ÚOCHB AV ČR
IOCB PRAGUE

Directive S2024-04

13 June 2024

Waste Management

Identification of waste producer:

Name of institution:	Institute of Organic Chemistry and Biochemistry of the CAS
Registered office:	Flemingovo nám. 542/2, 160 00 Praha 6
ID No. (IČO):	61388963
CZ NACE:	7219 – Other research and development in the natural sciences and engineering 7120 – Technical testing and analysis services

Contents

1. Introduction

This directive on waste management has been prepared in accordance with the relevant provisions of the following generally applicable legislation, as amended:

- Act **No. 541/2020 Coll.** on Waste and Amending Certain other Acts,
- Act **No. 542/2020 Coll.** on End-of-Life Products,
- Decree **No. 8/2021 Coll.** on the Waste Catalogue,
- Decree **No. 273/2021 Coll.** on the Details of Waste Management,
- Decree **No. 16/2022 Coll.** on the Details of Handling Certain End-of-Life Products, and
- Decree **No. 8/2021 Coll.** on the Waste Catalogue and Assessment of Waste Properties (the Waste Catalogue).

This organizational directive lays down the rules for the collection, sorting, handling and management of waste, including its collection at collection points. It applies to all workplaces of the Institute of Organic Chemistry and Biochemistry of the Czech Academy of Sciences, PRI with its registered office at Flemingovo nám. 542/2, 160 00 Prague 6 (hereinafter referred to as IOCB Prague).

This directive applies to the above activities and is binding for all workers. The aim of this directive is to ensure that all waste generated at the institute is managed in such a way that it does not harm the environment or human health.

All employees are obliged to observe the provisions of this directive in full and without being relieved of any obligation to comply with the provisions of other generally applicable legislation which they have been made aware of and which imposes such an obligation.

2. Definitions and Terms

Waste is defined as any movable item a person discards or has the intention or obligation to discard that belongs to one of the waste groups listed in the following table and in the Waste Catalogue.

Municipal waste – all waste generated during the activities of natural persons on the territory of a municipality and listed as municipal waste in the implementing legislation. Waste generated by legal persons or natural persons authorized to conduct business is excluded.

Hazardous waste (HW) – waste exhibiting one or more hazardous properties listed in the relevant annex to European Commission Regulation No. 1357/2014 (Table 1).

Table 1: Hazardous property of waste

	Symbol	Hazardous property of waste
HP1		Explosive
HP2		Oxidizing

HP3		Flammable
HP4		Irritant – causes irritation of the skin and eyes
HP5		Specific target organ toxicity / Inhalation toxicity
HP6		Acutely toxic
HP7		Carcinogenic
HP8		Corrosive
HP9		Infectious
HP10		Toxic for reproduction
HP11		Mutagenic
HP12		Releasing acutely toxic gas
HP13		Sensitizing
HP14		Ecotoxic
HP15		Waste potentially exhibiting any of the above hazardous properties when handled, which it did not have at the time when it was generated

Other waste (OW) – waste listed in the Waste Catalogue provided by the implementing legislation and which has none of the properties listed in Table 1. (e.g. paper waste, plastic waste, waste containing iron, construction waste, etc.).

Waste management – trading in waste, waste collection; purchase, transport, transport, storage, treatment, recovery and disposal of waste.

Waste collection – short-term amassing of waste in receptacles at the place of their generation until further handling.

Waste collection point – a place reserved, secured and properly marked for depositing waste. Waste is deposited at each collection point in designated packaging in designated places for individual types of waste.

Waste storage – temporary amassment of waste at a facility designated for this purpose for a period of no longer than 3 years before its recovery or 1 year before its disposal.

Generator of waste – any legal person whose activity generates waste or natural person authorized to conduct business whose business activity generates waste. For municipal waste generated on the territory of a municipality that originates from the activities of natural persons that

are not subject to the obligations of a generator, the municipality is considered the generator of waste. The municipality assumes the role of a generator of municipal waste at the instant when a natural person deposits waste at a place designated for this purpose; at the same time, the municipality becomes the owner of this waste.
Within the framework of this directive, individual work groups may also be regarded as waste generators.

Authorized person – any person authorized to manage waste under the Waste Act or under special legislation (e.g. at collection companies, collection yards).

3. Wastes that may be generated during activities carried out at IOCB Prague

The Institute of Organic Chemistry and Biochemistry of the Czech Academy of Sciences, PRI (hereinafter referred to as IOCB Prague) is a research institution of the Czech Academy of Sciences. The work carried out at IOCB Prague is basic research in the fields of organic chemistry, biochemistry and allied disciplines and is mainly focused on applications in medicine and the environmental sciences. The institute participates in university-level education, the supervision of master's and doctoral theses and is the seat of the commission for the defence of doctoral theses in organic and bioorganic chemistry.

The activities of IOCB Prague generate waste of the ‘other’ category, namely:

- paper and cardboard (office paper, cardboard boxes, etc.),
- plastics (PET bottles, plastic packaging, foils, etc.),
- glass (bottles, discarded laboratory utensils, etc.) - bottles previously containing methanol (of HPLC or LC–MS purity), acetonitrile (of HPLC or LC–MS purity), ethanol, isopropanol, inorganic acids or organic acids can be thoroughly rinsed with water; empty bottles previously containing volatile chemicals, such as dichloromethane (HPLC), ethyl acetate (HPLC), cyclohexane, pentane, tetrahydrofuran or diethyl ether, should be left open in a hood ideally overnight to allow residues to evaporate,
- waste printing toner,
- discarded chemicals without hazardous properties,
- discarded devices (printers, computers, etc.),
- sharp objects, also referred to as sharps (needles, syringes),
- bulky waste (e.g. discarded furniture);
- iron and steel,
- biodegradable waste, and
- mixed municipal waste.

IOCB Prague also generates waste of the ‘hazardous’ category, in particular:

- waste organic solvents,
- distillation and reaction residues,
- discarded hazardous chemicals, pharmaceuticals,
- infectious waste,
- packaging contaminated by hazardous substances,
- waste gases in pressure vessels,
- filtration materials, cleaning fabrics and protective clothing contaminated by hazardous substances,
- discarded equipment containing hazardous substances (e.g. refrigerators, freezers, air conditioning units, etc.),
- wastes containing mercury (e.g. fluorescent lamps, laboratory thermometers),

- waste oils (e.g. from the maintenance of equipment and the vehicle fleet),
- oily water from oil separators, and
- waste paint (e.g. from site maintenance).

The following wastes in particular may arise from the activities taking place at IOCB Prague:

Catalogue number of waste	Waste category	Name of waste
07 07 04*	N	Other organic solvents, washing liquids and mother liquors
07 07 07 *	N	Halogenated reaction and distillation residues
08 01 11*	N	Waste paints and lacquers
08 03 18	O	Waste printing toner other than those mentioned in 08 03 17
13 02 05*	N	Mineral-based non-chlorinated engine, gear and lubricating oils
13 05 07*	N	Oily water from oil separators
15 01 01	O	Paper and cardboard packaging
15 01 02	O	Plastic packaging
15 01 07	O	Glass packaging
15 01 10*	N	Packaging containing remnants of hazardous substances or packaging contaminated by such substances
15 02 02*	N	Absorbents, filtration materials, wiping fabrics and protective clothing
16 02 13*	N	Discarded equipment containing hazardous components other than those mentioned in 16 02 09 to 16 02 12
16 02 14	O	Discarded equipment other than that mentioned in 16 02 09 to 16 02 13
16 03 06	O	Organic wastes other than those mentioned in 16 03 05
16 05 04*	N	Gases in pressure vessels containing hazardous substances (including halons)
16 05 06*	N	Laboratory chemicals and mixtures thereof that constitute or contain hazardous substances
16 05 09	O	Discarded chemicals other than those mentioned in 16 05 06, 16 05 07 and 16 05 08
17 04 05	O	Iron and steel
18 01 01*	O/N	Sharps (except 18 01 03)

18 01 03*	N	Wastes whose collection and disposal is subject to special requirements in order to prevent infection
18 01 09*	N	Other unusable medicinal materials other than those mentioned in 18 01 08
20 01 21	N	Fluorescent tubes and other waste containing mercury
20 02 01	O	Biodegradable waste
20 03 01	O	Mixed municipal waste
20 03 07	O	Bulky waste

4. Rules of Waste Management

4.1 Waste prevention

- Each worker is obliged to prevent and limit the amount of waste generated during their activity or within the scope of their competence.
- Wastes the production of which cannot be avoided must be recovered or eliminated in a way which does not threaten human health or the natural environment and which is in accordance with the Waste Act and implementing legislation (e.g. the Act on Nature and Landscape Protection, the Act on Forests, etc.).

