

OPERATING MANUAL

U.S.P. /AMB_RIF_PRO01 May 2023 – rev.0

Safety and Prevention Unit

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Adopted with resolution no. 08/2023 dated June 8, 2023 of the Head of the Safety and Prevention Unit

List of revisions

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		N. Cont						



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1. Introduction

"A clean environment is critical to human health and well-being. However, the interactions between the environment and human health are extremely complex and hard to assess. This makes the use of the prudence principle particularly useful. Better-known health impacts are associated with air pollution, poor water quality and inadequate sanitation. Much less is known about the health impacts of hazardous chemicals. Noise is an emerging issue for the environment and health. Climate change, depletion of stratospheric ozone, loss of biodiversity and soil degradation can also affect human health. " European Environment Agency (EEA)

FBK, in order to promote the reduction of waste as a priority, in compliance with their hierarchy indicated by Directive 2008/98 EU as amended, has embarked on a path through prevention followed by preparation for reuse, reuse, recycling, recovery (including energy recovery) that will resort to landfilling and waste disposal without energy recovery as the last option.

The minimum goals of FBK are:

- reducing the production of municipal waste by strengthening separate disposal for different types of waste;
- starting recycling/recovering most of the waste produced;
- considering the possibility of reducing the generation of hazardous special waste by embracing, as far as possible and within our competence, the Life Cycle Assessment (LCA) philosophy, i.e. the approach that considers the entire life cycle of products (from raw material extraction to manufacture, transportation, use, transformation into waste and waste management);
- considering reuse and repurposing, thanks to which once an object's use is over, it does not add to the waste pile, but can be used again without the materials of which it is made undergoing any transformation.

To date, efforts to manage waste have been essentially aimed at meeting three goals:

- 1. reducing the generation of total waste and in particular certain types of waste (construction and demolition waste, electrical and electronic waste, oils, paints, etc.);
- 2. reducing the amount of hazardous waste (chemical and biological agents, paints, oils);
- 3. initiating the recovery of the majority of waste produced by accurately separating the waste produced and identifying suitable authorized recovery facilities.

All measures, procedures and solutions currently adopted by FBK through the **Safety and Prevention Unit** are constantly monitored through internal controls and also supported by audits with service providers.





2. How to use the operating manual

Part One describes the criteria and methodologies that have been prepared in FBK to manage waste generated at FBK in compliance with current regulations.

The reader will be able to:

- understand in which cases he or she can become an FBK internal waste producer,
- identify his or her waste production area or areas;
- understand how such waste is regulated;
- understand how such waste is classified and by whom;
- understand the temporary storage facilities to which such waste is to be delivered;
- understand how such waste should be sent for recovery or disposal.

Part Two, called **the** APPENDIX, lists all types of waste generated so far at FBK and the procedures that each *FBK internal waste producer* must use to deliver the waste he or she produces to temporary storage facilities.

The steps to be taken, once the detailed descriptions have been provided to the **Safety and Prevention Unit**, which are needed for proper classification, represent the procedural process to be followed so that each type of waste is sent for disposal or recovery in a proper manner and will concern the *FBK internal waste producer* in particular in the stages below:

- collection by homogeneous groups, according to the type of waste;
- identification of suitable packaging to contain waste depending on the physical state and hazard level;
- delivering waste to its temporary deposits;
- highlighted in magenta boxes.



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3. **Scope and purpose**

The purpose of this manual is to illustrate the correct *management of waste* produced by the activities of Fondazione Bruno Kessler, hereinafter also referred to as FBK, in order to comply with the provisions of current regulations. The reference standard of *waste management* is Part IV of Legislative Decree 152/06 as amended.

Art. 183 paragraph 1 letter n) Legislative Decree 152/06 as amended: *waste management:* the collection, transport, recovery and disposal of waste.

In Legislative Decree No. 152/2006 and subsequent implementing decrees, general aspects are set out concerning the identification and classification of waste, the prohibition of abandonment, *temporary storage* with the producer for subsequent delivery of waste to recovery/disposal, permits, administrative requirements and penalties.

Article 177 of Legislative Decree 152/06 as amended: *scope and purpose*: the fourth part of the decree regulates the management of waste and the remediation of polluted sites, also in implementation of Community directives, in particular Directive 2008/98/EC, providing for measures aimed at protecting the environment and human health, preventing or reducing the negative impacts of the production and management of waste, reducing the overall impacts of the use of resources and improving their effectiveness. Waste management constitutes an activity in the public interest.

FBK, as producer of waste,

Article 183 paragraph 1 letter f) Legislative Decree 152/06 as amended and integrated: *waste producer*. the person whose activity produces waste and the person to whom said production is legally referable (initial producer) or anyone who carries out pre-processing, mixing or other operations that have changed the nature or composition of said waste (new producer).

has the obligation to:

- identify and classify its waste according to the type of waste produced;
- > distinguish between municipal waste and special, both hazardous and non-hazardous waste;
- assign the correct waste identification code (CER);
- comply with the rules for temporary storage;
- deliver the waste produced to authorized plants through authorized transporters;
- keep a waste loading and unloading log;
- > prepare the identification form for waste transportation;
- prepare the MUD (Modello Unico di Dichiarazione Ambientale, in English Single Environmental Declaration Form) annual report.

Article 188 of Legislative Decree 152/06 as amended: Responsibility for waste management: the

producer of the waste provides for its handling directly or by entrusting it to an intermediary, or to a dealer, or its delivery to an entity or enterprise that carries out waste management operations, or to a person in charge of public or private waste collection or transport, in compliance with Part IV of the decree. The delivery of waste, for the purpose of treatment, does not constitute automatic exclusion of liability with respect to actual recovery or disposal operations, the liability of the waste producer for the recovery or disposal of waste is excluded in the following cases:

- provision of waste to the public collection service;
- delivery of waste to authorized entities for recovery or disposal provided that the waste producer has received the form referred to in Article 193 signed and dated on arrival by the consignee, within three months from the date of delivery of waste.



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The responsibility for the proper management of waste deriving from one's activities lies also with:

- > **co-located third party companies** in cases where these are bound by project agreements with FBK;
- contractors present at FBK, who are required to <u>deposit them in a delimited area</u> in an orderly manner, mark them, and remove them from FBK in a short time. The location should be shared with the **Safety** and **Prevention Unit** in accordance with FBK contacts identified to follow up on the execution of contract work.

4. **Recipients**

The waste management procedures apply to any FBK employee or other entity that has entered into an institutional

project agreement with FBK, in which FBK is a producer of the waste:

- workers who produce waste from FBK institutional activities;
- research Unit Heads;
- research Support Unit Heads;
- > members of the Safety and Prevention Unit.

5. **Regulatory framework**

The regulations relating to waste management are contained in several directives, in particular:

- Italian Legislative Decreen. 152/06 dated April 3, 2006 as amended (Environmental regulations) Part Four of this decree regulates waste management and the remediation of polluted sites, including the implementation of EU directives, particularly Directive 2008/98/EC, by providing measures to protect the environment and human health by preventing or reducing the negative impacts of waste generation and management, reducing the overall impacts of resource use, and improving the effectiveness of resource use. Waste management constitutes an activity in the public interest.
- Presidential Decree no. 254 of July 15, 2003 (Regulation on the management of sanitary waste) These regulations govern the management of medical and other types of waste in order to ensure high levels of environmental and public health protection and effective controls.
- Ministerial Decree of 5 February 1998 (Identification of non-hazardous waste subject to simplified recovery)

Identifies nonhazardous waste subject to simplified recovery procedures under Articles 31 and 33 of Legislative Decree No. 22 of February 5, 1997.

Ministerial Decree no. 161 of 12 June 2002 (Regulations on the identification of hazardous waste subject to simplified procedures

Regulation implementing Articles 31 and 33 of Legislative Decree no. 22 of February 5, 1997 on the identification of hazardous waste that can be admitted to simplified procedures.

