UNIWERSYTET PRZYRODNICZY w Lublinie | WYDZIAŁ MEDYCYNY WETERYNARYJNEJ

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General Biosafety Principles in force at the Faculty of Veterinary Medicine University of Life Sciences in Lublin.

Biosafety means taking steps to protect humans and animals from diseases and prevent their spread.

The biosecurity programme also helps to protect visitors and the faculty environment.

According to the FAO definition, the term "**biosafety**" covers a fairly broad issue of the strategy and integrated approach, as well as politics and regulations (including instruments and actions), which analyse the risk in food safety, health, and life of animals and plants, including environmental and management risks.

Biosafety applies to the spread of plant pests, parasites and animal diseases, zoonoses, and genetically modified organisms and their products, as well as introducing invasive alien species and genotypes. Biosafety embraces a complex issue which is of key importance for sustainable agriculture, food safety, and environmental protection, including biodiversity.

Within the framework of the Biosafety Programme, all of the above-mentioned threats have been analysed. Infection prevention and control is one of the fundamental elements of the biosecurity programme, affecting the functioning of all faculty administrative units, including theoretical, pre-clinical, and clinical ones.

It is utterly impossible to provide patients coming to a clinic with proper health care without adequate practical training in preventing infectious diseases. The procedures in force at the Faculty of Veterinary Medicine aim to reduce the risk of contracting an infectious disease by humans and animals. The developed Standard Operating Procedures are adapted to risks encountered in this specific environment.

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Objectives of using Standard Operating Procedures

- Protecting the staff, students, and clients from zoonoses
- Creating a safe environment for patients under the care of Faculty units.
- Education of students through demonstration and practical application of proper biosecurity procedures.
- Influencing the clients and the faculty's environment in terms of adequate zoonoses prophylaxis.
- Ensuring proper functioning of Faculty units.

Standard Operating Procedures Priorities

The principal task of Standard Operating Procedures is the prevention of the spread of diseases among patients, staff, and animal attendants.

- Good Hygiene Practice (GHP) - hygiene improving by applying basic GHP rules such as washing hands, using protective clothing, isolation, limiting direct contact with sick animals, and proper disposal of infectious material.
- Interruption of infection routes - by correctly applying Standard Operating Procedures every day, as well as understanding how infectious diseases spread. Creating barriers to direct and indirect infections. Determining the routes of patients and staff movement in such a way as to prevent the spread of pathogens.
- Communication about the risk encountered by means of warning signs.

Definitions

Infectious disease: a disease that may spread among animals or humans and animals.

Sanitizer (disinfectant, biocide): a chemical agent that kills microbes or prevents their growth. It is used on the surfaces of premises, equipment, and devices (floors, tables, patient care equipment)

Disinfection a process that is used to reduce the number of microbes and their spores to the level that does not pose a threat to health.

Protective (work) clothing – clothing and footwear, as well as outerwear that is worn at work only.

Frequently touched surfaces: surfaces of particular importance for the spread of infectious diseases, touched by various people at high frequency, such as light and ventilation switches, taps, rinse handles, handles, handrails, telephones, elevator buttons, keypads, buttons on appliances.

Epizootic barrier: materials and procedures used to prevent the transmission of microbes between patients and staff, as well as prevention of cross-contamination of surfaces, clothing, and equipment by pathogenic microorganisms. The Epizootic Barrier is used in 4 Class hazard zones and in case of animal patients particularly vulnerable to infections, such as young animals, immunocompromised animals, and animals with serious wounds or burns.

Please NOTE: use protective, disposable clothing and equipment properly to prevent the contamination of skin and frequently touched surfaces.

Multiple Drug-Resistant Bacteria: the bacteria, which have developed the ability to survive in the antibiotic environment. Antimicrobial resistance occurs when bacteria are able to reduce or eliminate the effectiveness of drugs, chemicals or other agents used to treat or prevent an infection. Antibiotics that are effective in treating bacterial infections turn out to be toxic to animals. (Examples of Drug-Resistant Bacteria include some strains of Salmonella enterica, methicillin-resistant *Staphylococcus aureus*, Vancomycin-Resistant Enterococcus spp).