Each IOCB employee must preclude the generation of waste through their activities. Whenever waste is generated, every employee is obliged to minimize its amount. Employees are mandated to limit the hazardous properties of waste, meaning they must not mix hazardous waste with other waste.

4.2 General obligations under the Waste Act

- Each employee is obliged to handle waste and dispose of it only in a manner specified by Act No. 541/2020 Coll. on Waste and other legislation issued for the protection of the environment.
- The management of hazardous waste is also governed by specific legislation such as Act No. 254/2001 Coll. on Waters or Act No. 133/1985 Coll. on Fire Protection.
- The primary generator of waste is obliged to determine whether the person to whom the waste is to be handed over is entitled to receive it under these Acts. If a person fails to present proof of such authorization, waste must not be handed over to them.
- Mixing of hazardous wastes with each other or with other wastes, substances or materials is prohibited. It is permissible only in exceptional cases with the **consent of the regional authority** having competence for the place of waste management.
- The waste generator is responsible for the management of waste until it is handed over to a person or entity authorized to receive it (e.g. a waste management or waste collection company).

Employees of IOCB Prague must deposit any generated waste separately in dedicated receptacles. Hazardous waste is collected in special receptacles that are properly labelled in accordance with applicable legislation. **Waste mixing is prohibited!** IOCB Prague transfers waste only to persons authorized under Act No. 541/2020 Coll. on Waste.

4.3 Classification of waste according to the Waste Catalogue

Each waste producer is obliged to classify waste by type.

- Each type of waste is assigned a six-digit catalogue number according to the types of waste listed in the Waste Catalogue, where:
  - the first two-digit number indicates the group of waste,
  - the second two-digit number indicates the subgroup of waste, and
  - the third two-digit number indicates the type of waste.
- According to the industry, field or technological process by which the given waste is generated, the appropriate group is determined first, followed by the subgroup of waste within the group. Within the given subgroup, the name of the type of waste with the relevant catalogue number is then ascertained. Within each subgroup, it is mandatory to choose the more specific suitable waste label over a more general one.

Each type of waste that is generated is assigned a six-digit catalogue number. Employees must put hazardous waste into appropriate receptacles marked with the respective code, name and other particulars in accordance with Act No. 541/2020 Coll. on Waste. Waste belonging to the 'other' category (paper, plastic, etc.) must be thrown into receptacles that do not have to be marked in accordance with the law. (Such receptacles must, however, be easily distinguishable by their shape, colour or description from ones not used for waste management or from receptacles used for other types of waste.)

4.4 Classification of waste by category

The waste generator is obliged to classify waste by category.

- The generator and the authorized person are obliged to classify waste as **hazardous** for waste management purposes if:
  - it exhibits at least one of the **hazardous properties** listed in the Annex to the directly applicable European Union legislation on hazardous properties of waste,
  - is **listed in the Waste Catalogue as hazardous waste**, or
  - is **mixed or contaminated** with any of the wastes listed as hazardous in the Waste Catalogue.
- If a waste has one or more hazardous properties, the generator and the authorized person managing it are obliged to classify and treat it as hazardous even if it does not meet the conditions set out in the first paragraph.
- Mixed municipal waste is not classified as hazardous and the generator or the authorized person are not obliged to treat it as such, even if it meets the conditions set out in the first or second paragraph.
- For the purposes of record keeping, wastes classified according to the Waste Catalogue are marked as follows:
  - **'N'** – hazardous waste,
  - **'O'** – other waste,
  - **'O/N'** – wastes that have been assigned to the category 'hazardous waste' and do not have, in the Waste Catalogue, a catalogue number marked with the symbol,
  - **'N/O'** – wastes classified as hazardous according to the Waste Catalogue and classified in the 'other' category on the basis of a certificate of the exclusion of hazardous properties of waste.

All IOCB employees are obliged to dispose of hazardous waste in special receptacles intended for hazardous waste. Any of the 'other' category that gets contaminated with a hazardous substance must be discarded into a receptacle for hazardous waste.

4.5 Waste collection

The waste generator is obliged to collect waste sorted by its individual types and categories.

- If due to the method of subsequent recovery or elimination it is unnecessary to sort waste or to collect it separately, the generator may forgo this step with approval from the locally competent state administration body.

Waste collection

- Waste receptacles must meet the following basic technical requirements:
  - **Receptacles for different types of waste** must be unequivocally distinguished (by shape, colour or description) from receptacles not used for waste management or intended for other types of waste;
  - **Waste must be protected against the effects of weather conditions** if receptacles for it are intended for use outside of sheltered premises, provided that they are not meant for inert waste only;
  - Receptacles must be **resistant to the chemical effects of the waste** for which they are intended;
  - If a receptacle is intended to also serve as **transport packaging**, it must **meet the requirements** of special legislation for the transport of dangerous goods (**ADR, RID**);
  - Receptacles for the collection of municipal waste must comply with the relevant technical standards;
  - Every receptacle must ensure that the waste placed inside it is protected against undesirable deterioration, misuse, theft, mixing with other types of waste or leakage endangering human health or the environment; and
  - Receptacles must allow for safe operation, cleaning and disinfection after being emptied.
- When selecting a collection point or a location for a waste receptacle, it is essential to take into account the safety of its operation, including fire safety, its accessibility and the possibility of its servicing using mechanization and transport vehicles.
- An identification sheet of the waste being collected must be placed on or next to every receptacle or collection point for hazardous waste. **The content of the identification sheet is laid down in Annex 29 to Decree No. 273/2021 Coll.** on the Details of Waste Management.

All employees of IOCB Prague are obliged to sort all generated waste by type as facilitated by the installed waste receptacles or collection points.

Waste receptacles are installed inside offices and laboratories or in corridors. The emptying of receptacles for paper, plastic and mixed municipal waste into central bins behind building C is provided by the cleaning service.

Hazardous waste is collected in appropriate and properly labelled receptacles. Receptacles for hazardous waste are located in individual laboratories where such waste is generated. Alternatively, waste should be taken to designated collection points or handed over to persons in charge of receiving it – employees of the waste management department (tel.: 220 183 224, 220 183 228, 220 183 127, 220 183 554).

4.6 Waste security

The waste generator is obliged to secure all waste against unwanted deterioration, theft or leakage.

- **Receptacles** (containers for waste) **located outdoors** must be **protected from weather conditions and locked** or secured in a locked or guarded area so that the waste contained in them cannot be destroyed or stolen.
- **Liquid waste** (e.g. waste oils, waste chemicals, etc.) must be collected in vessels connected to **holding sumps** or in a secure area in a way that prevents any danger to the environment.
- **Volatile wastes** (e.g. waste solvents) must be collected **in tightly sealed vessels**.
- Solid **waste contaminated** with hazardous substances (e.g. packaging used for hazardous substances, greasy rags/gloves) must be collected **in sealed vessels** from which hazardous substances cannot escape.