- Regulation (EU) No 1357/2014 (Hazard characteristics for waste) New Waste Hazard Characteristics.
- EU Decision 2014/955/EU (European Waste List) The new European list of waste.
- Ministerial Decree 148 of April 1, 1998 (Record keeping)
 Regulation approving the model of waste loading and unloading records.
- Ministerial Decree 145 of April 1, 1998 (Definition of the form)
 Regulation defining the model and contents of the waste accompanying form.



6. **Definitions and terminology**

"waste": according to article 183 paragraph 1 letter a) of Legislative Decree 152/06 as amended Waste is defined as any substance or object which the holder discards or intends or is required to discard;



- "hazardous waste": Article 183 of Legislative Decree 152/06 as amended: waste presenting one or more characteristics listed in annex I of Part IV of Legislative Decree 152/2006 as amended
- "non-hazardous waste": Article 183 of Legislative Decree 152/06 as amended: waste that does not present any characteristic listed in annex I of Part IV of Legislative Decree 152/06 as amended and integrated;
- > "urban waste": Article 183 lett. b -ter) Legislative Decree 152/06 as amended: "urban waste":
 - unsorted and separately collected household waste, including: paper and cardboard, glass, metals, plastics, organic waste, wood, textiles, packaging, waste electrical and electronic equipment, waste batteries and accumulators, and bulky waste, including mattresses and furniture;
 - 2. unsorted and separately collected waste from other sources which are similar in nature and composition to household waste listed in Annex L-quater produced by the activities listed in Annex L-quinquies;
 - 3. waste from the sweeping of roads and the emptying of waste bins;
 - waste of any nature or origin, lying on public roads and areas or on private roads and areas otherwise subject to public use or on maritime and lake beaches and on the banks of watercourses;
 - 5. waste from the maintenance of public green areas, such as leaves, grass clippings and tree prunings, as well as waste resulting from the cleaning of markets;
 - 6. waste from cemetery areas, exhumations and extumulations, and other waste from cemetery activities other than those mentioned in items 3, 4 and 5.
- > "special waste": Article 183 of Legislative Decree 152/06 as amended:
 - 1. waste from agricultural and agro-industrial activities;
 - 2. waste resulting from demolition, construction, as well as waste resulting from excavation activities;
 - 3. waste from industrial processing;
 - 4. waste from craft processing;
 - 5. waste from business activities;
 - 6. waste from service activities;
 - 7. waste from waste recovery and disposal activities, sludge from potabilization and other water treatment and wastewater purification, and from fume abatement;
 - 8. waste from health-related activities, end-of-life vehicles.



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- > "internal waste producer" means the individual belonging to an FBK Unit whose activity produces waste;
- "temporary storage before collection": article 183 paragraph 1 bb) Legislative Decree 152/06 as amended: the grouping of waste for the purpose of transporting it to a recovery and/or disposal plant, carried out, before collection pursuant to art. 185 – bis;

Article 185 bis Legislative Decree 152/05 as amended: Waste is *temporarily stored before collection* as follows:

➤ waste is collected and sent to recovery or disposal operations according to one of the following alternative methods, at the choice of the waste producer:

- at least once every three months, regardless of the quantity in storage;
- when the total quantity of waste in storage reaches 30 cubic meters, of which at most 10 cubic meters of hazardous waste;
- however, where the quantity of waste does not exceed the above limit per year, temporary storage may not exceed one year;
- wastes are grouped by homogeneous categories, in accordance with the relevant technical standards, as well as, in the case of hazardous wastes, in accordance with the rules governing the storage of hazardous substances contained therein, in accordance with the rules governing the packaging and labeling of hazardous substances.

Temporary storage prior to collection does not require authorization by the competent authority.





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Waste in *temporary storage* must be located in suitable, guarded area/room and must be sorted by type in appropriately labeled containers.

Article 187 of Legislative Decree 152/06: *prohibition of mixing hazardous waste*: it is prohibited to mix hazardous waste having different hazardous characteristics or hazardous waste with non-hazardous waste.

Temporary storage must be located in a covered, paved area identified with appropriate signage, using suitable containers.

FBK's Safety and Prevention Unit, in compliance with the provisions of Article 185-bis (b) of Legislative Decree. 152/06 as amended, starts hazardous and non-hazardous waste to recovery or disposal operations upon reaching 30 cubic meters of which 10 cubic meters is hazardous waste, monitors temporary storage through periodic visual inspections, and verifies compliance.



"labeling" means a label or placard must indicate the type of waste in temporary storage, as reported below in the example;

Art. 185 -bis paragraph 2 letter d) Legislative Decree 152/06: "*Hazardous waste labels":* d) in compliance with the regulations governing the packaging and labeling of hazardous substances.



Resolution of the Interministerial Committee of July 27, 1984 point 4.1.5: for the purpose of making known, during temporary storage, the nature and hazardousness of the waste, fixed and mobile containers must be appropriately marked with labels or plates, affixed to the containers themselves or placed in the storage areas; these markings must be clearly visible in size and location.

- > *"ecological island*" (recycling center) means an area equipped for the separate collection of waste;
- "separate collection" means collection in which a waste stream is kept separate according to the type and nature of waste in order to facilitate its specific treatment;
- "MUD Single Model of Communication": annual report to the competent local chamber of commerce that provides the quantities and quality characteristics of the waste produced during the previous year;
- "ADR Accord Dangerous Route": a European agreement concerning the international carriage of dangerous goods by road, signed in Geneva on September 30, 1957 and ratified in Italy by law number 1839 of August 12, 1962.



> "Formulario di Identificazione dei Rifiuti (Waste Identification Form) (FIR)": a fiscal document,

numbered, approved and prepared in four copies, accompanying the transportation of waste;

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"Loading and unloading register" means a waste loading and unloading record, on which information on the qualitative and quantitative characteristics of waste should be noted;

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Recupero: cod.		lisofizione Albo n.	
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> "waste management" means the collection, transport, recovery, including sorting and disposal of waste;



"WEEE" (Italian RAEE): electrical and electronic equipment or simply electronic waste, is a special type of waste consisting of any electrical or electronic equipment that the holder intends to dispose of because it is faulty, unused or obsolete and therefore destined for abandonment;





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"recovery" means any operation whose main result is to enable waste to play a useful role by substituting other materials that would otherwise have been used to perform a particular function or to prepare it to perform that function within the 'plant or in the economy at large;

RECOVERY OPERATIONS (Legislative Decree 152/06, Annex C)

- > R1: main use as fuel or other means to produce energy
- > R2: solvent regeneration/recovery
- R3: recycling/recovery of organic substances not used as solvents (including composting operations and other biological transformations)
- > *R4: recycling/recovery of metals or metal compounds*
- > *R5: recycling/recovery of other inorganic substances*
- > R6: regeneration of acids or bases
- > R7: recovery of products used to capture pollutants
- > R8: recovery of products from catalysts
- > R9: regeneration or other reuse of oils
- > R10: spreading on land for the benefit of agriculture
- > R11: use of waste obtained from any of the operations listed in R1 to R10
- > R12: exchange of waste for it to undergo one of the operations listed in R1 to R11
- R13: storage of waste for it to undergo one of the operations specified in R1 to R12 (excluding temporary storage, prior to collection, at the place where it is generated)



"disposal" means any operation other than recovery even when the operation results in secondary recovery of energy.

DISPOSAL OPERATIONS (Legislative Decree 152/06, Annex B)

- > D1: deposit on or in the ground (e.g. landfill)
- > D2: land treatment (e.g. biodegradation of liquid waste or sludge in soils)
- > D3: Deep injections (e.g. injections of pumpable waste into wells. In salt domes or natural geological faults)
- > D4: lagooning (e.g. discharge of liquid waste or sludge into wells, ponds or lagoons, etc.)
- > D5: specially arranged landfilling (e.g., systematization in separate watertight cells, covered or isolated from each other and the environment)
- > D6: discharge of solid waste into the water environment except immersion
- > D7: immersion, including burial in the marine subsoil
- > D8: biological treatment not specified elsewhere in this annex, resulting in compounds or mixtures that are disposed of according to one of the processes listed in D1 to D12
- > D9: Physicochemical treatment not specified elsewhere in this annex that results in compounds or mixtures removed by any of the processes listed in D1 to D12 (e.g., evaporation, drying, calcination, etc.)
- > D10: ground incineration
- > D11: incineration at sea
- > D12: permanent storage (e.g. placement of containers in a mine, etc.)
- > D13: preliminary grouping before any of the operations in D1 to D12
- > D14: preliminary reconditioning before any of the operations in D1 to D13
- > D15: preliminary storage prior to any of the operations in D1 to D14 (excluding temporary storage, prior to collection, at the place where they are produced)



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7. Waste packaging

The packages may, if necessary, be provided with suitable closures to prevent the contents from escaping, any accessories and devices suitable for safely carrying out filling and emptying operations; they are resistant to the shocks and stresses caused by their handling.