Nosocomial infection: local or systemic infections resulting from an adverse effect or the presence of an infectious agent or toxin that was not present or in the incubation period when the patient was being admitted to the hospital. (Concerns any infection that was not present or during the incubation period when the patient was being admitted to hospital/other facilities).

Personal protective equipment: Any equipment worn or held by an employee to protect him/ her from one or more of the hazards associated with the presence of dangerous or noxious agents in the working environment, including any accessories or accessories intended for that purpose.

Sterilisation: the destruction of all forms of microbes, including spores from objects and materials.

Infection: Intrusion of pathogenic microbes into the body and immunity breakdown.

Local infection: a site of the infection is in close proximity to the portal of entry.
Sepsis (Septicemia, blood poisoning): a group of symptoms that accompanies a systemic infection.

Staff: all the staff working at the Faculty of Veterinary Medicine – research technicians, veterinarians, researchers, teaching staff, students, or volunteers.

Zoonoses: infectious (or parasitic) animal diseases, or diseases spread by animals, which are transmissible to humans or vice versa. Infection occurs through direct contact or raw materials of animal origin, less often by air.

Hazard classification

Class 1 – not hazardous at all. Following the normal procedures. Pathogens that are usually not transmissible between animals. They do not pose a threat to humans.

Class 2 – Low risk. Following the normal procedures. Pathogens that can be transmitted between animals, but they do not pose a significant threat to humans, including infections caused by bacteria susceptible to antibiotics.

Class 3 – Hazardous. Implementation of the protective measures is required. Pathogens that can be transmitted between animals and cause diseases, including infections caused by drug-resistant bacteria. Pathogens of minor concern for human health.

Class 4 – Hazardous. Isolation is needed. Highly infectious pathogens, which pose a serious threat to human health.

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Instructions

Instructions on surface cleaning and disinfection

1. Frequency: on work completion

2. Actions:
- remove solid contamination mechanically
- collect the remains by a brush or scraper
- clean siphons in the gutters
- rinse with warm water at a temperature of about 30-40°C
- clean surfaces by hand or by foam
- rinse surfaces with water
- apply the sanitizer
- rinse surfaces with water

3. Responsibility:

A selected staff member is responsible for regular and effective cleaning and disinfection – having adopted the above-mentioned procedures, he/she makes visual assessment and records the results in an inspection sheet.

4. Measures to be adopted:
Detergent: Liquid soap
-working medium concentration 100%
-a range of temperature: from -10 to +30°C

-necessary disinfection time:……. 1-5 minutes

Sanitizer: ethanol-based

-working medium concentration 70%
-a range of temperature: from -10 to +30°C
-necessary disinfection time: ranging from 30 seconds to 5 minutes

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INSPECTION SHEET ON VISUAL ASSESSMENT OF CLEANLINESS CONTROL

Room number	Intended use	Washbasin	Soap	Disposable towels	Disinfection	Waste bin	Gloves	Comments
A clinical part of the B Building								
21	Dermatology Room							
32	Internal Diseases Room							
40	Dog Facility							
42	Cat Facility							
115	Urology Room							
116	Cardiology Room							
117	Dermatology Room							
118	Endoscopy Room							
215	Neurology Room							
A clinical part of the A Building-stable								
33	Box for animals with colic	-	-	-	-	-	-	No bio-security measures are needed
55	Room with a Livestock Crush							
58	Grooms Break Room							
59	Radiology and Endoscopy							
60	Radiology and Endoscopy							
62								
69	General treatment							

	Isolation room							
Room number	Intended use	Washbasin	Soap	Disposable towels	Disinfection	Waste bin	Gloves	Comments
The laboratory part of B building								
226	Laboratory Sample Collection Room							
229	Biochemistry							
230	Biochemistry							
231	Coagulation							
232	Cell culture							
233	Dermatology and Immunology							
234	Water Deionisation							
235	Microscopy							
246	Dermatology for Students							
247	Urine Test							
248	Dermatology							
249	Horse Digestive Tract							
250	Haematology							

General current recommendations:

Page…….. Responsible person …….