Employees of IOCB Prague must ensure that waste thrown into a receptacle does not leak or get destroyed. Whenever a worker finds that a container is damaged or unsuitable for the given type of waste, they must notify the waste management department of this fact.

4.7 Handing over waste to other persons or companies

Each waste generator is obliged to determine whether the person to whom waste is to be handed over is entitled to receive it under the Waste Act.

- Each waste generator is responsible for the waste until it is handed over to another authorized person.
- **Waste may be received and** taken property of **only by a legal entity or natural person authorized to conduct business** that is the operator of a facility for waste recovery, waste disposal or collection and purchase of the specific type of waste, **provided that it is a holder of a valid authorization granted by the relevant regional authority.**
- If a person fails to present proof of such authorization, waste must not be handed over to them.
- Each relevant decision of an administrative body specifies exactly what activities the authorized person may carry out, for example waste collection, acquisition, landfilling or incineration. Every decision must also specify what waste it pertains to.
- **A waste carrier is not an authorized person** within the meaning of Act No. 541/2020 Coll. on Waste and is responsible for waste only during its transport.
- The ideal solution is to conclude an agreement with an entity that is both an authorized person and a carrier.
- Every contract with a waste collection company should be accompanied relevant authorization documents.

IOCB Prague hands over waste only to persons authorized to manage waste. This is verified by requesting the presentation of a decision of the regional authority, which also specifies the types of waste the authorized person may handle.

4.8 Waste register

Each waste generator is obliged to keep continuous records of waste produced and the methods of its management. These records must be archived the period specified by the law or implementing legislation.

- Every waste generator is **obliged to keep continuous records** of waste produced and the methods of its management regardless of its amount.
- Records must be kept **for each separate establishment** and for each type of waste separately.
- Continuous records are kept **in accordance with Decree No. 273/2021 Coll.** (a preview of the form is presented in Annex 1 to this directive) and always includes the following:
    - the date and number of the entry in the register, and
    - the name and surname of the person in charge of keeping records.
- Continuous records of waste must be kept **for each individual instance in which waste is produced**. Defined as an instance of waste production is any moment when a waste receptacle or waste collection point is full to capacity or when waste is handed over to an authorized party.
- In cases where waste is generated continuously (**regular collection** of municipal waste), continuous records must be kept **at monthly intervals** (e.g. for mixed municipal waste, paper and plastic).
- **Records of waste must be kept for a minimum period of 5 years.**

IOCB Prague is obliged to keep continuous records of periodic and one-off collection of waste. Compliance with this obligation at IOCB Prague is ensured by the waste management department. IOCB Prague is obliged to keep the data for 5 years.

4.9 Reporting on waste generation

Each waste generator is obliged to report waste and to send other data to the competent administrative authority to the extent specified by the Waste Act and implementing legislation.

- Every **waste** generator **is obliged to prepare a true and complete report on the types and amount of waste and the methods of waste management. This report must be submitted to the municipal authority of the municipality with extended competence for the address of the establishment by 28 February of the following year. This applies to waste generators producing or managing more than 600 kg of hazardous waste per calendar year or more than 100 tonnes of other waste per calendar year**, as well as for those that year produce or manage waste specified by the implementing legislation in the given calendar, regardless of the amount of such waste.
- The annual production and waste management report for the previous calendar year (annual report) must be prepared in accordance with **Decree No. 273/2021 Coll.** (a preview of the form is included in Annex 1 to this directive).
- Reporting is carried out **separately for each separate establishment**, activity, mobile receptacle and for each type of waste. Reports are then submitted to the municipal office of the municipality with extended competence whose bodies carry out delegated competence at the respective place of waste management.
- **The report is sent by the waste producer in electronic form via the Integrated Reporting Compliance System (ISPOP).**

IOCB Prague produces more than 600 kg of hazardous waste per year, which is why it is subject to the obligation to submit annual reports on the production and management of waste by 28 February of the following calendar year through the Integrated Reporting Obligations Compliance System (ISPOP in Czech). Compliance with this obligation at IOCB Prague is ensured by the

waste management department. IOCB keeps each report on the annual production of waste and its management for 5 years.

5. Rules for the Management of Hazardous Waste

5.1 Labelling of hazardous waste

The originator and the person authorized to manage hazardous waste are obliged to ensure that all hazardous waste is **marked in accordance with the Waste Act.**

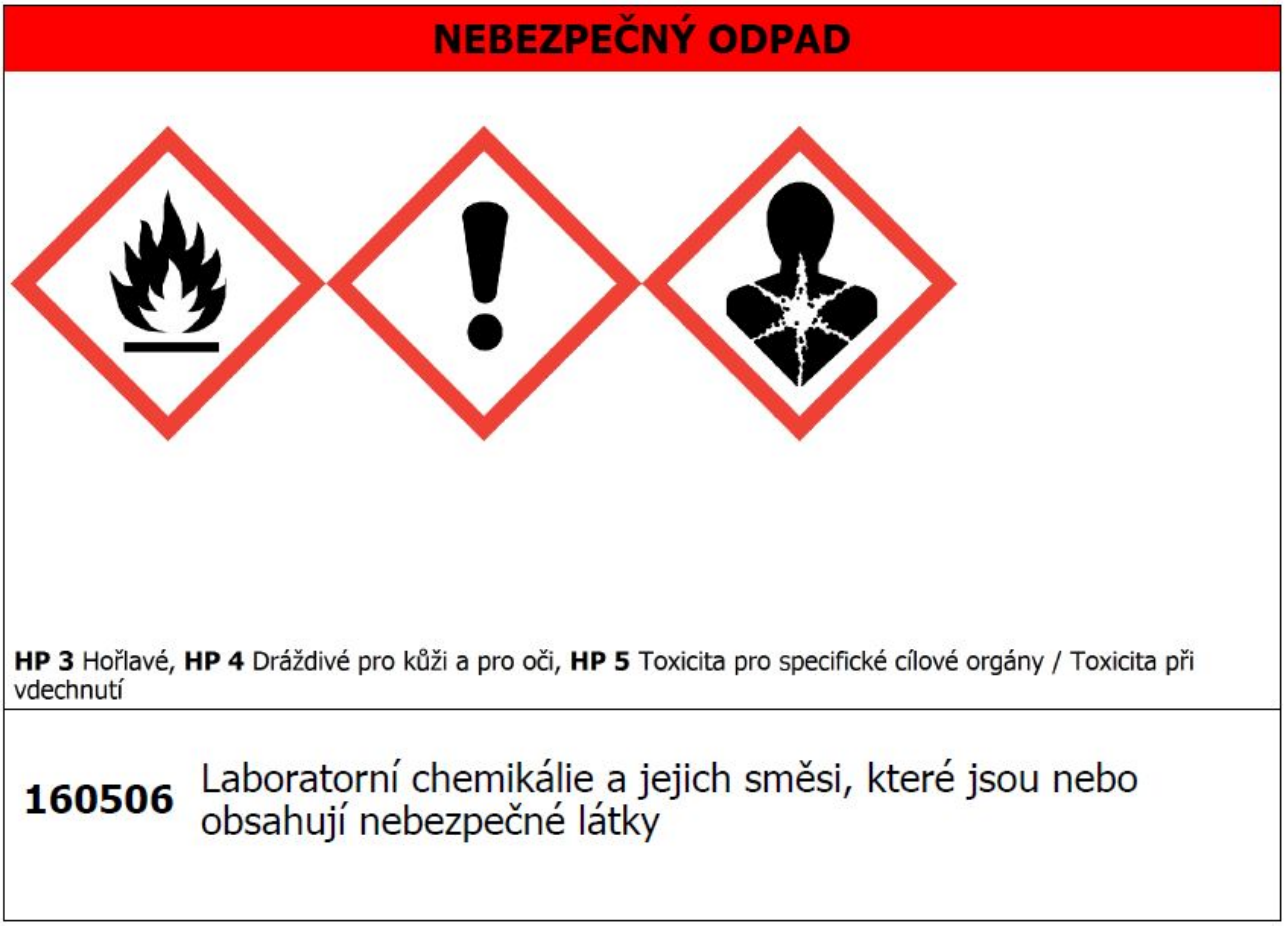
- **Wastes having at least one hazardous property must be marked** in a manner and to an extent specified by the implementing legislation.
- Each receptacle for hazardous waste must bear the **catalogue number of the hazardous waste, the code and name of the hazardous property, the inscription 'hazardous waste' and a warning graphic symbol** based on the directly applicable European Union legislation on the classification, labelling and packaging of substances and mixtures. The marking with the code and name of the hazardous property, the inscription 'hazardous waste' and the warning graphic symbol must be included on the marking label, which must be placed in such a way that it is visible to the person handling hazardous waste in the usual way. The name of the waste and its catalogue number must be visible to the person disposing of hazardous waste in the usual way and may be part of the label. If the name of the waste and its catalogue number are part of the label, they must be inscribed using the same font size as the inscription 'hazardous waste'. The part of the label with the name of the waste and its catalogue number does not count towards the minimum dimensions of the label. The minimum allowed dimensions for the labelling of hazardous waste are set out in Table 2.