The choice of packaging is agreed with the relevant staff and according to the provisions of the ADR consultant.

Examples:

		(: : : : : : : : : : : : : : : : : : :
IBC/GIR (tank)	Sanitary waste containers	Big Bag
Container for accumulators	Lidded drums	Canisters



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Each container must be labelled as follows:

	"R" Exclusively for hazardous waste immovable label or mark having the dimensions of 15X15 cm
K	with a yellow background bearing the letter R in black, 10 cm high, 8 cm wide and with a sign
	thickness of 1.5 cm.
EWC (Italian CER)	AA BB CC
CODE	
HAZARD	HP
CHARACTERISTICS	HP 1 "Explosive": waste that can, by chemical reaction, develop gas at such a temperature,
	pressure and speed as to cause damage in the surrounding area. This includes pyrotechnic wastes, evolve organic perovide wastes and evolve self-reactive wastes.
	HP 2 "Comburent " means waste canable usually by oxygen supply of causing or promoting the
	combustion of other materials.
	HP 3" Flammable":
	- <i>flammable liquid waste:</i> liquid waste whose flash point is less than 60 C or diesel waste, diesel fuels and light heating oils whose flash point is above 55 °C and below or equal to 75 °C;
	- <i>flammable solid and liquid pyrophoric waste:</i> solid or liquid waste that, even in small quantities,
	- <i>flammable solid waste</i> : solid waste that is readily flammable or can cause or promote a fire
	by rubbing;
	- flammable waste gas: waste gas that ignites in contact with air at 20 C and at
	normal pressure of 101,3 kPa;
	- <i>water-reactive waste:</i> waste that, in contact with water, develops flammable gases in
	<i>congerous quantities,</i> - <i>other flammable wastes:</i> flammable aerosols, flammable self-beating wastes
	flammable organic peroxides, and flammable self-reactive wastes.
	HP 4 "Irritant": waste whose application may cause skin irritation or eye injury.
	HP 5 "Harmful": waste that can cause specific target organ toxicity with single or repeated
	exposure,
	or may cause acute toxic effects following aspiration.
	HP 6 "Toxic" means waste that may cause acute toxic effects following oral or skin administration, or following inhalation exposure.
	HP 7 "Carcinogenic": waste that causes cancer or increases its incidence.
	HP 8 "Corrosive": waste whose application may cause skin corrosion.
	HP 9 "Infectious" means waste containing viable microorganisms or their toxins that are known,
	or rightly believed to be, causes of disease in humans or other living organisms.
	adult men and women, as well as on the development of offspring
	HP 11 "Mutagen" means waste that can cause a mutation, that is, a permanent change in the
	amount or structure of a cell's genetic material.
	HP 12 "Acute toxicity gas release": waste that releases acute toxicity gas (Acute Tox. 1, 2 or 3)
	in contact with water or an acid.
	effects to the skin or respiratory organs
	HP 14 "Ecotoxic" means waste that poses or may pose immediate or deferred risks to one
	or more environmental compartments.
	HP 15 "Waste that does not directly possess any of the above hazard characteristics but
	may manifest it later": waste that presents or may present hazards.



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PICTOGRAMS		This pictogram indicates:
(GHS/CLP)	~	- explosives;
	Art.	- self-reactive substances and mixtures:
Regulation (EC)	A.	- organic peroxides that can cause explosions when exposed to heat
No. 1272/2008		
		This pictogram indicates:
		- gases, aerosols, liquids and flammable solids:
		- self-heating substances and mixtures:
		- pyrophoric liquids and solids that could ignite in contact with air
		- substances and mixtures which in contact with water emit flammable cases:
		- solf-reactive substances and mixtures or organic perovides which may
		cause a fire when exposed to heat
	^	This pictogram indicates:
	12th	- gases, solids and oxidising liquids which may cause or make more
		dangerous a fire or explosion.
	~	
		This pictogram indicates:
		- gases under pressure (compressed, liquefied, dissolved) that could explode if
		exposed to heat;
		 refrigerated gases that could cause burns or cryogenic injuries.
	•	
	\wedge	This pictogram indicates.
	L.F.	- corrosive substance that can cause serious burns to the skin and damage to
		the eyes.
	•	The symbol may also indicate corrosive action on metals.
		This pictogram indicates:
		- a chemical that has an acute toxicity in contact with the skin, whether
	(Site	inhaled or ingested, and that can also be lethal.
		This pictogram indicates a substance with one or more of the following properties:
		- harmful;
		- causes skin sensitization and irritation to the skin and eyes;
		- irritates the airways;
		 has narcotic effects, causes drowsiness or dizziness;
		- dangerous to ozone.
		<i>This pictogram</i> indicates a substance with one or more of the following harmful
		effects:
		- carcinogenic;
		- damage to fertility and the fetus;
	•	- causes mutations;
		- respiratory sensitiser and may cause asthma allergy or breathing
		difficulties when inhaled;
		- toxic to certain organs;
		- involves aspiration hazards: can be harmful or even lethal if ingested or
		introduced into the airways.
	\wedge	This pictogram indicates.
	¥	- a substance dangerous to the environment and toxic to aquatic organisms.
	•	



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Waste Label Example:



8. Organizational chart

At FBK, the organization regarding special waste is charged to the **Safety and Prevention Unit**.

The organizational chart is shown below.





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9. Waste coding

The codification and classification of waste produced is charged to the Safety and Prevention Unit.

Annex D to Legislative Decree no. 152/06 as amended.

Waste is listed in the European Waste Catalogue (EWC), divided into 20 chapters. Waste marked with an asterisk (*) in the list of wastes shall be considered hazardous waste. The different types of waste included in the list are defined by a six-digit *waste code*.

Chapters of the list

- 1 Waste from prospecting, mining or quarrying, and physical or chemical processing of minerals.
- **2** Wastes generated from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food processing and preparation.
- **3** Waste from wood processing and panel, furniture, pulp, paper and cardboard production.
- 4 Wastes from the leather, fur and textile industries.
- 5 Waste from oil refining, natural gas purification, and pyrolytic treatment of coal.
- 6 Wastes from inorganic chemical processes.
- 7 Wastes from organic chemical processes.
- **8** Wastes from the production, formulation, supply and use of coatings (paints, varnishes and glazes), adhesives, sealants and printing inks.
- 9 Photographic industry waste.
- **10** Waste from thermal processes.
- **11** Wastes generated from chemical surface treatment and coating of metals and other materials; nonferrous hydrometallurgy.
- **12** Wastes generated from the processing and physical and mechanical surface treatment of metals and plastics.
- 13 Oil wastes and wastes of liquid fuels (except edible oils, and those in chapters 05, 12).
- **14** Waste organic solvents, refrigerants and propellants (except 07 and 08).
- 15 Packaging waste, absorbents, rags, filter materials and protective clothing (not otherwise specified).
- **16** Wastes not otherwise specified in the list.
- 17 Waste from construction and demolition operations (including soil from contaminated sites).
- **18** Wastes generated by the health and veterinary sector or related research activities (except kitchen and catering wastes that do not result directly from therapeutic treatment).
- **19** Waste generated from waste treatment plants, off-site wastewater treatment plants, as well as from the potabilization of water and its preparation for industrial use.
- **20** *Municipal waste (household and equivalent waste generated by business and industrial activities as well as institutions) including waste from separate collection.*

Example of waste encoding:

- chapter (waste generating activity) 13 spent oil and liquid fuel residues
- subchapter (waste generating subprocess) 13.01 waste hydraulic circuit oils
- name of waste (waste code) CER 13.01.04* chlorinated emulsions

The *"waste code* (CER)" consists of six digits: the first two identify the **chapter**, the second two the **subchapter** and the last two specify **the waste name**.