Week number Date Evaluated element Evaluation results Evaluator's Signature

Instructions on washing and disinfection of hands (visual and text instructions are provided in each laboratory, clinic, and classrooms)

Washing hands is the most important activity reducing the risk of spreading pathogenic microbes.
Hands should be washed:
Before and after work

- Before and after contact with each patient
- After contact with biological material such as blood, body fluids, secretions, excrements, or contaminated objects.
- After taking off gloves
- Between various courses of medical treatment administered to one patient, to avoid spreading the infection to other parts of the body.
- After working with biological samples
- After cleaning cages and box stalls.
- Before meals and breaks
- Before and after using the toilet

The recommended way of washing hands:

- Rinse hands with running water
- Apply the soap from the dispenser and wash hands for about 30 seconds, according to the given technique.
- Rinse hands with water
- Dry hands thoroughly using a paper towel
- Place used paper towel in the container designed for this purpose. Note: Do not touch the container with your hands.

The procedure for washing hands

- Rub hands palm to palm
- Rub the right palm against left-hand dorsum and vice versa – rub your left palm against right-hand dorsum.
- Rub hands palm to palm with your fingers interlaced, until you reach the knuckles
- Rub the upper parts of your right-hand fingers against your left palm, with your fingers clasped and vice versa.
- Clasp your right thumb in your left palm and rub rotationally and vice versa
- Clasp your right-hand fingers and rub them rotationally on your left palm and vice versa

Hand Disinfection

The recommended method for hand disinfection:

- Apply the sanitizer to your hands
- Spread the sanitizer on the surface of hands and wrists
- Let it dry, do not rinse

In order to minimise the risk of infection and keeping clean hands, the Faculty of Veterinary Medicine staff and students who have contact with patients or biological material should have short nails and should not wear jewellery on their hands.

Cleaning agents and sanitizers

For cleaning procedures, use preparations intended for municipal hygiene or the hygiene in health service.
For disinfection procedures, use preparations only with a proven biocidal activity listed in the Register of Biocidal Products published by the Office for Registration of Medicinal Products, Medical Devices and Biocidal Products on www.urpl.gov.pl.
Information leaflets and Safety Data Sheets for chemical preparations should be attached to the documentation of washing and disinfection. Employees who use chemical products are required to familiarise themselves with information in the Information Leaflets and Material Safety Data Sheets.

Footwear disinfection stations

An important factor influencing the spread of infectious diseases is the movement of people and various types of transport of people and equipment in the patient's environment.
Microbes on the floor can be transmitted via soles and wheels at a considerable distance.
In order to cease this route of infection mats soaked with disinfectant should be used wherever it is necessary. If protective footwear is used, pools or containers with a sanitizer solution should be applied. Sanitizer solution should be changed regularly as recommended by the manufacturer and in case it gets significantly contaminated, in order to remain effective for the whole period of application. A manual for footwear disinfection, as well as the method of monitoring the activity of sanitizer solution, should be placed near the footwear disinfection station. The instructions need to cover the information on how the solution is replaced or replenished or how to inform the person responsible for these activities. Any person using the disinfection station is required to follow the instructions, check the use of the solution, and if necessary, replace it, or inform the person in charge.

Instructions on using personal protective equipment

Employees and students should take care of their safety and the safety of people they work with as far as possible. They should work with personal protective equipment and protective devices, and familiarise themselves with the service handbooks of the personal protective equipment, as well as keep them in good order, including carrying out minor maintenance. Personal protective equipment should be used efficiently and economically, and only for the intended purpose. Staff and students' clothing should be neat and adapted to the situation because it contributes to the Faculty of Veterinary Medicine image.

Protective clothing – usually a white medical apron or trousers and a blouse.
The same protective clothing should not be used to work in different biohazard zones.
Disposable protective clothing – usually a white interface or foil apron with long sleeves, fastened or tied at the back; diagnostic or surgical, sterile latex/nitrile gloves; plastic shoe covers. In addition, if necessary, a mask or half-mask respirator, as well as safety glasses or face shield (protective visor).