Table 2: Sizes of labels for the labelling of hazardous waste

Container size (l)	**Minimum label size (mm)**	**Dimensions of each warning pictogram (in millimetres)**
smaller than or equal to 3	preferably at least 52 × 74	larger than 10 × 10 preferably at least 16 × 16
larger than 3 and smaller than or equal to 50	at least 74 × 105	at least 23 × 23
larger than 50 and smaller than or equal to 500	at least 105 × 148	at least 32 × 32
larger than 500	at least 148 × 210	at least 46 × 46

All hazardous waste generated through activities carried out at IOCB Prague must be marked with a hazardous waste label and a hazardous waste identification sheet.

Fig. 1: Sample hazardous waste label



5.2 Hazardous waste identification sheet

The originator and the person authorized to manage hazardous waste are obliged to prepare a hazardous waste identification sheet and to equip with it all places where hazardous waste is stored or handled.

- **The identification sheet** of the collected hazardous waste must be placed **near or on the receptacle or collection site for hazardous waste.**
- The content of the identification sheet is specified in **Decree No. 273/2021 Coll**. on the Details of Waste Management.

Fig. 2: Sample hazardous waste identification sheet

IDENTIFIKAČNÍ LIST NEBEZPEČNÉHO ODPADU

dle Přílohy č. 3 vyhlášky č. 383/2001 Sb.

1. Název odpadu:
Laboratorní chemikálie a jejich směsi, které jsou nebo obsahují nebezpečné látky

2. Kód odpadu: **160506**

3. Kód podle ADR: UN číslo: 3082

4. Původce odpadu nebo oprávněná osoba:
Obchodní firma/název/jméno a příjmení: Ústav organické chemie a biochemie AV ČR, v. v. i. **IČO:** 61388963
Sídlo: Flemingovo náměstí 542/2, 16000 Praha 6 **IČZ/IČP:** 61388963P1
Provozovna: Ústav organické chemie a biochemie AV ČR, v. v. i.
Ulice: Flemingovo náměstí 542/2 **PSČ a Obec:** 16000 Praha 6
Osoba oprávněná jednat jménem původce odpadu nebo oprávněné osoby:
Telefon:
E-mail: **Razítko a podpis:** .....

5. Fyzikální a chemické vlastnosti odpadu (5.1 Vzhled odpadu, 5.2 Chemická stabilita, 5.3 Možnost nebezpečných reakcí, 5.4 Další informace):
Pevné nebo kapalné chemikálie v původních obalech. Odpad může obsahovat velmi široké spektrum škodlivin (organických i anorganických).

6. Identifikace nebezpečnosti:
6.1 Klasifikace nebezpečného odpadu: HP 3 Hořlavé, HP 4 Dráždivé pro kůži a pro oči, HP 5 Toxicita pro specifické cílové orgány / Toxicita při vdechnutí
6.2 Další nebezpečnost a 6.3 Složení, informace o nebezpečných složkách:
Vlastnosti závisí na chemickém složení odpadu.

6.4 Grafické symboly nebezpečných vlastností:

7. Požadavky pro bezpečné soustřeďování a přepravu odpadu:
7.1 Technická opatření (způsob bezpečné přepravy, požadavky na soustřeďování):
Skladovat v uzavřených nádobách zabezpečených před účinky atmosférických vlivů, zamezit přístupu nepovolaným osobám. Zabezpečit dostatečné větrání místnosti. Zabránit úniku do vod. Při práci nejíst, nepít, nekouřit.

7.2 Doporučené osobní ochranné pracovní prostředky:
a) dýchací orgány: respirátor se sorpční vložkou **c) ruce:** ochranné rukavice pryžové
b) oči: ochranné brýle nebo štít **d) ostatní části těla:** ochranný oděv

8. Opatření při nehodách, haváriích a požárech:
8.1 Opatření v případě náhodného úniku (opatření na ochranu zdraví a osob, opatření na ochranu životního prostředí):
Při rozsypání (rozlití) shromáždit do původního nebo náhradního obalu, kapalné zasypat sorpčním materiálem a tento shromáždit do sudů. Zabránit případnému úniku do vod!
8.2 První pomoc (popis poskytnutí první pomoci):
Při zasažení očí: vypláchnout proudem vody a zajistit lékařskou pomoc. Při vdechnutí: postiženého přemístit na čerstvý vzduch a zajistit lékařskou pomoc. Při zasažení pokožky: omýt vodou a mýdlem, ošetřit ochranným krémem, v případě poleptání, převézt k lékařskému
8.3 Metody a materiály pro omezení úniku, další pokyny:
Při projevech nevolnosti a jiných obtíží je nutné lékařské ošetření. Informovat lékaře o charakteru látky.

8.4 Protipožární vybavení (hasiva, pokyny pro hasiče):
Nakládat s odpadem v souladu s předpisy požární ochrany. Nehasit vodou z důvodu možného odplavení škodlivin! Vhodným přístrojem je práškový. Při požáru může docházet k vývoji toxických plynů.
8.5 Významná telefonní čísla:

Jednotné číslo tísňového volání: 112 **Hasičský záchranný sbor:** 150 **Záchranná služba:** 155 **Policie:** 158

9. Ostatní důležité údaje:
Příznaky mohou být nespecifické (např. bolesti hlavy, podráždění, nevolnosti a pod.) u těkavějších látek i narkotické stavy, v závislosti na typu škodliviny. Toxicita odpadu závisí na jeho chemickém složení.
Možnost vyluhovatelnosti škodlivin do vod, proto je odpad nutno považovat za vysoce rizikový pro životní prostředí.

10. Identifikační list nebezpečného odpadu zpracoval: **Datum vyhotovení:** 21.11.2016
Jméno a příjmení:
Telefon: **E-mail:** **Podpis:** .....

Vytvořeno v programu EVI 8 (www.inisoft.cz)

6. Waste Management at IOCB Prague

Waste arising from the activities at IOCB Prague is collected according to their individual categories at the place of their generation or at designated collection points. In each building there are designated collection points (for paper, plastic and mixed municipal waste) where waste is stored in waste bins. From there it is subsequently transferred by the cleaning service to appropriate bins at the collection point for municipal waste.

Small receptacles for hazardous waste (e.g. used tips, needles, packaging of chemicals, waste solvents) are located inside laboratories. Such items may be collected only in yellow bins designed for this purpose. When full, the yellow bin must always be closed with a red lid before it is handed in. It must then be handed over to the **waste management department** in **the basement of building B** (door B1.26).

Employees of the waste management department ensure the **categorization of waste**, its **sorting** if applicable, **the marking** of gathering points and receptacles, the placement of waste at appropriate collection points, and **the packaging** of waste for transport. It also **secures its collection** for recovery or disposal.