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10. Waste produced

Currently, Fondazione Bruno Kessler, due to the various activities carried out, produces:

- waste from laboratory activities in which chemical agents are handled;
- waste from laboratory activities in which biological agents are handled;
- waste from demolition and construction activities;
- waste from workshop activities;
- > waste arising from technical and IT service activities;
- > waste from separate collection.

The classification of the waste and the attribution of the accurate waste code (CER), is based on the following information:

- knowledge of the production process that generated the waste;
- the product safety data sheets;
- product Information Sheet;
- > characterization and classification chemical analysis.

11. **Temporary storage of waste**

FBK has set up, within the company perimeter, the following areas:

- chemicals area;
- filters area;
- toner area;
- > neon area;
- battery and light accumulators area;
- RAEE (wEEE) area;
- iron and demolition area;
- separate waste collection area to be allocated to the municipal waste manager of the municipality of Trento.

In areas designated for temporary storage, waste shall be sorted into homogeneous categories; temporary chemical storage shall be equipped with containment basin sized according to current regulations, in compliance with packaging and labeling regulations, taking into account:

- waste characteristics;
- > compatibility of the waste with the packaging;
- packaging handling.



Via Sommarive site





The *internal waste producer* may introduce:

- light batteries and accumulators, such as: alkaline, Ni-Cd, Li-MH, at the battery and light accumulators area, (see floor plan, west building near the warehouse);
- > waste such as paper, cardboard, packaging and unsorted waste in the containers present:
 - for the via Sommarive site, on each floor;
 - for the other locations, on the ground floor.

For all other waste, contact the Safety and Prevention Unit.







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12. Measures to be taken in the event of accidental chemical waste spills

In the event of chemical waste spills during transport from the laboratory to the storage facility, the **Safety and Prevention Unit** will ensure that a clean-up kit containing vermiculite, shovel, absorbents, waste bags, gloves and clamps is made available at the temporary chemical waste storage facility.

The *producer of the accidental spill* shall provide:

- demarcate the area to be cleared if it is a transit or work area and notify those directly involved in that area;
- call for help if unable to handle the situation, in accordance with the FBK Emergency Plan: notify the Safety and Prevention Unit of the spill, the nature of the chemical agent and the area affected, indicating the presence of any drains or downspouts into which it might spill;
- go, with a member of **the Safety and Prevention Unit**, to the temporary chemical waste storage and pick up the remediation kit;
- once the remediation work has been completed, take, in accordance with the Safety and Prevention Unit, the remediation material to the "temporary chemical waste storage facility."

13. Delivery of waste to authorized parties

The service of transportation, recovery/disposal of waste produced is entrusted to companies with the necessary permits issued by the competent authorities.

The **Safety and Prevention** Unit verifies the permits of the transporter and the recovery/disposal facility to which they deliver the waste and, if any, the broker with/without possession of waste. Transporters and disposers must be licensed for the type of waste being transported or processed. Authorization is sought from the National Register of Environmental Managers for transporters and from the relevant province or region for disposal facilities.





The National Register of Environmental Managers was established by Legislative Decree 152/06 and succeeds the National Register of Waste Managers governed by Legislative Decree 22/97. It is established at the Ministry of the Environment and Land and Sea Protection and is divided into a National Committee, based at the Ministry itself, and Regional and Provincial Sections, based at the Chambers of Commerce of the regional capitals and autonomous provinces of Trento and Bolzano. The National Committee and the regional and provincial Sections are interconnected via the ICT network of the Chambers of Commerce.



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"Safety Consultant for the Transport of Dangerous Goods/Waste by Road": FBK has designated, as required by ADR regulations, the Safety Consultant for the Transport of Dangerous Goods/Waste by Road, in the person of **Nives Cont, who** holds an appropriate professional certificate issued by the Trento DMV; the essential function of the consultant is to seek all means and promote all actions, within the limits of the company's activities in question, to facilitate the performance of these activities in compliance with applicable regulations and under optimal safety conditions. Her functions, to be adapted to the activities of the enterprise, are specifically as follows:

- > monitoring compliance with the requirements governing the transport of hazardous goods;
- > advising the company on the transport of hazardous goods;
- arrange for the preparation of an annual report, intended for the company's management or possibly a local public authority, on the company's activities with regard to the transport of hazardous goods.

The report is kept for five years and made available to national authorities upon request. The tasks of the consultant shall include procedures for enforcing the rules on the identification of transported hazardous goods.

ADR stands for "*Accord relatif au transport international des marchandises dangereuses par route*, " *i.e., the agreement relating to the international transport of dangerous goods by road, signed in Geneva on Sept. 30, 1957 and ratified in Italy by Law No. 1839 of Aug. 12, 1962.* ADR is a **mandatory standard** in both international and domestic transport.

For the acceptance of the product waste, the **Safety and Prevention Unit** prepares the documentation to be submitted

to the recovery or disposal plant, in particular:

- waste type form;
- > analysis (if required by the destination plant or by law);
- > safety data sheet and/or technical data sheet;
- waste sample (if required);
- > "disposal Request" form.



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_	_
_	_/
-	21
FOUR	
BRUN	DAZIONE

Scheda di Omologa/Caratterizzazione	DATA:
PRODUTTORE	
Ragione Sociale:	
Sede Legale:	
Sede Impianto:	
C.E. PIVA:	
Referente: e-mail:	Tel· Fax
l'Azienda è il produttore iniziale del rifiuto: D SL D NO	/ div / div
RIFIUTO	
Descrizione:	CER:
Stato fisico: 🗆 solido pulverulento 🗖 solido non pulverulento 🗖 fangoso	🗆 liquido
Tipologia:	
Ciclo produttivo che origina il rifiuto:	
Odore: 🗆 NO 🛛 SI (specificare)	
Colore:	
Natura: 🗆 organica 🛛 inorganica 🗖 mista	
Contaminato da sostanze pericolose: 🗖 NO 🗖 SI (specificare)	
Rifiuto pericoloso: 🗆 NO 🛛 SI con le seguenti caratteristiche di pericolo (barrare quelle relative al rifiuto in oggetto):
	HP11 🗆 HP12 🗆 HP13 🗖 HP14 🗖 HP15
che sono state attribuite: 🗆 per origine 🛛 da analisi chimica 🗖 da scheda di sicu	rezza 🛯 da indicazione del produttore iniziale
Il rifiuto presenta residui di basi (pH > 9): □ NO □ SI (specificare)	
Il rifiuto presenta residui di basi (pH \leq 5): \Box NO \Box SI (specificare)	
Il rifiuto presenta residui di sostanze altamente infiammabili (solventi, ecc): 🗖 NC	D □ SI (specificare)
Il rifiuto contiene amianto o materiali contenenti amianto 🛛 NO 🛛 SI	
<u>Il rifiuto è conforme a quanto previsto dal Regolamento UE 1179/2016 e Reg</u>	olamento UE 997/2017
ALTRE INFO	
Modalità di imballaggio: 🗆 Rig Bags 🖵 cistemette It 1000 🗖 fusti /lt 200)) su nallet □ fusti (lt 60) su nallet
□ sfuso in cassone □ sfuso in cisterna □ altro (specificare)	
Modalità di etichettatura: BARRARE LE ETICHETTE DI PERICOLO RIPORTATE I	N SECONDA PAGINA
Utilizzo di specifici DPI per la manipolazione e lo scarico:	
Obblighi ADR: D NO D SI (specificare)	

Homologation form page 1



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Homologation form page 2



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		Modulo - Richiesta di Conferimento							DATA COMPILAZ	DATA COMPILAZIONE			
FONDAZIONE					Da inviare comp	ilata all'uff	icio:						
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Produttore Indirizzo CF e CER Stato		Cara	tteristiche o	li pericolo	Analisi	Scheda di omologa	Quantit	tà r mc c	nr olli	Descrizione sommaria	Tipologia di imballo	Ris. Eu	
C. 2010/04		-1-1 	8			0.SI	D SI	and a come	10	arca.	70	17	- STORESON
		12				O NO	O NO						
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		10 1				DSI	O SI		10				
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	2					0 SI	O SI	2					
	0					D NO	0 NO						
(*) 1 = solido (**) SF (sfuso in NOTE PARTICOLARI:	polverulen n container	to; 2 r); BE	! = solido n 3 (big bag);	on polveru PLTS	lento; 3 = fang (bancali); (oso; CST (cist	4 =liq ernette);	uido GB (ga	bbie da	met	ro cubo); F (fusti);	altro spec	cificare
PER ACCETTAZIONE					SCARICO CON	FERMAT	OIL		-	9	PRESSU IMPIANTO D		

Disposal Request Form

14. Administrative management of waste

The Safety and Prevention Unit, in compliance with current regulations on waste management, provides for:

- completing the waste loading and unloading register;
- > preparing the identification form for waste transportation;
- sending the annual communication of waste produced (MUD);
- > keeping the annual report prepared by the ADR consultant.

