services (rounds, sample sets, V+ etc.) in the menu ***Orders***.

Requests overview is available in the menu ***Requests***.

Group administrator

It should be useful (in bigger organisations) that one participant can manage the identification data and orders of other participants. Such a participant is then referred to as the group administrator. The group administrator is created by SEKK on the basis of the request that the participant sends to SEKK by e-mail.

5. Index