Whenever a new type of waste is generated, for which there is no collection point or there is doubt about its correct classification, it is **mandatory to contact an employee of the waste management department**.

6.1 Overview of central collection points at IOCB Prague

Department for waste management

- Basement of building B; door B1.26; tel.: 220 183 224, 220 183 127;
- Persons in charge: Ing. Lukáš Rynda, Petr Šimek, CSc.
- **Collection point for**: printer toners, waste from GMO laboratories, sharps (including used tips, needles, scalpels), waste containing mercury (discarded or broken mercury thermometers, discharge bulbs, etc.). Discarded chemicals to be handed in for disposal must be marked to indicate the composition of the waste and give the contact information of the waste generator. Gloves and other items contaminated by hazardous substances must be handed in for disposal in the same way as discarded chemicals.

Area for the temporary placement of discarded electrical equipment and chemicals

- Lockable area behind building B; lockable bins for small electrical waste are located at the central hazardous waste collection point.

Municipal waste depository (paper, plastic, mixed municipal waste)

- Colour-coded bins for collecting municipal waste are located behind building C.
- Biodegradable waste

Waste solvent collection site

- Shelter behind the gatehouse from Stavitelská street
- **Collection point** for waste solvents, silica gel and used oils

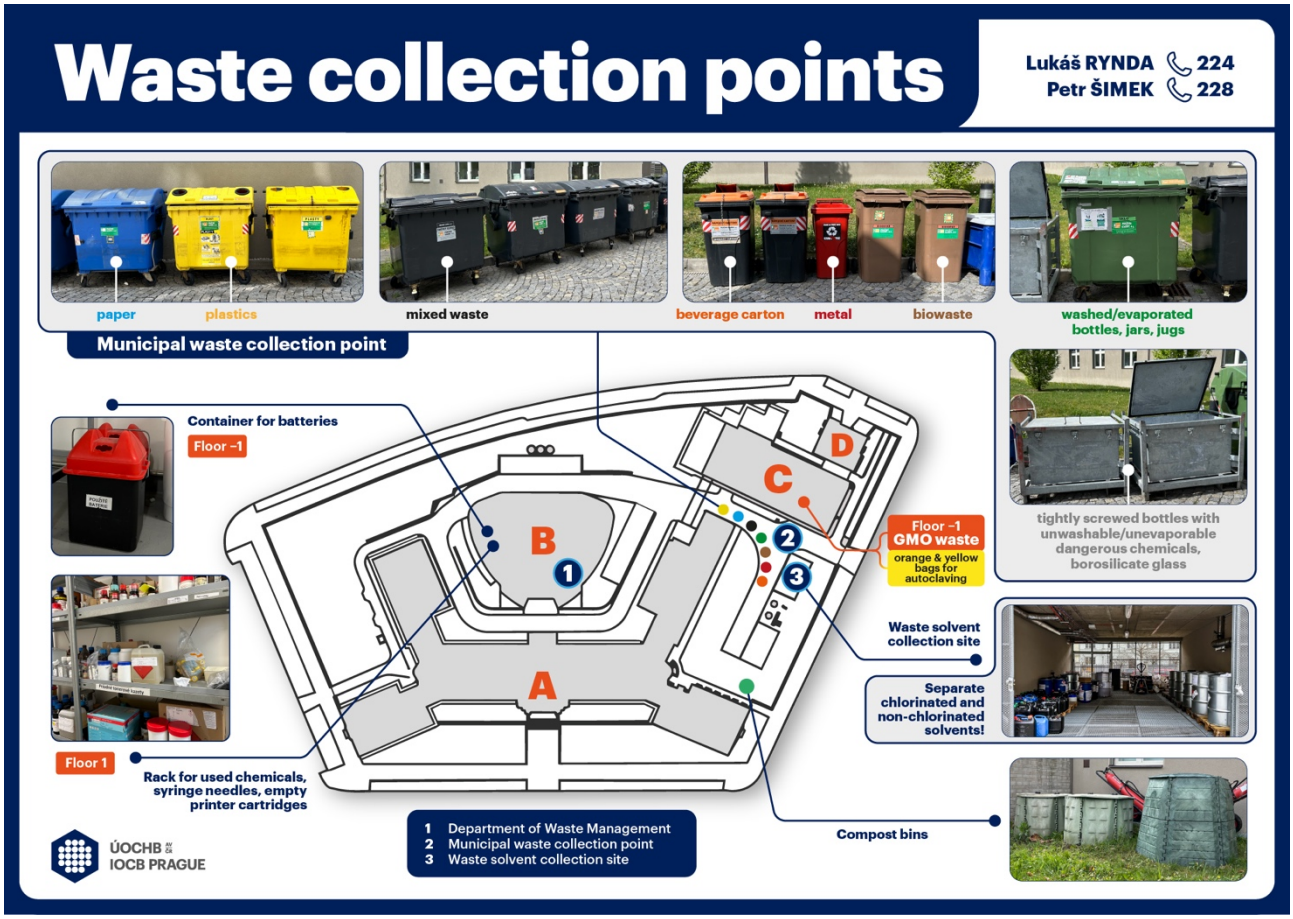
Hazardous waste collection site

- Lockable cubicles by the nitrogen station

- **Collection point for hazardous waste:** packaging of hazardous substances; contaminated packaging; discarded equipment containing hazardous substances (e.g. refrigerators, freezers, air conditioning units, etc.);
- **Collection point for certain 'other' waste:** discarded small electrical devices; glass waste

Below is a diagram of the IOCB site indicating the locations of waste collection points.

Figure 3: Diagram of the IOCB Prague establishment – Flemingovo náměstí with waste collection points indicated



6.2 Waste management at IOCB Prague in detail

6.2.1 Other waste

Name of waste	Code of waste	Description of waste	Waste management
Alkaline batteries (excluding batteries under heading 160603)	16 06 04	Spent batteries	Receptacles for used batteries are located next to the office supplies warehouse (building B, room B01.12.).
Biodegradable waste	20 02 01	Waste from the maintenance of the premises (leaves, grass, branches), remains of food of plant origin	The waste generated is stored in receptacles designated for this purpose (brown BIOWASTE bins) next to the municipal waste collection point.
Waste printing toner	08 03 18	Waste printer toners	Waste toners are taken to the collection point at the waste management department.
Paper and cardboard packaging	15 01 01	Office paper, paper packaging, boxes, cardboard boxes	Waste is collected in receptacles found inside the respective buildings. From these receptacles, it is taken, as part of the cleaning service, to bins designated for this purpose (blue bins labelled ‘PAPER’) at the collection point of other waste. **Do not discard here: dirty paper, wet paper, carbon paper, wax paper, etc.**
Plastic packaging	15 01 02	PET beverage bottles, uncontaminated plastic chemistry utensils, cups, bags, foils, plastic products and packaging, polystyrene, etc.	Waste is collected in receptacles found inside the respective buildings. From these receptacles, the waste is taken, as part of the cleaning service, to bins designated for this purpose (yellow bins labelled ‘PLASTICS’) at the collection point of municipal waste. **Do not discard here: plastic packaging of hazardous chemicals, cleaning agents, etc.**

Glass packaging	15 01 07	Bottles, jars, discarded laboratory utensils not contaminated with hazardous substances	Waste is collected at individual workplaces. When accumulated, the waste must be taken to dust bins (green dust bins for glass) **Packaging contaminated with residues of chemicals that cannot be rinsed or evaporated out does not belong in this container.** **Waste to be discarded here is dried out or rinsed glass bottles.**
Mixed municipal waste (MMW, SKO in Czech)	20 03 01	Unsortable waste, building sweepings, snack scraps, greasy or wet paper, textiles	Waste is collected in receptacles inside the respective buildings and at respective workplaces. From these receptacles it is then transferred, as part of the cleaning service, to bins designated for this purpose (black / grey bins labelled 'MIXED WASTE') at the collection point for other waste. **Do not discard here: reusable waste such as paper, plastics, glass, etc., hazardous waste (chemicals, fluorescent lamps, toners, batteries, etc.).**
Discarded equipment other than that mentioned in 16 02 09 to 16 02 13	16 02 14	Discarded electrical devices that do not contain hazardous substances (kettles, printers, scanners, computers, etc.)	Discarded devices are handed over to a person in charge of collecting discarded electrical material and devices and their write-off from the institute's assets (Mr Dolejš, tel. 220 183 321, building B, door B1.12). From there, they are moved to the e-waste collection point or to receptacles next to the hazardous waste collection point.
Discarded chemicals other than those mentioned in 16 05 06, 16 05 07 and 16 05 08	16 05 09	Discarded chemicals that do not contain hazardous substances	Discarded chemicals must be handed over to the waste management department.
Iron and steel	17 04 05	Iron and steel waste	This waste is transported to the premises on Papírenská Street. From there, it is transported for recovery after the amount for transport has been accumulated.