Waste Transportation Form

Art. 193 Legislative Decree no. 06 as amended. *Transportation of waste:* the transportation of waste, carried out by entities or companies, shall be accompanied by an identification form (FIR) that shall contain the following data:

- a) name and address of the waste producer and holder;
- b) origin, type and quantity of waste;
- c) destination facility;
- d) date and transportation route;
- e) receiver name and address.

The paper form is prepared by FBK in four copies, completed, dated and signed by the producer and signed by the transporter; one copy is to remain with FBK, the other three, signed and dated on arrival by the recipient, are to be submitted one to the recipient and two to the transporter, who then forwards one to FBK (called the fourth copy). Alternatively, the fourth copy may be submitted by certified e-mail provided that the transporter ensures that the original document is either retained or sent to FBK at a later time. Copies of the form, as provided, are stored for three years.



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Waste loading and unloading register

Art. 190 Legislative Decree no. 152/06 as amended. *Chronological loading and unloading register:* "...enterprises and entities that are initial producers of hazardous waste and enterprises and entities that are initial producers of non-hazardous waste are obliged to keep a chronological loading and unloading register, in which the quantity produced, ... as well as the details of the identification form referred to in Article 193, are indicated for each type of waste."

FBK (initial producer of the waste) shall make entries in the chronological record within ten working days after the waste is generated and discharged.

MUD preparation

Art. 190 Legislative Decree no. 152/06 as amended. *Catasto dei rifiuti:* FBK, an entity obliged to keep the loading and unloading register must report annually to the Waste Cadastre (at the relevant Chambers of Commerce) the quantities and qualitative characteristics of waste (via the MUD Modello Unico Dichiarazione ambientale (Single Environmental Declaration Form)).

15. Method for the identification and classification of waste

PLEASE NOTE:

Before starting a new work process from which it is expected that waste may be generated, the Unit or Service's *internal waste producer* is required to inform **the Safety and Prevention Unit**.

The following is the correct guidance regarding how to identify and classify waste generated by the *internal waste producer*.

The *internal waste producer* shall report the production of new waste as a result of the activity carried out in his or her Research or Service Unit to the **Safety and Prevention Unit**, describing the activity from which it originated and the process that generated it; if it is a mixture, he or she shall describe its components and the individual quantities that make it up. The *internal waste producer* provides documentation of the waste (Safety sheet in Italian, technical data sheet, certificate of analysis, other) and reports any anomaly related to the composition or packaging of the waste to the **Safety and Prevention Unit**.

The **Safety and Prevention Unit** conducts an inspection, assigning, in cooperation with the ADR consultant, the waste code (CER), hazard characteristics, if any, and assessing the need for classification analysis.

Following directions received from the **Safety and Prevention Unit**, the *internal waste producer* delivers the waste to the identified temporary storage facility.



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The CER identification process





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APPENDIX

List of FBK waste data sheets

Below is a description of the waste products divided by waste safety data sheets and types.

Waste	Description of waste
data sheet	
	A
A.1	Chemical agents
A.2	Absorbents, rags, protective clothing contaminated by hazardous agents, filters
	В
B.1	Batteries and Cells
	C
C.1	Paper and cardboard
C.2	Waste printer cartridges and toner
	Ι
I.1	Miscellaneous hazardous and non-hazardous packaging
I.2	Bulky waste
	M
M.1	Demolition materials
M.2	Medicines
	0
0.1	Spent lubricating oils
	R
R.1	RAEE (WEEE)
R.2	Medical waste
	T
T.1	Fluorescent tubes



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Waste data sheet A.1

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Waste data sheet A.1 – Chemical agents

1. WASTE DESCRIPTION

Chemical agents containing or consisting of hazardous substances, including mixtures of chemicals.

They must be grouped as defined with the Safety and Prevention Unit.

2. **POSSIBLE WASTE LIST CHAPTERS**

- 06 wastes from inorganic chemical processes
- 07 wastes from organic chemical processes
- 14 organic solvents
- 16 waste chemicals

Examples of CER: 060102* hydrochloric acid 070204* organic solvents 140603* other solvents 160506* chemicals

The CER code is assigned by the Safety and Prevention Unit

3. POSSIBLE HAZARDOUS CHARACTERISTICS OF THE WASTE

HP3, HP6, HP8, HP14

Chemical waste agents can be, for example: corrosive, carcinogenic, irritant, flammable, toxic.

4. ADS HAZARD CLASS

The choice is made according to the hazard characteristics (indicated by the letters HP), chemical analysis, safety data sheets, and waste characterization sheets provided by the producer, depending on the production cycle or treatment that originated it, after also hearing the opinion of the ADR consultant.

ADR Classification Example:

UN 1760 WASTE, CORROSIVE LIQUID N.O.S., 8, III, (E)

The specification of the various elements:

- uN 1760 identifies the chemical-scientific name of the waste;
- 8 indicates the ADR (corrosive) hazard label;
- packaging group III indicates that the waste presents a low hazard;
- the tunnel code type (E) indicates that transit is prohibited regardless of the method of transport.

UN 3286 WASTE, FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.A.S., 3 (6.1) (8), II, (D/E)

The specification of the various elements:

- uN 1760 identifies the chemical-scientific name of the waste;
- 3 (6.1) (8) indicates the main ADR hazard label (flammable) and the secondary hazard labels (6.1 toxic) (8 corrosive);
- packaging group II indicates that the waste presents a medium hazard;
- the type tunnel code (D/E) indicates that transit in bulk or in tanks in type D and E tunnels is prohibited.



5. METHODS OF COLLECTION

The waste *internal waste producer* shall:

- 1. separate liquids from solids;
- 2. not mix compounds of a different nature, avoiding chemical incompatibilities;
- 3. use the approved packaging agreed with **the Safety and Prevention Unit**, indicating the name of the substances/mixtures and their composition as a percentage;
 - liquid waste: fill the tank up to a maximum of 90% of the total volume of the packaging, use the plugs equipped with vent in case of waste that can produce gas;
 - solid waste: fill the sealed plastic bags; if necessary use 2 bags, putting them one inside the other;
 - > **reagentarium:** attach obsolete reagentarium sheet and relevant MSDS.

6. PACKAGING SELECTION INSTRUCTIONS

Hazardous waste must be packed in good quality packaging; this packaging must be strong enough to withstand the shocks and stresses that normally characterize transportation. Packaging that is directly in contact with the waste must not be weakened by the waste, must not cause hazardous effects by reacting with its contents.

The Safety and Prevention Unit shall provide suitable packaging to contain waste as required, in particular for:

> liquid waste:

- 5-liter canisters for approved liquids fitted with a cap;
- 1-liter canisters for bromine solutions or other previously defined agents equipped with a cap;
- other smaller or different containers depending on the type of waste, as agreed with the laboratory/workshop.
- solid waste:
 - heavy duty polyethylene bags of various sizes;
 - drums depending on the type of waste;
 - approved cardboard boxes of different sizes. Containers and caps are available in the warehouse.