Medical care for patients who have contracted an infectious disease (epizootic barrier)

When caring for patients, precautions should be taken that are appropriate to the type of procedure used and the extent of exposure to biological factors. These guidelines apply to work with biological material, such as tissues or body fluids, when handling live animals, cleaning the cages, or the stall boxes occupied by animals suffering from or suspected of having contracted an infectious disease, an autopsy or a carcass examination of an animal that has died under the suspicion of an infectious disease.

- **Wear protective clothing (laboratory apron or suit) and gloves** when caring for patients suffering from or suspected of having contracted an infectious disease (3 or 4 hazard class).
- When performing activities where there is a splash of biological material or formation of dust or aerosol, use gloves, surgical masks, and safety glasses.
- If a glove gets torn, pierced or other damages occur, gloves should be removed, and if work can proceed safely, new gloves should be put on.
- Washing shoes or wearing disposable shoe covers in places of 3 and 4 hazard class helps to prevent the spread of infectious material throughout the whole Faculty.
- Depending on the circumstances and the type of hazard, it may be necessary to use additional protection such as face shields or face respirators.

Informing about the hazard using warning signs

The Faculty has adopted a hazard information system based on labelling some zones with red, yellow, and green lines.

The areas labelled with a red line are the ones, where there is a hazard of 3 or 4 class, associated with biological material or an unknown one, e.g. research samples.

The areas labelled with a yellow line are the ones where there is a hazard associated with biological material of 1 or 2 class.

The areas labelled with a green line are the ones, which are located within a red or yellow area and where no biohazard occurs.

There are also prohibition, warning, and mandatory graphic signs, so-called pictographs, which define the most important code of conduct in separated zones

Table 2. Table of pictographs and signs.

Z1	Osobom nieupoważnionym wstęp wzbroniony. Authorized personnel only	
Z2	Zakaz wstępu za zwierzętami No pets allowed	
N1	Stosuj odzież ochronną Use protective clothing	
N2	Stosuj odzież ochronną Use protective clothing	
N3	Stosuj rękawice Use protective gloves	
N4	Stosuj buty ochronne lub ochraniacze na buty Use protective shoes or shoe cover	
N5	Umyj ręce Wash hands	
N6	Stosuj maseczkę ochronną i nakrycie głowy Use face mask and head covering	

N7	Stosuj maseczkę ochronną, nakrycie głowy i rękawice Use face mask, head covering and protective gloves	
N8	Stosuj nakrycie głowy i spinaj włosy Use head covering and tie your hair	
O1	Ostrzeżenie przed skażeniem biologicznym Warning – biological material (Biohazard) infectious material	
O2	Ostrzeżenie - butle z gazem Warning – gas cylinders	
O3	Uwaga ! Promieniowanie nadfioletowe Warning – UV radiation	
O4	Ostrzeżenie przed silnym polem magnetycznym Warning – magnetic field	

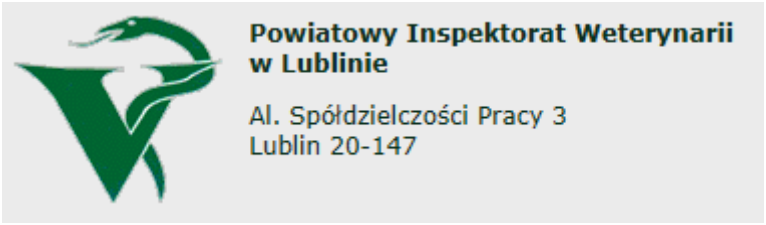
O5	Ostrzeżenie przed substancjami radioaktywnymi i promieniowaniem jonizującym Warning – radiation hazard	
O6	Ostrzeżenie przed materiałami toksycznymi Warning - toxic substances	
O7	Ostrzeżenie przed substancjami łatwopalnymi Warning - flammable substances	
O9	Ostrzeżenie przed substancjami żrącymi Warning - corrosive substances	
O10	Ostrzeżenie - Pole elektromagnetyczne Warning – electromagnetic field	
O11	Ostrzeżenie przed nagłym hałasem Warning – loud noise	

