




April, 2015

Analysis of blood samples from laboratory animals

Shipment Address	Veterinärmedizinisches Labor Winterthurerstr. 260 8057 Zürich	
Phone	044 635 83 40	
Sample Submission	Main building 2nd floor Room TFA 10.08	
Sample Number	Maximum of 15 samples per day. In case of more samples, please contact us.	
Notification	The laboratory should be notified at least 7 days before sample submission.	
Sample Processing	If samples are received in the laboratory before 2 pm, they will be analyzed the same day (only valid if the laboratory has been notified in advance). This may not be true if manual differentials are required.	
Attention	Please be aware that if the laboratory has not been informed about sample submission or if the maximum number of samples is exceeded, we are not able to guarantee sample processing the same day.	

ACCREDITED BY EAAC/EFMD



General remarks

- For blood collection techniques we refer to the Zurich Integrative Rodent Physiology Platform (<http://www.zirp.uzh.ch>).
- Please use only the indicated blood tubes.
- The tubes have to be clean and clearly labelled.
- For every animal, a submission form has to be filled in and given to the laboratory together with the samples (<http://www.vetlabor.uzh.ch>). In case of a group of animals with the same analyses, one submission form for the whole group is sufficient.
- For analyses not mentioned below, please contact us: 044 635 83 40 or info@vetlabor.ch
- Please be aware that we don't have any laboratory specific reference values for laboratory animals and that we don't report any reference values in these species.
- Please be aware that, depending on the type of study, an administrative charge might be claimed.



Hematology

In general, hematology testing is performed on EDTA-anticoagulated blood. This is the only type of anticoagulant that can be assayed with our hematology analyzer. We use a Sysmex XT-2000iV analyzer in our laboratory, which is running with a veterinary specific software able to measure laboratory animals, including mice, rats, monkeys, rabbits, hamsters, minipigs and others. If required, microscopic examination is done by experienced medical technologists and veterinary clinical pathologists are available for consultation.

General remarks

- The sample **stability** is limited and samples have to be analyzed the **day of sampling**. For **mice**, samples should ideally even be analyzed **within 4 hours** after sampling.
- EDTA blood should be kept refrigerated until submission (2-8°C). If you submit the samples on a cold pack, please make sure to keep them out of direct contact with the pack (insert paper towels between the blood and the icepack). Direct contact may cause freezing of red cells, with subsequent hemolysis.
- Clotted samples will yield erroneous results and no results will be released by the laboratory, no matter how big the clots are. Ensure that the blood is mixed promptly with the EDTA after blood collection to avoid sample clotting. This should be done by gentle inversion several times. **Do not shake the tube!** In addition, coating the needle and syringe with a solution of 7.5% EDTA may help to avoid clotting.
- Please be aware that partially filled EDTA tubes affect the cells because EDTA is hypertonic and may result in erroneous results. EDTA tubes should ideally be more than half full.
- Please use tubes with a round bottom inner tube (see recommendations below)

Sample requirements

- Normal aspiration mode:
 - o EDTA-anticoagulated whole blood: **at least 300 µl**
 - o Recommended tubes: Sarstedt, Microvette[®] 500 K3E (Ordering Number 20.1341)
- Capillary aspiration mode (blood is diluted 1:5 before analyses (**done by our laboratory**)):
 - o EDTA-anticoagulated whole blood: **at least 100 µl**
 - o Recommended tubes: Sarstedt, Microvette[®] 200 K3E (Ordering Number 20.1288)
 - o Reticulocyte counts and white blood cell differentials are not as reliable as with the normal aspiration mode; these results will however be verified by microscopic examination of the blood film



Parameters:

Small hematogram

Hematocrit / Packed cell volume
Hemoglobin concentration
Red blood cell count
Mean corpuscular hemoglobin (MCH)
Mean corpuscular hemoglobin concentration (MCHC)
Mean cellular volume (MCV)
Red cell distribution width (RDW)
White blood cell count
Platelet count (Impedance)

Large hematogram

Hematocrit / Packed cell volume
Hemoglobin concentration
Red blood cell count
Mean corpuscular hemoglobin (MCH)
Mean corpuscular hemoglobin concentration (MCHC)
Mean cellular volume (MCV)
Red cell distribution width (RDW)
Reticulocyte count
White blood cell count
White blood cell differential
Platelet count (Impedance)
Morphological assessment of all cell lineages

Prizes:

- Small hematogram: 16 CHF per sample (excl. of VAT)
- Large hematogram: 34.20 CHF per sample (excl. of VAT)
- Platelets are routinely counted by impedance technology; if an optical count is required, 9.90 CHF per sample (excl. of VAT) needs to be charged in addition.

Bone Marrow:

We are able to examine and interpret bone marrow smears. This will be done by veterinary clinical pathologists (Dipl. ECVCP) experienced in laboratory animal species. Please get in contact with us for details.