7. **DISPOSAL METHODS**

The waste *internal waste producer* shall:

- > for the **via Sommarive site**:
 - deliver the waste as instructed by **the Safety and Prevention Unit** to the "temporary chemical waste storage facility," according to the Google calendar schedule, in the presence of the **Safety** and **Prevention Unit officer**.
- for the via alla Cascata location: deposit the waste at the laboratory in a cabinet or under a fume hood, notifying the Safety and Prevention Unit that waste has been produced.



8. PACKAGE LABELING

Once the waste has been delivered to the "*temporary storage*", the **Safety and Prevention** Unit will label it in order to have a correct identification of the waste.

	Waste:	
	EWC (Italian CER	CODE:
	HP Hazard Chara	acteristics:
	CLP/GHS pictog	rams
	ADR	
(Dimensions 10x10 cm)	(Dimensions 10x10 cm)	(Dimensions 15x15 cm)
ADR Label	<i>Label if the waste has HP14 characteristic</i>	<i>Apply on the package in addition to the other warning labels.</i>

Examples of marks and labels applied on the package

9. VEHICLE LABELING

When transporting in **packages**: the transporter places the neutral orange panel 40x30cm) at the front and rear of the vehicle, taking care to also place the square "**R**" mark (40x40cm) at the rear of the vehicle to the right and so that it is clearly visible.

10. DOCUMENTS ACCOMPANYING THE WASTE

Waste identification form.



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Waste data sheet A.2

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Waste data sheet A.2 –

Absorbent materials – rags, protective clothing and filters

1. WASTE DESCRIPTION

Absorbent materials, such as rags, filter paper, cotton swabs, personal protective equipment (filters, masks, protective clothing. Also included are UTA filters, activated carbon filters of vacuumed cabinets and laboratory hoods, scrubbers.

They must be grouped as defined with the Safety and Prevention Unit.

2. POSSIBLE WASTE LIST CHAPTERS

- 15 Packaging waste, absorbents, rags, filter materials and protective clothing (not otherwise specified)
- 16 waste not otherwise specified
- 19 waste from treatment plants

Examples of CER: 150202* absorbents, filter materials (including oil filters not otherwise specified), rags and protective clothing, containing dangerous substances

150203 absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 150202*

There are wastes that can be described with both a hazardous and a non-hazardous CER code (they are called **Mirror Codes**: CER 150202*; CER 150203). In this case, only through an analysis can a correct classification be attributed.

The CER code is assigned by the Safety and Prevention Unit

3. POSSIBLE HAZARDOUS CHARACTERISTICS OF THE WASTE

HP4, HP5, HP14

4. ADS HAZARD CLASS

The choice is made according to the hazard characteristics (indicated by the letters HP), chemical analysis, safety data sheets, and waste characterization sheets provided by the producer, depending on the production cycle or treatment that originated it, after also hearing the opinion of the ADR consultant.

5. METHODS OF COLLECTION

The waste *internal waste producer* shall:

- **1.** separate the waste by type;
- 2. use the packaging agreed with the **Safety and Prevention Unit**, showing the description of the content;
- **3.** place waste contaminated by particularly dangerous agents or produced in large quantities in separate packaging.



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6. PACKAGING SELECTION INSTRUCTIONS

Hazardous waste must be packed in good quality packaging; this packaging must be strong enough to withstand the shocks and stresses that normally characterize transportation. Packaging that is directly in contact with the waste must not be weakened by the waste, must not cause hazardous effects by reacting with its contents.

The Safety and Prevention Unit shall provide suitable packaging to contain waste as required, in particular for:

- > heavy duty polyethylene bags of various sizes;
- ➤ drums;
- > approved cardboard boxes of different sizes.

The containers can be picked up in the warehouse.

7. METHODS OF DISPOSAL

The waste *internal waste producer* shall:

- > for the **via Sommarive site**:
 - UTA filters: place them in an orderly manner inside the dedicated container in the filter area;
 - deliver the waste **as instructed by the Safety and Prevention Unit** to the "temporary chemical waste storage facility," according to the Google calendar schedule, in the presence of the **Safety and Prevention Unit officer.**
- > for the **via alla Cascata** location:
 - deposit the waste at the laboratory in a cabinet or under a fume hood, notifying the **Safety and Prevention Unit** that waste has been produced.

8. PACKAGE LABELING

Once the waste has been delivered to the "*deposito temporaneo*", the **Safety and Prevention Unit** will label it in order to have a correct identification of the waste.

	Waste:	
R	EWC (Italian CER) CODE:	
	HP Hazard Characteristic:	
	CLP/GHS pictograms	
	ADR	

Example of hazardous waste label applied on the package

Waste name: EWC (Italian CER) Code: Remarks:

Example of hazardous waste label applied on the package



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9. VEHICLE LABELING

When transporting hazardous waste in **packages**: the conveyor places the neutral orange panel 40x30cm on the front and rear of the vehicle (if subject to the ADR), paying attention to also place the square mark "**R**" (40x40cm) on the rear of the vehicle to the right and in order to be clearly visible.

10. DOCUMENTS ACCOMPANYING THE WASTE

Waste identification form.





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Waste data sheet B.1

Waste data sheet B.1 – Batteries and Cells

1. WASTE DESCRIPTION

Three categories of batteries and cells can be identified: **a)** portable batteries and cells: this category includes all batteries (rechargeable and non-rechargeable) that are normally used in household appliances (remote controls, clocks, alarm clocks, etc.) and in portable computers, cell phones, cordless power tools, etc.; **b)** industrial cells: these are batteries and cells designed and used for specific applications (e.g. used for emergency power supply, electric bicycles, etc.); **c)** automotive cells: these are cells that ensure their starting, ignition and lighting; they can be, for example, alkaline, lead-acid, nickel-cadmium, lithium batteries, etc.

They must be grouped as defined with the Safety and Prevention Unit

2. POSSIBLE WASTE LIST CHAPTERS

16 - Batteries and accumulators wastes

20 - fractions subject to separate collection

Examples of CERs:	160601* Lead-acid batteries
	160602* nickel-cadmium batteries
	160604 alkaline batteries
	200134 batteries and accumulators

The CER code is assigned by the Safety and Prevention Unit

3. POSSIBLE HAZARDOUS CHARACTERISTICS OF THE WASTE

HP6, HP8, HP14

They can be, for example, toxic, corrosive, create damage to the environment.

4. ADS HAZARD CLASS

The choice is made according to the hazard characteristics (indicated by the letters HP), chemical analysis, safety data sheets, and waste characterization sheets provided by the producer, depending on the production cycle or treatment that originated it, after also hearing the opinion of the ADR consultant.

ADR Classification Example:

UN 2794 WASTE, electric ACCUMULATORS FILLED WITH ACIDIC LIQUID ELECTROLYTE, 8, (E)

The specification of the various elements:

- UN 2794 identifies the chemical-scientific name of the waste;

- 8 indicates the ADR (corrosive) hazard label;

- the tunnel code type (E) indicates that transit is prohibited regardless of the method of transport.

UN 3480 WASTE, IONIC LITHIUM BATTERIES, 9A (E)

The specification of the various elements:

- UN 3480 identifies the chemical-scientific name of the waste;

- 9A indicates the ADR hazard label;
- the tunnel code type (E) indicates that transit is prohibited regardless of the method of transport.



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5. METHODS OF COLLECTION

The waste *internal waste producer* separates the large or heavy batteries from the small and light ones. Lead-acid batteries in automobiles e.g., should be separated from stylus and/or button batteries; if you find a dangerous situation (swollen or oxidized batteries) inform the **Safety and Prevention Unit**, keeping them separate.

6. PACKAGING SELECTION INSTRUCTIONS

Hazardous waste must be packed in good quality packaging; this packaging must be strong enough to withstand the shocks and stresses that normally characterize transportation. Packaging that is directly in contact with the waste must not be weakened by the waste, must not cause hazardous effects by reacting with its contents.

The Safety and Prevention Unit provides the containers at the collection sites.