DEPARTMENT AND CLINIC OF ANIMAL INTERNAL DISEASES, FACULTY OF VETERINARY MEDICINE, UNIVERSITY OF LIFE SCIENCES IN LUBLIN

I. PROCEDURE FOR SUSPICION OF AN INFECTIOUS DISEASE IN A PATIENT STAYING ON THE PREMISES OF THE CLINIC

1. The case should be reported to the District Veterinary Officer

Contact details:



Phone/fax: 81 748-37-48

http://www.miw.lpi.pl/

2.Designation of a person responsible for the veterinary care of the patient

3.Secondment of a technician to serve the patient

a) Control of the preparation of separate patient handling equipment (equipment marked in red),

b) Control of the preparation of separate patient handling materials (variable footwear and disposable clothing for persons in contact with infectious material - animal, faeces, etc.),

(c) control of the preparation of disinfectants for the premises and equipment:

- disinfectants for the rooms,

- Disinfecting mats,

- UV lamps,

- transport equipment

4. Contact with the company disposing of biological material.

Utylimed Sp. z o.o.

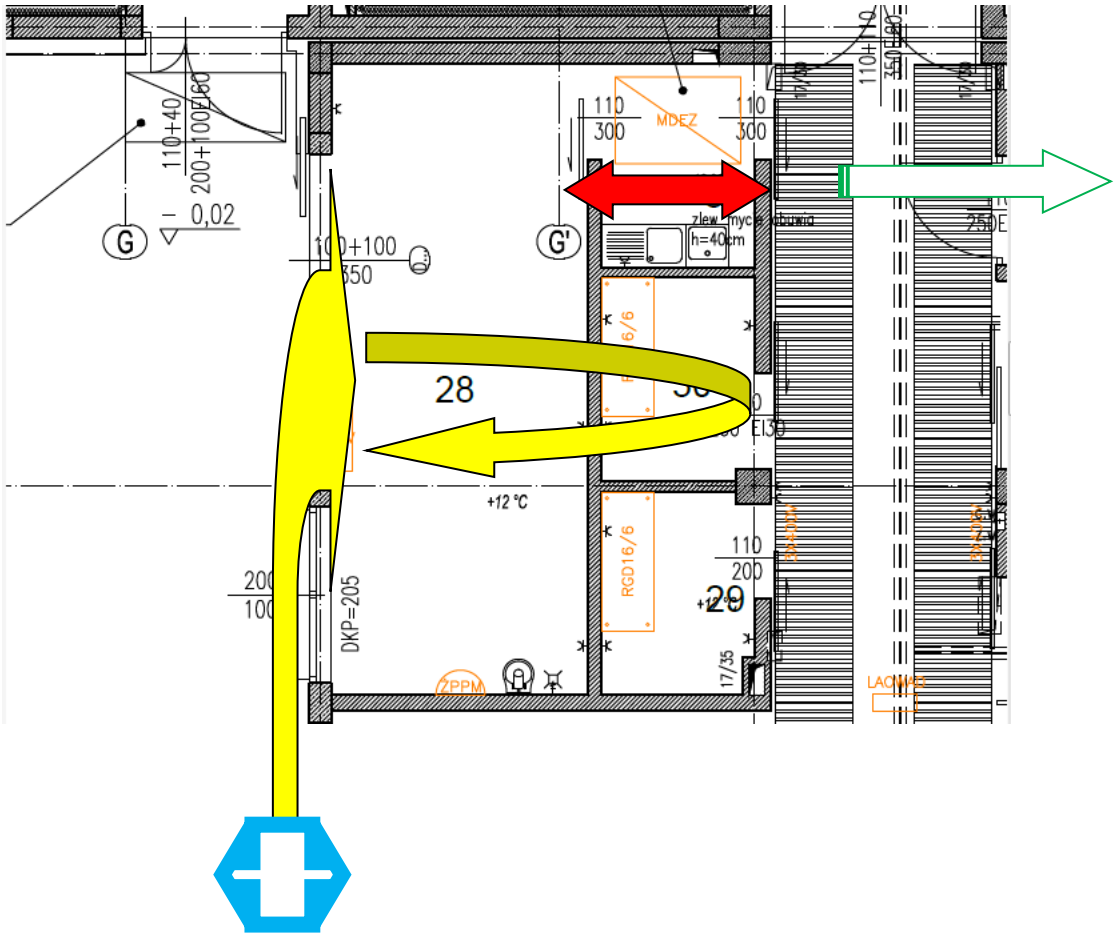
Turystyczna Street 9

20-207 Lublin

Phone: 81 441-53-08

5. Transfer of case information to other neighbouring units.

Person in charge
The Dean of the Faculty



Transport and collection of animals to the isolation room by an authorised unit

Animal movement

the exit for an employee after decontamination

Procedure for transporting biological material and unsterile tools and materials on the premises of the Clinic

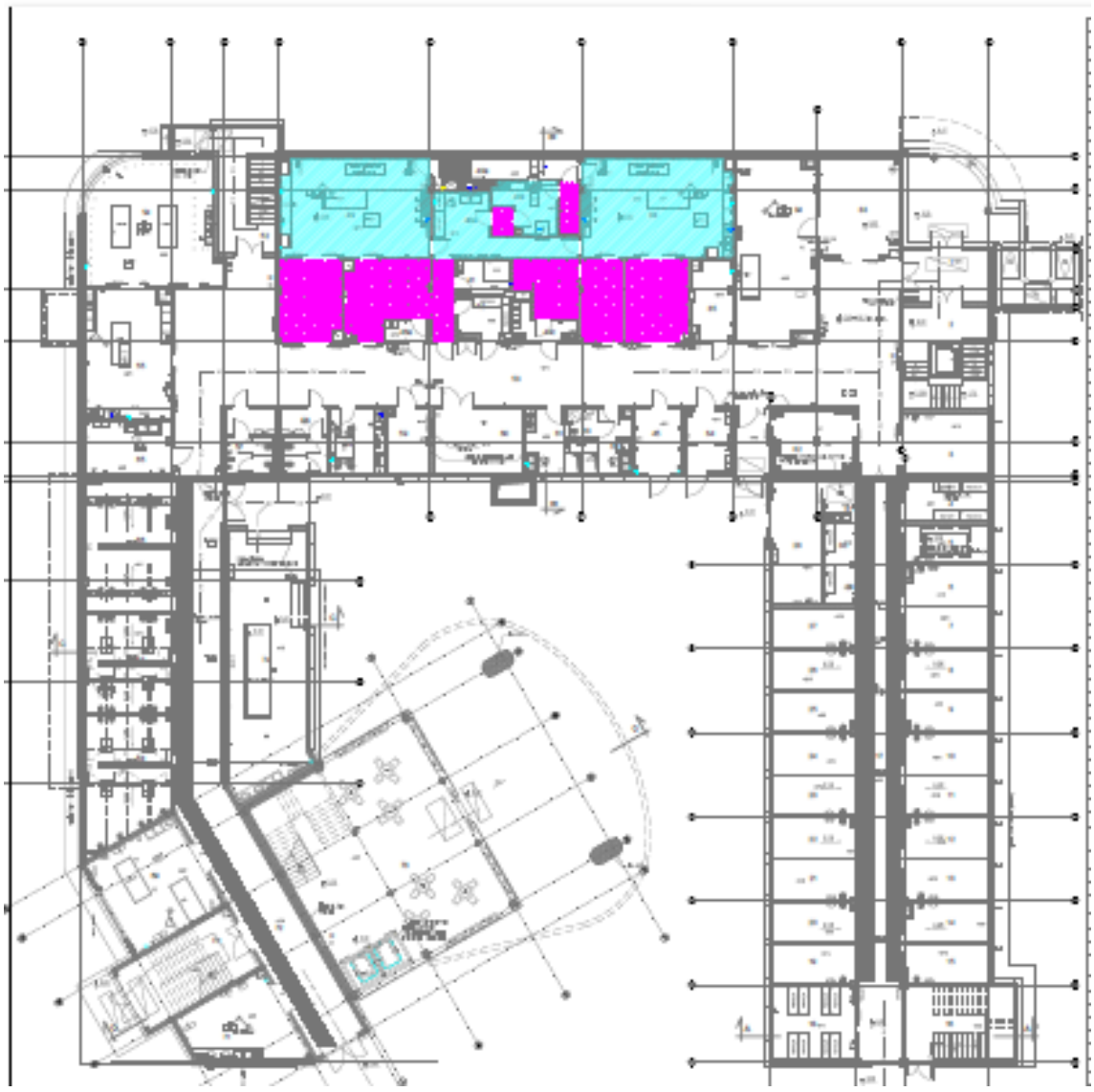
1) On the premises of the outpatient clinic, the biological material may only be stored for a short period of time in specially designated containers properly labelled for that purpose.