6.2.2 Hazardous waste

Name of waste	Code of waste	Description of waste	Waste management
Absorbents, filtration materials, wiping fabrics and protective clothing	15 02 02	Used protective gloves, filter paper, pipette tips, used sorption material (e.g. Vapex)	Waste is collected at individual workplaces. Once it is amassed, it is taken to the waste management department.
Halogenated reaction and distillation residues	07 07 07	Used organic solvents	Waste management identical as with 07 07 04.
Other unusable medicinal materials	18 01 09	Drug residues from research	Discarded drugs must be handed over to the waste management department.
Other organic solvents, washing liquids and mother liquors	07 07 04	Used organic solvents	At individual workplaces, such waste must be poured into canisters and these must be taken to the waste solvent collection point when full. **The waste generator within the IOCB must be indicated on the canisters and, most importantly, the type of solvent (chlorinated or non-chlorinated) must be specified.** The solvents are then poured into transport vessels (barrels) by employees of the waste management department.
Laboratory chemicals and mixtures thereof that constitute or contain hazardous substances	16 05 06	Discarded chemicals (e.g. expired), silica gel	Discarded chemicals must be handed over to the waste management department. Silica gel is collected in paper barrels at the waste solvent collection point.

Mineral-based non-chlorinated engine, gear and lubricating oils	13 02 05	Used oils from lifting and handling equipment or from the vehicle fleet	Before collection, waste is amassed in appropriate and properly marked vessels at the solvent collection point.
Packaging containing remnants of hazardous substances or packaging contaminated by such substances	15 01 10	Contaminated packaging of chemicals, solvents, cleaning agents, oils, paints	Waste from individual workplaces is transferred to metal receptacles (containers) located next to the hazardous waste collection point.
Waste paints and lacquers	08 01 11	Residues of paints and lacquers used in the maintenance of the premises	Waste is collected in suitable and properly labelled vessels at the waste solvent collection point.
Wastes whose collection and disposal is subject to special requirements in order to prevent infection	18 01 03	GMO waste, biological and microbiological waste	GMOs are disposed of directly at the workplace by autoclaving. Thus sterilized waste is transferred to the waste management department in appropriate packaging.
Sharp objects	18 01 01	Used needles, scalpels, glass pipettes	Waste is collected at individual workplaces. When accumulated, it must be taken to the waste management department.
Gases in pressure vessels containing hazardous substances (including halons)	16 05 04	Pressure cylinders containing dangerous gases	Pressure cylinders are collected in the room for discarded chemicals.
Discarded equipment containing hazardous components	16 02 13	Discarded refrigerators, freezers, air conditioning units, etc.	Discarded devices are collected at the collection point for hazardous waste.
Oil-contaminated water from oil separators	13 05 07	Waste from oil separator cleaning	Waste is collected directly from the place of its generation.

Fluorescent tubes and other waste containing mercury	20 01 21	Broken or discarded mercury thermometers, fluorescent lamps	Waste is taken from individual workplaces to the waste management department. Common fluorescent tubes, if not damaged, are returned when new ones are purchased.

6.2.3 Waste management regulated under other generally binding legislation

Radioactive waste

The management of radioactive waste is governed by Act No. 18/1997 Coll. on the Peaceful Use of Nuclear Energy and Ionizing Radiation (Atomic Act).

Waste water

Waste water is disposed of in accordance with special provisions of Act No. 254/2001 Coll. on Waters.

Unused medicines

The procedure for the disposal of waste medicaments is regulated by Act No. 378/2007 Coll. on Pharmaceuticals.

Animal by-products

The treatment of animal by-products is governed by several pieces of legislation, in particular: Act No. 166/1999 Coll. on Veterinary Care and Amending Certain Related Acts, Regulation (EC) No. 1069/2009 of the European Parliament and of the Council, Commission Regulation (EU) No. 142/2011, and Directive No. 94/2010 Coll.

6.3 Waste management at workplaces subject to a special waste management regime

6.3.1 Animal facility

Wastes generated by the operation of the animal facility have specific properties given by the fact that they are produced in connection with working with living organisms. The animal facility produces two main types of waste of animal origin – manure (including used bedding) and the bodies of animals or their unprocessed organs, jointly referred to as carcasses. Carcasses are category I animal by-products (ABP, VŽP in Czech). Such materials are considered the most hazardous and are therefore intended for disposal only. The removal of these materials from IOCB Prague is ensured by a contracted company. During transport, all animal by-products must be accompanied by a 'Commercial document for the transport of animal by-products'. The management of animal by-products is not subject to Act No. 541/2020 Coll. on Waste. Instead, it is addressed by several other pieces of legislation, in particular Regulation (EC) No. 1069/2009 of the European Parliament and of the Council; Act No. 166/1999 Coll. on Veterinary Care and on Amendments to Certain Related Acts; Commission Regulation (EU) No. 142/2011; Decree No. 94/2010 Coll., etc. The above legislation sets out numerous conditions that must be met. For example, according to Decree 419/2012 Coll., it must be ensured that all premises for the hygienic storage and safe disposal of bodies of dead experimental animals and waste of animal origin are part of premises for the breeding of laboratory animals.

Also generated is waste that could be a source of secondary infection (e.g. cotton wool contaminated with blood). Manure and other potentially infectious wastes are classified as hazardous waste under waste codes 18 02 01 and 18 02 02. When handed over to an authorized person for disposal, this waste must be marked within the scope of applicable legislation (see chapter 5.1). These wastes are handed over to a company authorized to manage such waste. To determine the appropriate method of disposal, it is necessary to know the history of the material that has become waste, for example in order to determine whether it could contain infectious substances. The history of the material must also be known for the correct categorization of the animal by-products in accordance with Regulation No. 1069/2009/EC.

To ensure the proper fulfilment of all legal requirements pertaining to the management of waste of animal origin and its categorization, this agenda is within the competence of the **Biochemical Pharmacology** research-service group, which is the principal user of the animal facility. The management of waste of animal origin within this group is ensured by a designated employee based on authorization by the director of the IOCB. This employee must carry out the agenda in accordance with instructions given by the group leader.

The production of waste of animal origin is recorded in the central waste register of IOCB Prague. The employee of the Biochemical Pharmacology working group in charge of managing waste of animal origin is therefore obliged to keep the manager of the waste management department of IOCB informed about each instance of waste disposal and to provide them with copies of relevant documents for the purpose of archiving.