7. METHODS OF DISPOSAL

The waste *internal waste producer* shall:

- ➢ for the via Sommarive site:
 - large or heavy batteries: deliver the waste to the "temporary chemical waste storage", as per the schedule agreed with the Safety and Prevention Unit in the presence of the officer;
 - *light batteries*: introduce the batteries in the dedicated blue container labeled *"battery and light accumulator area"* located near the warehouse, on the basement floor corridor of the West building.

It is forbidden to leave them outside the container or introduce any other material.





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8. PACKAGE LABELING

Once the waste has been delivered to the "*temporary storage*", the **Safety and Prevention** Unit will label it in order to have a correct identification of the waste.

R	Waste:	
	EWC (Italian CER) CODE:	
	HP Hazard Characteristics:	
	CLP/GHS pictograms	
	ADR	

Example of hazardous waste label applied on the package

		R
Dimensions 10x10 cm)	(Dimensions 10x10 cm)	(Dimensions 15x15 cm)
ADR Label	Mark for Lithium Batteries	<i>Apply on the package in addition to the other warning labels.</i>

Examples of marks and labels applied on the package

9. VEHICLE LABELING

When transporting in **packages**: the transporter places the neutral orange panel 40x30cm) at the front and rear of the vehicle, taking care to also place the square **"R"** mark (40x40cm) at the rear of the vehicle to the right and so that it is clearly visible.

10. DOCUMENTS ACCOMPANYING THE WASTE

Waste identification form.



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Waste data sheet C.1

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Waste data sheet C.1 – Paper and cardboard

1. WASTE DESCRIPTION

Packaging waste such as paper and cardboard and office paper.

They must be grouped as defined with the Safety and Prevention Unit.

2. POSSIBLE WASTE LIST CHAPTERS

- 15 packaging
- 20 fractions subject to separate collection

CER examples: 150101 paper and cardboard packaging

200101 paper and cardboard;

The CER code is assigned by the Safety and Prevention Unit

3. POSSIBLE HAZARDOUS CHARACTERISTICS OF THE WASTE

Non applicable.

4. ADS HAZARD CLASS

Non applicable.

5. METHODS OF COLLECTION

The waste *internal waste producer* shall:

- separate small quantities of paper or paperboard from large quantities.

The Corporate Assets Unit regulates the separate collection of paper and cardboard packaging and office paper used, in the course of cleaning or their use, by designated personnel.

6. PACKAGING SELECTION INSTRUCTIONS

Follow the instructions provided by the Safety and Prevention Unit.

7. METHODS OF DISPOSAL

The waste *internal waste producer* shall:

- for small quantities of paper or paperboard:
 place the compacted material in the paper recycling collection "raccolta differenziata carta" point,
 located, along the corridors of the buildings, especially near the printers;
- for *large* quantities of paper or paperboard:
 contact the Corporate Assets Unit contact person to define the place and collection schedules.





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Waste data sheet C.1

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8. PACKAGE LABELING

Waste name: EWC (Italian CER) Code: Remarks:

Example of hazardous waste label applied on the package

9. VEHICLE LABELING

Non applicable for non-hazardous waste

10. DOCUMENTS ACCOMPANYING THE WASTE

Waste identification form (if applicable).





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Waste data sheet C.2

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Waste data sheet C.2 – Waste printer cartridges and toner

1. WASTE DESCRIPTION

Toners and inkjet cartridges at the end of their life cycle are considered special waste according to the environmental regulation document (hazardous and non hazardous). As such, they cannot be disposed of in common waste: they can be spent print toners, full or partially filled cartridges and/or tanks, empty cartridges and/or tanks.

They are collected by the IT service officers in charge and must be grouped as arranged with the **Safety and Prevention Unit.**

2. POSSIBLE WASTE LIST CHAPTERS

- 08 wastes from the production of printing inks
- 16 wastes not otherwise specified

Examples of CER: 080317* exhausted printing toners, containing dangerous substances
 080318 waste printing toners, other than those mentioned in 080317*
 160215* hazardous components removed from end-of-life equipment
 160216 components removed from end-of-life equipment other than those mentioned in 160215*

There are wastes that can be described with both a hazardous and a non-hazardous CER code (they are called **Mirror Codes:** CER 080317*- CER 080318; CER 160215*-CER 160216). In this case, only through examination can a correct classification be attributed.

The CER code is assigned by the Safety and Prevention Unit

3. POSSIBLE HAZARDOUS CHARACTERISTICS OF THE WASTE

HP4, HP6

4. ADS HAZARD CLASS

The choice is made according to the hazard characteristics (indicated by the letters HP), chemical analysis, safety data sheets, and waste characterization sheets provided by the producer, depending on the production cycle or treatment that originated it, after also hearing the opinion of the ADR consultant.

5. METHODS OF COLLECTION

The *internal waste producer* may use the waste wrapper of the new toner, sealing it with tape; it is recommended that dust collection tanks be closed and empty containers be kept separate from full or partially full containers.

Packaging to hold wrappers containing toners and/or tanks is available in the warehouse.



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6. PACKAGING SELECTION INSTRUCTIONS

Hazardous waste must be packed in good quality packaging; this packaging must be strong enough to withstand the shocks and stresses that normally characterize transportation. Packaging that is directly in contact with the waste must not be weakened by the waste, must not cause hazardous effects by reacting with its contents.

7. METHODS OF DISPOSAL

The waste *internal waste producer* shall:

- ➢ for the via Sommarive site:
 - *introduce the full or partially filled toners and tanks* into the container set up in the deposito obsoleti (obsolete deposit), "area RAEE", warning **the Safety and Prevention Unit** when it is full.
 - *introduce the toners and empty tanks* into the prepared container located in the warehouse, "area toner vuoti", warning the warehouse operator when it is full.

8. PACKAGE LABELING

Once the waste has been delivered to the "*deposito temporaneo*", the **Safety and Prevention Unit** will label it in order to have a correct identification of the waste.

R	Waste:	
	EWC (Italian CER) CODE:	
	HP Hazard Characteristics:	
	CLP/GHS pictograms	
	ADR	

Example of hazardous waste label applied on the package

Waste name:	
EWC (Italian CER) Code:	
Remarks:	

Example of hazardous waste label applied on the package

9. VEHICLE LABELING

When transporting in **packages**: the transporter places the neutral orange panel 40x30cm) at the front and rear of the vehicle, taking care to also place the square "**R**" mark (40x40cm) at the rear of the vehicle to the right and so that it is clearly visible.

10. DOCUMENTS ACCOMPANYING THE WASTE

Waste identification form.



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Waste data sheet I.1

Waste Data Sheet I.1 – Miscellaneous hazardous and non-hazardous packaging

1. WASTE DESCRIPTION

Wooden containers, plastic and metal containers, glass containers, composites. Hazardous substances are those marked with hazard pictograms, such as flammable, irritant, toxic, etc.

They must be grouped as defined with the Safety and Prevention Unit.

2. POSSIBLE WASTE LIST CHAPTERS

15 - packaging Examples of CER

150103 wooden packaging150102 plastic packaging150107 glass packaging150110* packaging contaminated with dangerous substances

The CER code is assigned by the Safety and Prevention Unit

3. POSSIBLE HAZARDOUS CHARACTERISTICS OF THE WASTE

HP3, HP4, HP6, HP14

4. ADS HAZARD CLASS

The choice is made according to the hazard characteristics (indicated by the letters HP), chemical analysis, safety data sheets, and waste characterization sheets provided by the producer, depending on the production cycle or treatment that originated it, after also hearing the opinion of the ADR consultant.

5. METHODS OF COLLECTION

The waste *internal waste producer* shall:

- differentiate packaging according to composition and hazard;
- for **Clean Room and LaBSSAH**: introduce the packaging marked with the hazard pictograms inside the special containers.

6. PACKAGING SELECTION INSTRUCTIONS

Hazardous waste must be packed in good quality packaging; this packaging must be strong enough to withstand the shocks and stresses that normally characterize transportation. Packaging that is directly in contact with the waste must not be weakened by the waste, must not cause hazardous effects by reacting with its contents.