2) Long-term storage of biological material, as well as medical waste (from the moment it is obtained to the moment it is handed over to a specialist disposal company), takes place in special, marked containers in the cold room

(3) Biological material may only be transferred by authorised persons after appropriate training.

4) Biological material and medical waste shall be transferred and transported in appropriate, sealed containers, properly labelled for that purpose.

5) The biological material and sterile and unsterile medical materials should be transported along the routes clearly marked and described below.



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DEPARTMENT AND CLINIC OF ANIMAL INTERNAL DISEASES
FACULTY OF VETERINARY MEDICINE, UNIVERSITY OF LIFE SCIENCES IN LUBLIN

Procedure for transporting biological material and unsterile tools and materials on the laboratory premises

1) On the laboratory premises, the biological material may only be stored for a short period of time in specially designated containers properly labelled for that purpose.

2) Long-term storage of biological material, as well as medical waste (from the moment it is obtained to the moment it is handed over to a specialist disposal company), takes place in special, marked containers in the cold room.

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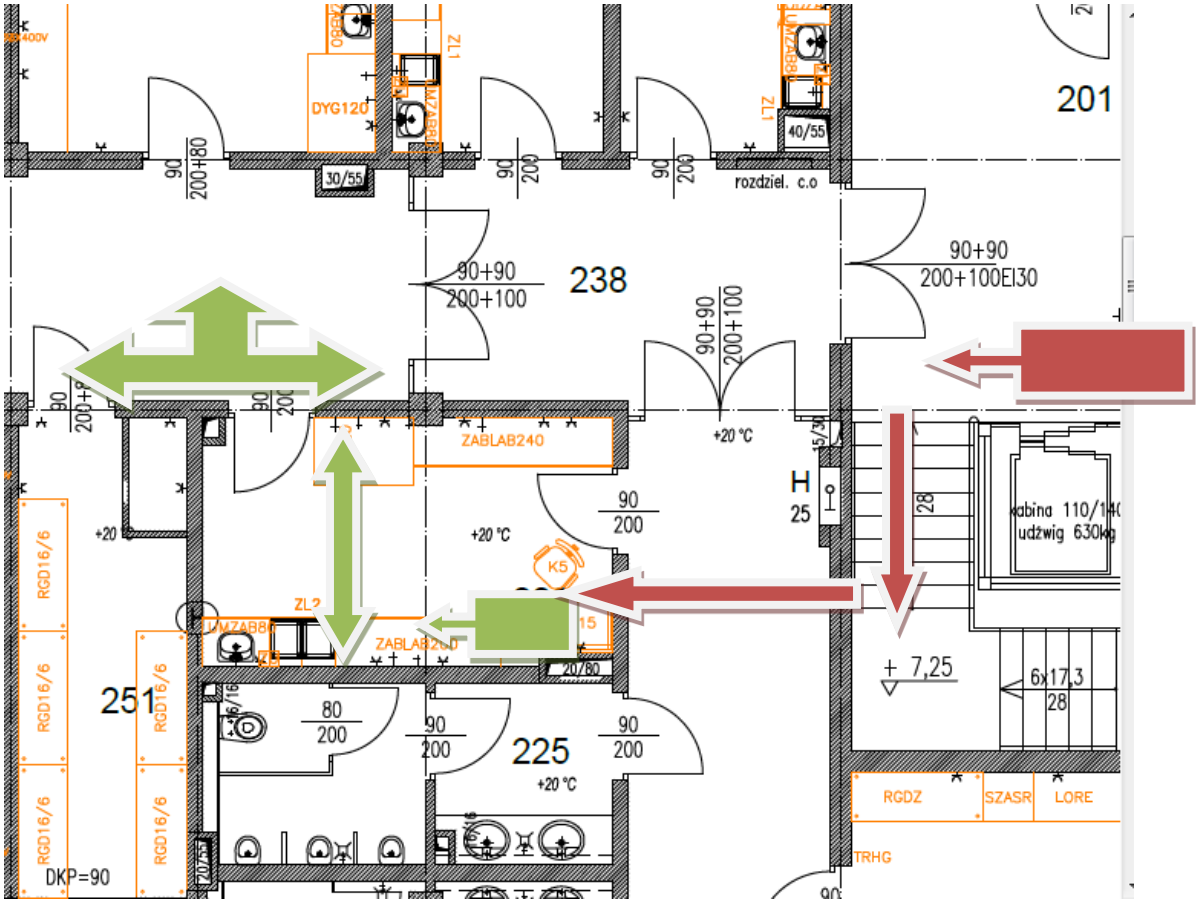