6.3.2 Virology

All laboratory wastes generated through the activities of the Department of Virology are considered infectious. These include, for example, waste agarose gels and plastic materials. Generally, such waste is collected in appropriate packaging that allows it to be autoclaved. Agarose gels liquefy during autoclaving and plastic materials melt, possibly forming sharp edges that can subsequently

damage some packaging materials. Therefore, a suitable packaging is one that is sufficiently resistant to damage by its contents and that prevents the contents from escaping outside the packaging before and after autoclaving. If plastic bags are used as packaging, they must not contain sharps, for example injection needles. Infectious waste in such appropriate packaging is handed over to an authorized person for autoclave sterilization. Such waste is disposed of according to the instructions of the head of the respective working group.

Infectious waste posing a large hazard is autoclaved directly on the premises of the department of virology in spaces designated for working with such materials.

Sharps are autoclaved in puncture-resistant containers. After sterilization, such waste must be taken to the waste management department and the packaging must be marked with the name of the waste producer (or the name of the laboratory, department or working group).

Because materials to be sterilized do not have a standard composition, it is not permissible to apply for the exclusion of hazardous properties of the resulting sterilized waste, and therefore it continues to be treated as infectious waste.

6.3.3 GMO facilities

Infectious waste is generated at workplaces where genetically modified organisms are handled. This includes, for example, waste agarose gels and plastic materials. Generally, such waste is collected in appropriate packaging that allows it to be autoclaved. Agarose gels liquefy during autoclaving and plastic materials melt, possibly forming sharp edges that can subsequently damage some packaging materials. Therefore, a suitable packaging is one that is sufficiently resistant to damage by its contents and that prevents the contents from escaping outside the packaging both before and after autoclaving. If plastic bags are used as packaging, they must not contain sharps, for example injection needles. Infectious waste in such appropriate packaging is handed over to an authorized person for sterilization by autoclaving.

As a precaution, in accordance of the operating rules of the workplace, approved by the Ministry of Health, waste treated in this way is still considered infectious. After sterilization, waste must be taken to the waste management department and its packaging must be marked with the name of the waste generator.

All liquid wastes containing genetically modified organisms must be sterilized by mixing with a solution of **sodium hypochlorite**. The following procedure is the same as with solid waste, without further sterilization by autoclaving.

6.4 Take-back

Some products are subject to the take-back system. These are, for example, **discharge bulbs and fluorescent tubes, electrical equipment, tires, batteries.** Such products must be collected separately and handed over under the thus-called take-back regime (i.e. outside the regular waste management regime).

Waste of this type generated at IOCB Prague includes, in particular: discharge bulbs and fluorescent tubes, electrical equipment and batteries.

7. Duties and responsibilities

All employees are required to:

- prevent the generation of waste, limit its quantity and hazardous properties;
- sort and store waste only in designated receptacles or containers and in designated places, in accordance with the requirements of this directive;
- not to mix different types of waste or hazardous waste;
- manage waste with regard for the safety and health of persons and the protection of the environment; and
- upon the generation of a new type of waste, report this fact to an employee of the waste management department.

The department in charge of waste management undertakes to ensure that:

- waste management at workplaces of IOCB Prague complies with the Waste Act and with this directive;
- all types of waste will be handed over only to authorized persons or companies and on the basis of a contract; and
- that this directive and documents related to waste management are updated whenever a new technology with the potential to generate new types of waste is introduced.

The department in charge of waste management is obliged to:

- carry out checks to monitor the effects of waste management on human health and the environment,
- ensure the classification of waste according to the Waste Catalogue and by category;
- ensure the processing of hazardous waste identification sheets;
- ensure the collection of waste by an authorized contractor company (when necessary, e.g. when receptacles are full);
- keep continuous records of waste and the methods of its management;
- prepare and submit reports on the annual waste production and management for the past calendar year through the Integrated Reporting Obligations Compliance System (ISPOP in Czech).
- ensure that containers and receptacles intended for the collection of hazardous waste are properly marked (with a label and identification sheet); and
- archive bills, invoices and other documents related to waste management for at least 5 years.

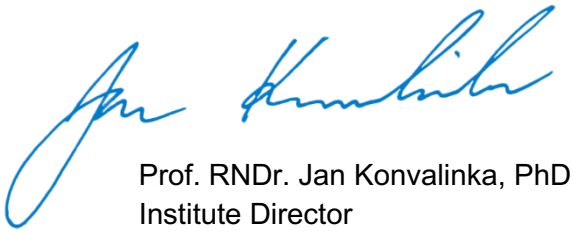
8. Conclusion

IOCB Prague is obliged to ensure the proper processing, management and storage of all documentation related to the fulfilment of obligations in the field of environmental protection and to keep the documentation up to date.

At IOCB Prague, the management of the waste management agenda falls within the competence of the Department for Waste Management. Should any doubts concerning waste management occur, please consult an authorized employee of this department (door No.: A3.36, line: 224).

This directive is primarily focused on waste management at the building at Flemingovo náměstí 542/2, Prague 6. However, the basic obligations arising from the applicable legislation also apply to waste management on all other premises of the institution (i.e. Šultysova 692/55, Prague 6; Papírenská 6821/0, Prague 6; Thunovská 181, Prague 1; Glinkova 1655/6, Prague 6; Dolní Malá Úpa 22, Malá Úpa; Hojsova Stráž 201, Železná Ruda).

All employees of IOCB Prague must be familiarized with this Directive.



Prof. RNDr. Jan Konvalinka, PhD.
Institute Director

9. Annexes

Annex 1: Report on waste generation and management (continuous record format)

Report on the waste generation and management

Reporting year Page No.
Report intended for municipality with extended powers – ORP in Czech (code, name): Total number of pages of the report:
Sheet No. 1 – Identification of the generator or authorized person

Generator or person authorized	Separate establishment		
ID No. (IČO):	Identification number of facility (IČZ in Czech) / Identification number of establishment (IČP in Czech)		
Business name / name / name and surname of the generator or authorized person	Name of establishment		
Street No.	Street No.		
Municipality	Municipality		
Post code	Post code		
Code of municipality with extended powers (ORP in Czech) / code of administrative unit of the capital city Prague (SOP in Czech)	Code of municipality with extended powers (ORP in Czech) / code of administrative unit of the capital city Prague (SOP in Czech)		
IČZÚJ	IČZÚJ		
Date of report	Report prepared by	Name	Surname
Report note	Telephone	E-mail	
	An integrated permission has been issued for the facility.	Yes / No	
	PID (IPPC code of facility)	MZP	
	The facility, by contract, participates in the functioning of the municipal waste management system.	Yes / No	
	Catalogue numbers of wastes managed under the municipal waste management system		

ID No. (IČO):	
Identification Number of Basic Geographical Unit of establishment (IČZÚJ in Czech)	

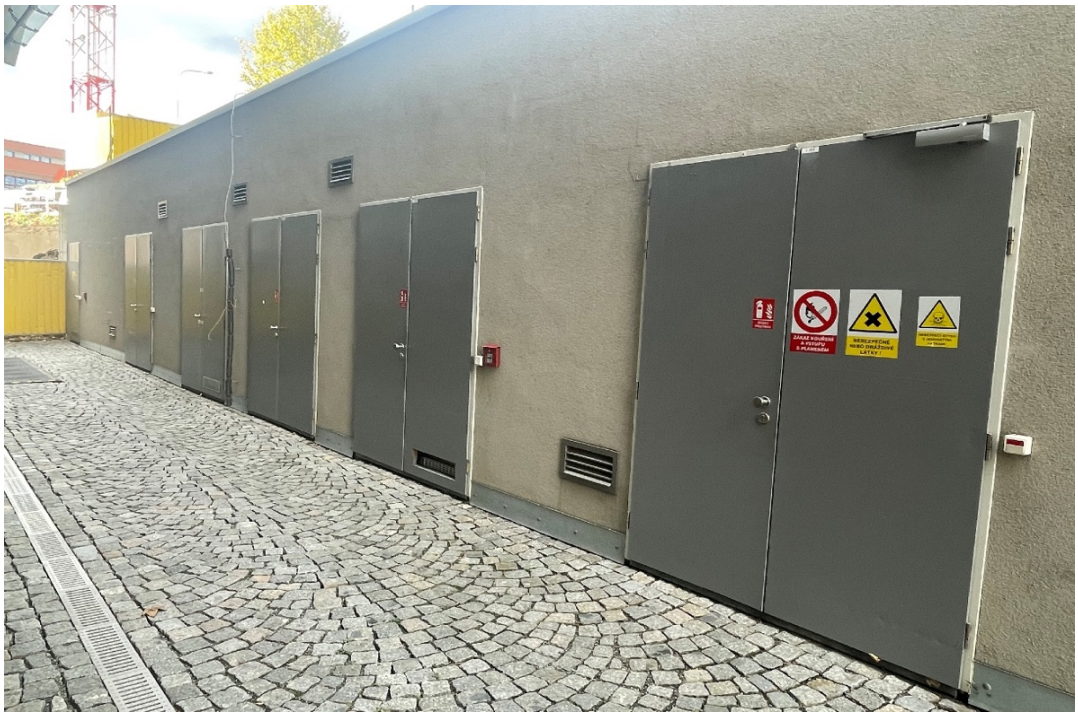
Identification number of the facility or establishment (IČZ or IČP, respectively, in Czech)	

