Verein für **medizinische Qualitätskontrolle**
Association **pour le contrôle de Qualité médical**
Associazione **per il controllo di qualità medico**

# Instructions and patient details survey 2021-4

## General

A list of all analyses with the corresponding samples can be found on www.MQZH.ch under «Offer».

**Sample handling**
If nothing special is specified, you can use our proficiency test samples like patient material. Refrigerated samples must be removed from the refrigerator about 15-30 minutes (exception blood gas ampoules 5 hrs) before analysis so that they are at room temperature. Ready-to-use samples only need to be mixed afterwards. Our samples are partly of human origin and are handled and disposed of with the same care as patient samples.

All whole blood samples must always be turned over the head by hand 30-40 times until no more cells adhere to the bottom of the tube

**Sample analysis**
- The samples must be analyzed using the same method that you use for the patient samples.
- Multiple determinations are only allowed if this is also done for patient samples.
- Samples must not be forwarded to other laboratories.

**Results submission**
- If the results are not submitted via the online system, the protocol sheet must be signed by the responsible laboratory manager/physician
- The results may only be discussed with colleagues from other laboratories once the proficiency test has been completed.

**Administration**
- IMPORTANT: Check whether the information on the log sheet is correct and complete. You can write changes and additions directly on the sheet by hand or enter them in the "Notes" field in the online account..
- Please do not forget to keep a copy of your results until you have received and checked the evaluation.

## The following samples require specific handling

**B33 SARS CoV-2 Antigen Rapid Test**

You will receive the B33 sample as a liquid (it simulates the patient's nose). Be sure to use the swab, which is included in your rapid test kit. You can find detailed instructions on www.MQZH.ch

**K3 HbA1c**

Participants with Afinion: Please perform the determination as soon as possible (fresh whole blood).

**H6, H7 Bloodcount 5-Part / Retikulocytes**

These proficiency test samples are measured like patient samples. Please measure the samples immediately after receipt..

**G1, G3, G4, G18-G22, Coagulation**

Pipette 1 ml distilled water into the vial, close and mix gently. Allow to stand for 30 minutes at room temperature. Mix again carefully by hand before measurement. Measure within 2 hours.

**U2, urine test strips**

Please enter your result as you do for your patient samples. (Submission in numbers or +++ is possible))

**B1 Strep A Test**

Use the swab as if it were freshly swabbed.

**S1 Fecal occult blood**

The simulated stool sample is ready for use. The application of the sample, which is done by the patient in the case of the patient sample, must also be performed.

**K29 Calprotectine**

The sample can be handled like liquid faeces.

If it is not possible to measure the sample on the day of arrival, please store it at -20°C.

**K39 Folate in Erythrocyte**

The hematocrit value of the sample can be read on the label. Please measure the sample immediately after receipt. If you cannot measure the sample immediately, please store at -20°C.

## The following device-specific instructions can be found at www.MQZH.ch under "Instructions"»:

| | |
|---|---|
| CoaguChek Pro II | Radiometer ABL800/80/90, AQT |
| Microsemi | Epoc |
| CoaguChek XS | Uricult |
| Quick Vue In-line Strep A | Cholestech LDX |
| Hemochron jr | ImmunoCAP RAPID |
| Micro INR | Simptomax |
| Xprecia | Blutsenkung |
| GeneXpert | SARS CoV-2 antigen rapid test |

## Patient details

## K1 Clinical chemistry

**Estimated glomerular filtration rate (eGFR)**

In order to assess a patient's renal function, plasma creatinine should be measured and the the eGFR should be calculated. In the protocol sheet, all participants who measure creatinine will find an additional entry for the eGFR. If you do not yet work with the eGFR, you will find further you will find further information and a calculator at www.mqzh.ch.
Patient details: 61-year-old man, skin color white, (weight 105 kg)

## H4 Blood parasites

Possible codes for identification:

| | |
|---|---|
| 100 | No parasites found |
| 101 | Plasmodium |
| 102 | Plasmodium falciparum |
| 103 | Plasmodium malariae |
| 104 | Plasmodium vivax |
| 105 | Plasmodium ovale |
| 106 | Trypanosoma sp. |
| 107 | Mikrofilaria |
| 199 | others: |

(For P. falciparum, indicate % of infected erythrocytes).

## K38 Immunfixation

**Specimen description: Patient: women, born 1985**

Codes for the interpretation of the immunofixation. Please specify the appropriate code.

| **Codes** | **Description**<br><br>**In the immunofixation appears a:** |
|---|---|
| 1 | monoclonal component type IgA Kappa |
| 2 | monoclonal component type IgA Lambda |
| 3 | monoclonal component type IgG Kappa |
| 4 | monoclonal component type IgG Lambda |
| 5 | monoclonal component type IgM Kappa |
| 6 | monoclonal component type IgM Lambda |
| 7 | Oligoclonal immunoglobulin responses indicate limited heterogeneity of synthesized immunoglobulins |
| 8 | Inconspicuous findings, no further investigations |

## B10 Gram stain

Material: Blood culture, Diagnosis: Sepsis
(Please mark only applicable answers)

## U4 Urine sediment

**Procedure**
Enclosed you will receive 5 photos with images of urine sediment components. The following types of images we will use: PK=phase contrast, HF=bright field.
Your task is to identify the objects marked with an arrow using the two-digit codes below. On the protocol sheet, you will find five entries ("Image 1" to "Image 5") in the "Urine Sediment" section where you can enter the codes.