Material delivery

Segregation, describing and initial processing

Dispatching to laboratory workstations

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The principles of safe conduct and work in a laboratory

1. Behave responsibly in the laboratory
2. Follow verbal and written instructions of your teacher/attendant. In case you do not understand the instructions or the procedure YOU SHOULD ASK THE TEACHER/ATTENDANT BEFORE YOU BEGIN THE PROCEDURE
3. Never work alone in the laboratory
4. Do not touch any devices, substances or other materials in the laboratory during your first visit to the laboratory unless explicitly told to do so
5. Conduct only experiments and work commissioned by the teacher/attendant. Follow both verbal and written instructions carefully. Conducting experiments not commissioned by the teacher/attendant is not permitted.
6. Do not eat, drink, or chew gum in the laboratory. Do not use laboratory glassware and other devices as containers for food or drink
7. Prepare yourself thoroughly for work in the laboratory
8. Always work in well-ventilated rooms
9. Keep your workplace clean
10. Be careful in the laboratory at all times
11. Always read labels and manuals before you start using the equipment. Prepare the devices according to your teacher's/attendant's instructions.
12. Do not touch your face, eyes, mouth or body when using chemical substances and equipment
13. Supervise your experiments personally. Do not wander all over the laboratory, distract others, or disturb their work.
14. Familiarize yourself with the location of the fire extinguisher and medical kit and the procedures for using them. Learn where fire alarms and exits are.
15. Wear an appropriate outfit in the laboratory. For safety reasons, you should clip your hair and not wear loose clothes.

16. Wear a protective apron

17. If something happens to you or your partner, quickly (and loudly) report it to the lecturer to attract his/her attention. Do not panic.

18. if a chemical substance gets into your eyes or onto your skin, immediately start rinsing the site in running water for 20 minutes. Quickly (and loudly) report it to the teacher/attendant to attract his/her attention.

19. treat all chemicals in the laboratory as a potential hazard. Do not try or smell any chemicals.

20. double- check the label on the bottle before you use it. Always use only as much as you need.

21. never put unused substances back in the original container.

22. place damaged laboratory glass in a specially designed container.

23. check the laboratory glass thoroughly before use. Never use dirty glass.

24. If you do not know how to use the device, ask your lecturer for help.

25. Warm glass remains hot for a long time. Carefully place it in a designated place to cool down.

26. never look at a heated container.

27. never place hot apparatus on a laboratory table top. Allow the apparatus to cool down before touching it.

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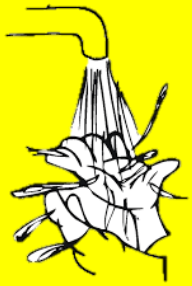
Safety rules in the laboratory

Always inform your teacher or the head of the laboratory about the danger/accident that occurred

Always read the instructions before you start any planned activity/task



Wash and disinfect your hands and the laboratory equipment before and after you use it

Wear glasses, clothing and protective footwear according to the procedure

Do not eat or smell a substance unknown to you