

PROCEDURE: THE HANDLING OF HAZARDOUS WASTE

REFERRAL A: Form: "[Application for the Removal of Chemical Waste from the Laboratory](#)"

APPENDIX B: References to the Procedure

APPENDIX C: Various Labels for the Different Types of Waste and Hazardous Groups

1. General

According to the Law of Hazardous Materials, 5753 – 1993, the University of Ben Gurion in the Negev is defined as a “hazardous site” and requires a Permit for Hazardous Materials. In order to fulfill the conditions of the Permit for Hazardous Materials, at least every six months the organization must remove hazardous waste, in accordance with the requirements of the law and the regulations – see Appendix B in this matter.

This particular regulation refers to chemical and biological waste, as well as carcasses and sharp objects, and not to radioactive waste.

Radioactive waste shall be dealt with in accordance with the University's Radiation Safety Instructions. Please consult with the person in charge of radiation safety prior to beginning work with radioactive materials.

2. Goal

The goal of the Procedure is to set rules and guidelines for the handling of the removal of hazardous materials from Ben Gurion University in the Negev, with the exception of radio-active waste.

3. Definitions

3.1 Laboratory Employee

An employee is defined in the Regulations of Security in the Workplace (Occupational Health and Safety in the Workplace for Hazardous Materials in Medical, Chemical and Biological Laboratories), 5761 – 2001 (hereinafter: the “**Regulations**”), including a researcher, student (at any stage of his studies), a volunteer and a pensioner. It is hereby clarified the cleaning crew shall not be considered a “Laboratory Employee” as aforementioned in this Procedure.

3.2 Laboratory Manager

An individual who is appointed as the laboratory manager in accordance with the Regulations, and in the absence of the aforementioned appointment – the individual who actually manages the laboratory.

3.3 Hazardous Material

Chemical or biological materials as defined in Regulations of Security in the Workplace (Occupational Health and Safety in the Workplace for Hazardous Materials in Medical, Chemical and Biological Laboratories), 5761 – 2001.

3.4 Hazardous Material Waste

Waste which includes hazardous chemical or biological waste, including packaging and equipment of the materials that are contaminated by these factors.

3.5 Sharp Waste

Needles, tips, glass shards or otherwise which can harm the skin of an employee by means of a cut or prick.

3.6 Contaminated Sharp Waste

Sharp waste that is contaminated by hazardous chemical or biological materials.

3.7 Conductor

A conductor holding a license in any of the following: C', D', G' or H', including anyone on behalf of whom is responsible for conducting in accordance with the Law of Conduction Services, 5771 – 2011.

3.8 Carcass Waste

Carcass and tissue, laboratory animals.

4. Content of the Procedure

Each Laboratory Employee who comes into contact with chemical and biological materials and hazardous materials, shall act in accordance with the following provisions:

4.1 Prohibition of Disposing Hazardous Waste

It is prohibited to spill hazardous liquid waste into the laboratory sinks or washbasins.

It is prohibited to dispose of hazardous solid waste, including disposable gloves and the packaging of hazardous materials.

4.2 Handling of chemical waste

- 4.2.1** Chemical waste or residues must be kept in the appropriate container for the type of waste. The waste container must be compatible with the type of waste stored in it in order to prevent damage to the container and diffusion of the waste.
- 4.2.2** The container must be marked according to the type of waste and its risk classification (see Appendix C), for example: organic waste, inflammable waste, toxic waste, acidic waste, etc.
- 4.2.3** Different types of waste or materials which may interact with one another shall not be kept in the same container.
- 4.2.4** The waste storage containers shall be tightly sealed and placed in "Arkalite" boxes with absorbent material in order to ensure absorption and prevent spillage.
- 4.2.5** Care must be taken to separate the types of waste according to their risk classification in the safety sheet.
- 4.2.6** Once filled, a chemical waste container must be securely sealed.
- 4.2.7** [Update from 01/2020]

In order to remove chemical waste from the laboratory, the computerized form "Request to remove chemical waste from the laboratory" must be filled out and copies of it sent directly to the safety department and the procurement department's depots.

4.2.8 The laboratories' director or his representative shall issue and sign a copy of the transport order which shall constitute a consignment note and shall be attached to the container of waste which is being removed.

4.2.9 [Update from 01/20]

Removing chemical waste from the laboratory and the University premises:

- A.** The depot shall order the waste removal company to collect the waste directly from the laboratories, as needed.
- B.** In the event of an over accumulation of waste in the laboratory before the scheduled removal date, the waste shall be taken through the University's carrier to the depot, from where it shall be collected by the removal company.
- C.** The authorization to remove the waste to the dangerous materials disposal site shall be kept by the depot manager at the central depot.
- D.** The waste removal shall be paid for by the procurement department from the University's budget.

4.3 Handling of Biological Waste

Each Laboratory Employee who comes into contact with biological materials and hazardous materials shall act in accordance with the following provisions:

4.3.1 Biological hazardous contaminated equipment shall be collected in marked plastic containers which can be closed or in double polyethylene bags which are clearly marked with the "Biohazard" labels.

4.3.2 Handling of Liquids

Biological hazardous liquids in the B/2 level such as, blood and its contents, bodily fluids, cultures, etc., shall be sterilized with bleach that is concentrated 500 ppm for at least thirty minutes. After the sterilization it may be spilled into the sewer.