Page number of sheet No. 2:

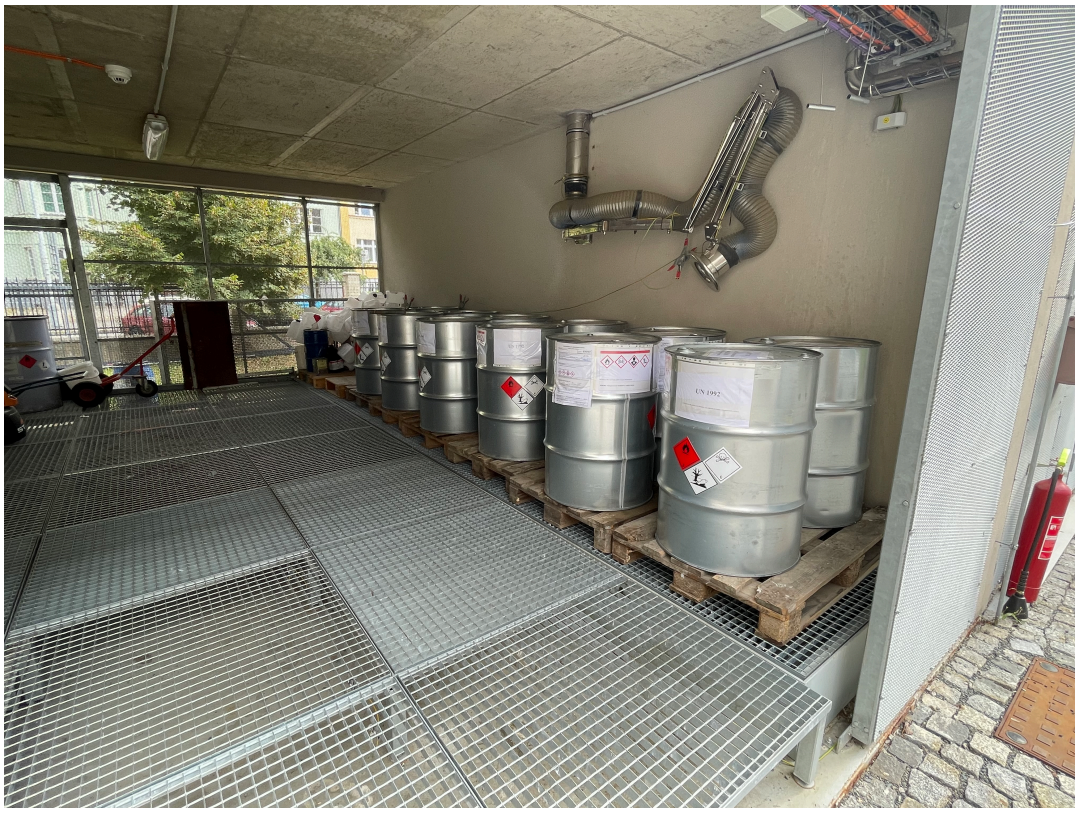
Number of pages of sheet No. 2:

Order number	Waste classification			Amount of waste (tonnes)		Method of management code	Partner	Certificate No.
	Catalogue number of waste	Waste category	Name of waste type	Total (+)	Of which according to column 7 (−)		ID No. (IČO in Czech), business name / name / name and surname, identification number of the facility / establishment (IČZ / IČP in Czech), name, address, and the identification number of the basic geographical unit (IČZÚJ in Czech) of the establishment	
1	2	3	4	5	6	7	8	9

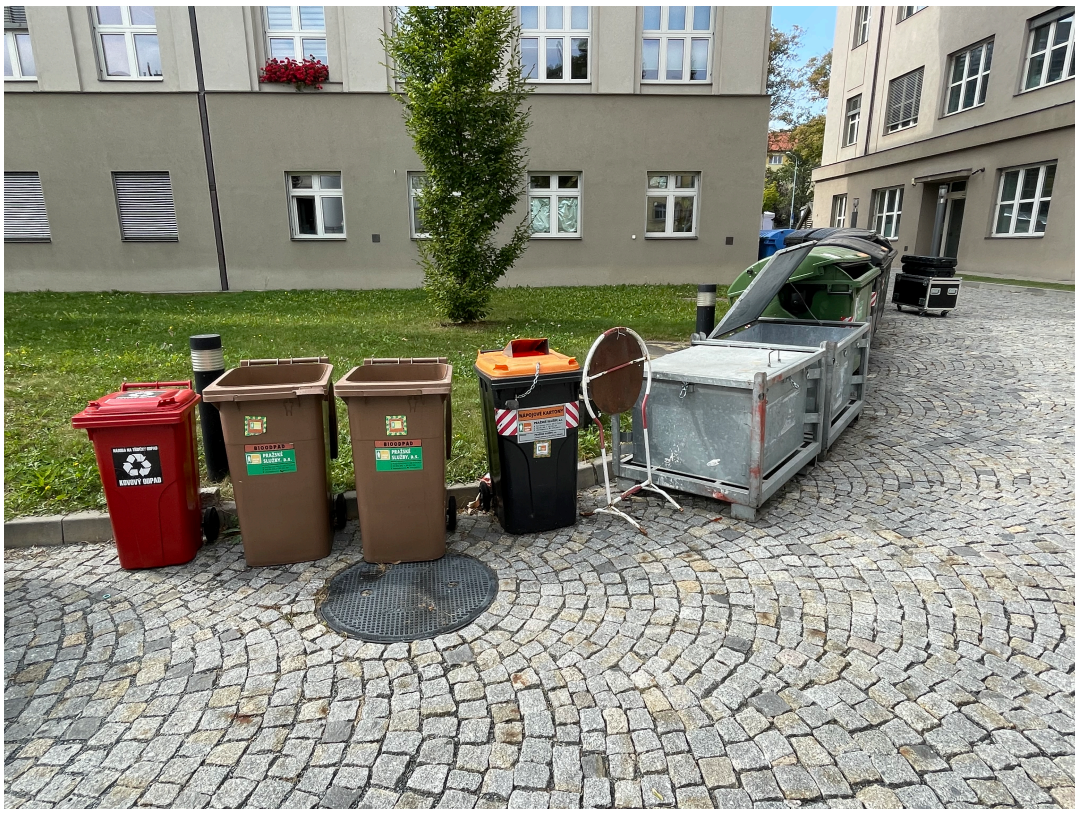
Annex No. 2 – Photographic documentation



Area for the temporary placement of discarded electrical equipment and chemicals



Waste solvent collection site



Receptacles for metal waste, biowaste and beverage cartons

Receptacle for 150110 Packaging containing residues of or contaminated by dangerous substances*