**Sample description: 32-year-old mle patient**

**Urin-Teststrip**

| Test | Resultat | Unit | Reference |
|---|---|---|---|
| Glucose, ql | **neg** | | **neg** |
| Protein, ql | **Spuren** | | **neg** |
| Bilirubin | **neg** | | **neg** |
| Urobilinogen | **norm** | | **norm** |
| pH | **5.0** | | **5.0-7.5** |
| Dichte | **1.025 g/ml** | g/ml | **1.020-1.030** |
| Erythrozyten, ql | **+** | | **neg** |
| Keton | **neg** | | **neg** |
| Nitrit | **neg** | | **neg** |
| Leukozyten | **neg** | | **neg** |

The images are all from the same sample and were taken with a 40x objective.
IMPORTANT: Note the scale at the bottom right to estimate the size of the elements.
More images of this sample can be found on the web at www.mqzh.ch in the photo album..

**Codes**

| | | |
|---|---|---|
| **10** Erythrocytes normal | **40** Spermatozoa | **60** Bacteria |
| **11** dysmorphic Erythrocytes | | **61** Yeast/Fungi |
| **12** Acanthocytes | **50** Hyaline Casts | **62** Trichomonas |
| | **51** Granular Casts | |
| **20** Leucocytes | **52** Waxy Casts | **70** Crystals and Salts |
| | **53** Erythorocyte Casts | |
| **30** Squamous Epithelia | **54** Leucocyte Casts | **80** Hair |
| **31** Epithelia (other than squamous-) | **55** Epithelia Casts | **81** Mucus |
| **32** Caudate Epithelia | **56 Pseudocasts** | **82** Impurity |
| **33** Round Epithelia | **57** Lipids | **83** Air bubble |
| **34** Transitional Epithelia | | **99** Unknown |
| **35** Renal Tubular Epithelial Cells | | |
| **36** Decoy Cells | | |

Several terms are possible for epithelia. Use the term that is common in your laboratory.

## H3 Differential Blood Smear

**Patient data**

| | Age / Sex | | Hb | Hk | Leuc | Tc | Ec |
|---|---|---|---|---|---|---|---|
| 2021-4 H3A | 60 | m | 82 g/l | 0.258 l/l | 6.36 G/l | 137 G/l | 3.38 T/l |
| 2021-4 H3B | 63 | m | 77 g/l | 0.24 l/l | 89.68 G/l | 20 G/l | 2.71 T/l |

**Instructions for filling out the H3 Protokoll**

If your smear is defective or bad, we will gladly send you another one. Call us as soon as possible, our stock is limited.

**Leukocyte differentiation**

For the differentiation of rod and segment nucleated neutrophil granulocytes you have to work according to the thread rule.

Neutrophils (rod + seg), lymphocytes/plasma cells and white precursors (promyelocytes + myelocytes + metamyelocytes) are automatically added together for QUALAB assessment.

For example, if you cannot distinguish the white precursors, it is possible to sum them up with a curly bracket.

IMPORTANT: Make sure that the sum adds up to 100%, otherwise you will get a "not fulfilled".

**Morphological data**

After you have assessed the morphology of the leukocytes, platelets and erythrocytes, you must select the most important features of this blood count for the report. (max. 5 codes)

To do this, enter the codes below under "Findings":

**General Codes**

29 Normal findings (do not add any other codes)
30 Pathologic findings, refer to expert
31 Pathologic findings, not refered to expert

(Note: Even if you write code 30 on a blood count, the leukocyte differentiation must be done in any case).

**Leukocyte assessment**

01 Hypersegmentation
02 Left shift
03 Pelger-Hüet Abnormaly
04 Toxic signs of neutrophils (toxic granulation, basophilic strippling or vacuoles)
05 Atypical lymphocytes presumably reactive
06 Atypical lymphocytes probably neoplastic
07 Auer rods
08 other:

**Thrombocyte assessment**

09 Giant platelet
10 Platelet aggregates
11 other:

**Erythrocyte assessment**

12 Microcyten
13 Macrocytes
14 Hypochromasia
15 Polychromasia
16 Poikilocytosis
17 Elliptocytes/Ovalocytes
18 Stomatocyosis
19 Targetcells
20 Fragmentocytes
21 Spherocytes/Microspherocytes
22 Rouleaux
23 Erythrocyte agglutination
24 Howell-Jolly bodies
25 Basophilic strippling
26 Tear drops
27 other:
28 Parasites (please specifiy)

To meet the requirements, you must specify at least one code for both preparations, and differentiate the leukocytes.