4.3.3 Handling of Solids

- A. Contaminated utensils and pathogen waste (bacteria, viruses, parasites, fungus, etc.) shall be sterilized by means of biohazard autoclave bags.
- B. Contaminated disposable utensils and disposable gloves shall be collected separately into Biohazard bags and transferred to autoclave for sterilization. In order to ensure effective sterilization the bags for the biological waste shall not be filled more than 80% of their capacity.

4.3.4 Handling for Carcass Waste

Carcass waste shall be collected into thick plastic bags and stored in the freezer designated for this purpose, until its removal to the incinerator (by a company designated for this purpose).

4.3.5 General Handling for all Types of Biological Waste

- A. Prior to sterilization the bags need to be sealed (not hermetically !) with autoclave tape.
- B. Biohazard packages will be out into the autoclave in appropriate stainless steel or plastic buckets in order to prevent biological waste as a result from bag leakage.
- C. IT IS FORBIDDEN TO PUT CHEMICAL MATERIALS INTO THE AUTOCLAVE!**
- D. Following sterilization, packages with waste can be disposed of as regular garbage.
- E. Handling material which contains biological and radioactive materials shall be given priority in the process of handling radioactive waste.

4.4 Handling of Sharp Waste

- 4.4.1** Sharp waste must be picked up and collected from the various areas with the help of tweezers or a dustpan.
- 4.4.2** Non-contaminated sharp waste should be collected into rigid and hard packaging and should be disposed of as regular garbage.
- 4.4.3 Handling of Sharp Chemical Waste**
 - A. Sharp chemical waste should be centralized into rigid and hard packages and marked accordingly,

B. After the package is closed it should be disposed of to the central warehouse according to the guidelines of section 4.2.

4.4.4 Handling of Sharp Biological Waste

A. A biological Laboratory Employee shall remove needles and syringes only with an instrument which prevents hand contact, and shall not fold or cut the needles. In the event that there is no instrument for the removal of needles from the laboratory, the syringe with the attached needle shall be disposed of in the garbage.

B. The Laboratory Employee shall put the contaminated sharp waste utensil into the appropriate disposable container, such as syringes, needles, and sharp objects into a rigid and hard stainless steel or plastic container which is intended for such and the container shall be clearly marked.

C. A container shall be marked with the Biohazard label that indicates that it is both biohazard and sharp.

D. The container shall be placed in a safe place.

E. Upon filling the container, the container shutter shall be closed and sealed. In order to ensure sterilization, and prior to sealing the shutter, 50 ml of water should be added to the container. The container is intended for disposable use.

F. Prior to placing the container in the autoclave, autoclave tape should be pasted as an index for the regularity of the sterilization.

G. After the sterilization the container should be disposed of as regular garbage.

5. The Laboratory Cleaning Crew

5.1 The laboratory cleaning crew is forbidden to handle waste and hazardous materials as aforementioned in this procedure.

5.2 A Laboratory Employee shall not approach the cleaning crew with any request to handle the waste and hazardous materials in the laboratory.

5.3 In the event that during the cleaning of the laboratory, any hazardous materials are spilled or any receiving utensil for the hazardous material is broken, the cleaning worker shall immediately stop his work, close the laboratory and notify the contractor's working manager. The contractor's working manager shall immediately report to the safety department's control center.

5.4 The safety department shall notify the cleaning crew of any updated information concerning the appropriate conduct and the process of providing notification in the case of an incident as aforementioned.

6. Liability

The chemical safety supervisor, the biological safety supervisor, the department head for the planning and supervision of safety, the safety department, the laboratory managers and employees and warehouse managers are all responsible for the execution of this procedure.

[Signature]_____

David Bareket

Vice President and CEO

Appendix A: References to the Procedure

- A. Law for the Organized Supervision at the Workplace, 5714 – 1954
- B. Regulations for the Organized Supervision at the Workplace (Providing Information and Instructing the Employees), 5759 – 1999.
- C. Safety in the Workplace [New Version], 5730 – 1970.
- D. Regulations of Security in the Workplace (Occupational Health and Safety in the Workplace for Hazardous Materials in Medical, Chemical and Biological Laboratories), 5761 – 2001.
- E. Regulations for Business Licenses (Removal of Hazardous Waste Materials), 5751 – 1990.
- F. Regulations for Business Licenses (Hazardous Sites), 5753 – 1993.
- G. Regulations for Public Health (Handling of Waste in Medical Institutions), 5757 – 1997.
- H. Regulations for the Transport of Services, 5761 – 2001.
- I. Law of Hazardous Materials, 5753 – 1993.
- J. Law for the Transport of Services, 5761 – 2001

APPENDIX C – PROCEDURE 09-007

1. Corrosive Acidic Materials:

CAUTION!
CORROSIVE ACIDIC MATERIAL WASTE

2. Basic Corrosive Materials:

CAUTION!
BASIC CORROSIVE MATERIAL WASTE

3. Flammable Waste Materials (including solvents):

CAUTION!
FLAMMABLE MATERIAL WASTE

4. Oxidizing Waste Materials:

CAUTION!
OXIDIZING MATERIAL WASTE

5. Organic Material Waste:

CAUTION!
ORGANIC MATERIAL WASTE

6. Inorganic Material Waste:

CAUTION!
INORGANIC MATERIAL WASTE

7. Ethidium Bromide Waste:

CAUTION!
ETHIDIUM BROMIDE MATERIAL WASTE