



**Mossakowski Medical Research Institute, at the Polish
Academy of Sciences**

General instructions for the use of hazardous chemical substances and preparations

1. Purpose

The purpose of this instruction is to establish rules for handling hazardous substances at IMDiK PAN.

2. Scope of application

These instructions apply to all employees who come into contact with hazardous substances at IMDiK PAN.

3. Terminology

The terms used in this manual are quoted in:

Regulation of the Minister of Labor and Social Policy, dated September 26, 1997, on general regulations of occupational safety and health (as amended)

Safety data sheets for hazardous substances and hazardous preparation

Act of January 11, 2001 on chemical substances and preparations (as amended)

Regulation of the Minister of Health of July 3, 2002 on the safety data sheet for hazardous substances and preparations (as amended)

Regulation of the Minister of Health of July 11, 2003 on the labeling of packaging and hazardous preparations (as amended)

4. Scope of application







General provisions





4.1 Hazardous substance – means one or more substances or mixtures of substances that, due to their chemical, biological or radioactive properties, may, if improperly handled, cause a threat to human life or health or the environment. A hazardous substance can be a raw material, product, intermediate product, waste, as well as a substance resulting from an accident. Substances and preparations classified in at least one of the following categories should be treated as hazardous substances and preparations:

Hazard category of the substance	Symbol
Explosive substances and mixtures	E
Oxidizing substances and mixtures	O
Extremely flammable substances and mixtures	F ⁺
Highly flammable substances and mixtures	F
Flammable substances and mixtures	R10
Very toxic substances and mixtures	T ⁺
Toxic substances and mixtures	T

Harmful substances and mixtures	Xn
Corrosive substances and mixtures	C
Irritant substances and mixtures	Xi
Sensitizing substances and mixtures	R42 and/or R43
Carcinogenic substances and mixtures	Car. Cat. (1,2 or 3)
Mutagenic substances and mixtures	Mut. Cat. (1,2 or 3)
Substances and mixtures toxic to reproduction	Repr. Cat (1, 2 or 3)
Substances and mixtures hazardous to the environment	N or R52 and/or R 53

Applicable pictograms and warning slogans:

physical and chemical hazards:		health risks:	
 GHS01	<ul style="list-style-type: none"> - explosive or self-reactive compounds 	 GHS05	<ul style="list-style-type: none"> - exhibiting a corrosive effect on the skin cat. 1A. 1B 1C - risk of serious eye damage
 GHS02	<ul style="list-style-type: none"> - flammable (liquids/gases/aerosols/solids) - self-heating, self-reactive - pyrophoric (solid/liquid) - organic peroxides - substances/mixtures that release flammable gases on contact with water 	 GHS06	<ul style="list-style-type: none"> - acute toxicity category 1, 2 or 3
 GHS03	<ul style="list-style-type: none"> - oxidizing (gases/liquids/solids) 	 GHS07	<ul style="list-style-type: none"> - acute toxicity cat. 4 (formerly: harmful substance) - skin or eye irritation - skin sensitization

 GHS04	- gases under pressure (compressed)	 GHS08	- carcinogenic, mutagenic or reproductive effects (known as CMR). - toxic effects on critical organs at single or chronic exposure - respiratory sensitization
 GHS05	- causing corrosion of metals	 GHS09	environmental risks: - hazardous to the environment, especially posing a threat to the aquatic environment - posing a threat to the ozone layer

4.2 . A person working with hazardous substances must wear appropriate protective clothing in accordance with **Section 8** of the safety data sheet (e.g., apron, goggles, gloves).

4.3 Each employee, before starting work, must read the current safety data sheets for hazardous substances and preparations. The Manager of the organizational unit where hazardous substances are used is responsible for familiarizing employees with the instruction and for its observance. Each employee shall perform work in accordance with the provisions of this instruction.

4.4 In all unforeseen situations that do not comply with the developed instructions, notify the immediate supervisor to agree on the course of action.

Specific provisions

4.5 A person using hazardous substances and/or preparations is obliged to have the appropriate safety data sheets or have permanent access to them.

4.6 The use of hazardous substances requires the use of protective measures recommended in the safety data sheet, storage and handling of hazardous substances. Work with these substances should be done only in areas designated for this purpose.

4.7 It is necessary to protect the hazardous substances used from accidental and improper use. Particularly hazardous substances are subject to detailed records and protection from unauthorized access.

4.8 Hazardous substances and preparations should be stored in conditions that meet the requirements of building and fire protection regulations and in accordance with other specific instructions.

4.9 Dangerous substances and preparations may be stored outside warehouses, provided that the requirements described in safety data sheets and specific instructions are met.

4.10 Dangerous substances and preparations should be collected in the amount necessary for the work to be performed.

4.11 All equipment and solutions for working with hazardous substances and preparations should be labeled. Packages must have labels placed and described in a legible and permanent manner, in accordance with the requirements of the safety data sheet. The name of the reagent/hazardous substance, its concentration and expiration date must be indicated.

4.12 Containers with hazardous substances and preparations should be airtight and protected against leakage of their contents. They should be placed in a way that excludes the possibility of adverse reactions with other substances.

4.13 . If the package with the hazardous substance or preparation is destroyed or damaged, it should be placed in a replacement package, with characteristics corresponding to the original package, with a replacement label with all the information contained on the original label or on the safety data sheet.

4.14 . When working with particularly hazardous substances, including concentrated acids and lyes, a minimum of two people must be present so that mutual assistance can be provided in the event of an accident.

4.15 . Cylinders with hazardous substances and preparations should be carried with both hands, with one hand supporting the bottom of the vessel. It is recommended to use a carrier to carry particularly hazardous substances.

4.16 . Work with easily volatile hazardous substances and preparations, including concentrated acids and flammable compounds, should be carried out under a fume hood with ventilation turned on.

4.17 In places where hazardous substances and preparations are stored and used, neutralizers and sorbents should be available; these agents should be placed in labeled containers.

4.18 . In case of spillage of concentrated acid/base, neutralize it and then wash it off. Do not directly wash off concentrated acids and bases with water.

4.19 . It is prohibited to place used sorbents in containers other than those intended for this purpose.

4.20 . Incomplete reagents, waste of hazardous substances and preparations, solutions classified as hazardous preparations, and packaging of hazardous substances constitute hazardous waste.

Hazardous waste must not be poured down the drain or dumped into non-hazardous waste.

Emergency procedures

4.21. In the event of an emergency, when working with any hazardous substances that cause an immediate threat to health as well as the environment, stop work, secure the scene and notify the immediate supervisor to decide on measures to eliminate the resulting danger and its effects and causes.

4.22. If a solution is spilled or a hazardous substance is spilled, the employee is obliged to take preventive measures and, in case of danger, to notify the immediate supervisor.

4.23. If you notice the release of gases, vapors, fumes or heating of hazardous substances, as well as the swelling of packaging and other symptoms, take special precautions, notify your superiors.

Final provisions

4.24. It is forbidden to store hazardous substances in places not intended for this purpose.

4.25. The employee shall immediately inform the supervisor of a situation that may pose a threat to human health or life and the environment.

4.26. The place of use and storage of hazardous substances should be equipped with material safety data sheets, neutralizer and/or sorbent.

4.27. These instructions do not apply to poisons.

4.28. Employees who have access to hazardous substances should be acquainted with this manual with written confirmation.

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Assessed by

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Approved by