The Safety and Prevention Unit provides the bags at the warehouse when necessary



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7. METHODS OF DISPOSAL

The waste *internal waste producer* shall:

for all locations:

place the packaging to be used for separate collection in the "raccolta differenziata" point, located in each building, along the corridors.

for the via Sommarive site: deliver the packages marked with hazard pictograms according to the schedule set up with the Safety and Prevention Unit at the temporary chemical waste storage "deposito temporaneo dei rifiuti chimici".

8. PACKAGE LABELING

Once the waste has been delivered to the "*deposito temporaneo*", the **Safety and Prevention Unit** will label it in order to have a correct identification of the waste.



Example of hazardous waste label applied on the package

Waste name:	
EWC (Italian CER) Code:	
Remarks:	

Example of hazardous waste label applied on the package

9. VEHICLE LABELING

When transporting in **packages**: the transporter places the neutral orange panel 40x30cm) at the front and rear of the vehicle, taking care to also place the square "**R**" mark (40x40cm) at the rear of the vehicle to the right and so that it is clearly visible.

10. DOCUMENTS ACCOMPANYING THE WASTE

Waste identification form.



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Waste data sheet I.2

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Waste data sheet I.2 – Bulky waste

1. WASTE DESCRIPTION

Bulky waste is waste from separate collection and can be, for example, cabinets, desks, chairs, tables, sofas, mirrors, curtains.

They are collected by the personnel in charge of the Corporate Assets Service and must be grouped as defined by the **Safety and Prevention Unit**.

2. POSSIBLE WASTE LIST CHAPTERS

20 - recycable waste

Example of CER 200307 bulky waste

The CER code is assigned by the Safety and Prevention Unit

3. POSSIBLE HAZARDOUS CHARACTERISTICS OF THE WASTE

Non applicable.

4. ADS HAZARD CLASS

Non applicable.

5. METHODS OF COLLECTION

The waste *internal waste producer* shall:

- group bulky waste according as per arrangements.

6. PACKAGING SELECTION INSTRUCTIONS

The Safety and Prevention Unit provides the information for the correct management of the waste.

7. METHODS OF DISPOSAL

The waste *internal waste producer* shall:

- deposit them in the agreed container or pallet.



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Waste data sheet I.2

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8. PACKAGE LABELING

Once the waste has been delivered to the "*deposito temporaneo*", the **Safety and Prevention Unit** will label it in order to have a correct identification of the waste.

Waste name: EWC (Italian CER) Code: Remarks:

Example of hazardous waste label applied on the package

9. VEHICLE LABELING

Non applicable for non-hazardous waste

10. DOCUMENTS ACCOMPANYING THE WASTE

Waste identification form.



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Waste data sheet M.1

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Waste data sheet M.1 – Demolition materials

1. WASTE DESCRIPTION

Demolition products are extremely varied and include building materials such as reinforced concrete, steel, brick, finishing materials such as plaster, tile, and paneling, and miscellaneous products such as bathroom fixtures and iron. Waste demolition/construction materials from laboratory, machine shop, and maintenance activities are mainly: plasterboard, walls, fabrication scraps, walls also of mixed material, gutters, pipes, wood, glass, doors of mixed material, inert, rock wool, insulation materials, window and door frames.

They are recovered by the staff in charge of the Technical Service or other staff in charge and must be grouped as defined with the **Safety and Prevention Unit**.

2. POSSIBLE WASTE LIST CHAPTERS

17 - waste from construction and demolition activities

Examples of CERs: 170904 mixed waste from construction and demolition activities 170903* other construction demolition waste containing hazardous substances 170201 wood 170601* insulating materials, containing asbestos 170405 iron and steel

The CER code is assigned by the Safety and Prevention Unit

3. POSSIBLE HAZARDOUS CHARACTERISTICS OF THE WASTE

HP7, HP14

Hazard characteristics are assigned to the waste, if applicable, following analysis or appropriate documentation.

4. ADS HAZARD CLASS

The choice is made according to the hazard characteristics (indicated by the letters HP), chemical analysis, safety data sheets, and waste characterization sheets provided by the producer, depending on the production cycle or treatment that originated it, after also hearing the opinion of the ADR consultant.

5. METHODS OF COLLECTION

The waste *internal waste producer* shall:

separate hazardous waste from non-hazardous waste by prior agreement with the Safety and Prevention Unit and according to their nature: wood, plasterboard, inert, glass, ferrous material etc.



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Examples:







Demolition

6. PACKAGING SELECTION INSTRUCTIONS

Hazardous waste must be packed in good quality packaging; this packaging must be strong enough to withstand the shocks and stresses that normally characterize transportation. Packaging that is directly in contact with the waste must not be weakened by the waste, must not cause hazardous effects by reacting with its contents.

The Safety and Prevention Unit shall provide:

- the container adapted to the needs;
- the demolition container and the iron container, located at the iron and demolition area.

7. METHODS OF DISPOSAL

The waste *internal waste producer* shall:

- > for the **via Sommarive site**:
 - place the *homogeneous* waste inside the **demolition container** or the **iron container** as per arrangements with the **Safety and Prevention Unit**;

Note: We recommend that you always notify the **Safety and Prevention Unit**.

For other materials, make arrangements with the Safety and Prevention Unit on the packaging method.

8. PACKAGE LABELING

Once the waste has been delivered to the "*deposito temporaneo*", the **Safety and Prevention Unit** will label it in order to have a correct identification of the waste.

R	Waste:	
	EWC (Italian CER) CODE:	
	HP Hazard Characteristics:	
	CLP/GHS pictograms	
	ADR	

Example of hazardous waste label applied on the package



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Waste name: EWC (Italian CER) Code: Remarks:

Example of hazardous waste label applied on the package

9. VEHICLE LABELING

The conveyor, in case of transport of hazardous waste, places the square mark " \mathbf{R} " (40x40cm) on the rear of the vehicle to the right and so as to be clearly visible.

10. DOCUMENTS ACCOMPANYING THE WASTE

Waste identification form.



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Waste data sheet M.2

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Waste data sheet M.2 – Medicines

1. WASTE DESCRIPTION

Waste from first aid kits of medical origin, expired medicines, physiological solutions, chemicals containing hazardous substances.

They are recovered by the first aid box officer in charge and grouped as defined with the Safety and Prevention Unit.

2. POSSIBLE WASTE LIST CHAPTERS

18 - waste from the health sector 20 -

municipal waste

Example of CER: 180109 medicines

180106* hazardous chemicals

The CER code is assigned by the Safety and Prevention Unit

3. POSSIBLE HAZARDOUS CHARACTERISTICS OF THE WASTE

HP4, HP5, HP14

4. ADS HAZARD CLASS

The choice is made according to the hazard characteristics (indicated by the letters HP), chemical analysis, safety data sheets, and waste characterization sheets provided by the producer, depending on the production cycle or treatment that originated it, after also hearing the opinion of the ADR consultant.

5. METHODS OF COLLECTION

The *internal officer* in charge of the first aid stations groups the waste, packaging it in envelopes or boxes, as necessary.

6. PACKAGING SELECTION INSTRUCTIONS

Hazardous waste must be packed in good quality packaging; this packaging must be strong enough to withstand the shocks and stresses that normally characterize transportation. Packaging that is directly in contact with the waste must not be weakened by the waste, must not cause hazardous effects by reacting with its contents.

The **Safety and Prevention** Unit shall, if necessary, provide the containers.



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7. METHODS OF DISPOSAL

The *internal officer in charge* of the first aid stations shall

- for the via Sommarive site:
 deliver the material to the Safety and Prevention Unit.
- for other locations:
 send the material to the Safety and Prevention Unit by internal mail or hand deliver it.

The Safety and Prevention Unit checks the packaging and, if necessary, repackages it.

8. PACKAGE LABELING

Once the waste has been delivered to the "*deposito temporaneo*", the **Safety and Prevention Unit** will label it in order to have a correct identification of the waste.



Example of hazardous waste label applied on the package

Waste name:	
EWC (Italian CER) Code:	
Remarks:	

Example of hazardous waste label applied on the package

9. VEHICLE LABELING

When transporting hazardous waste in **packages**: the conveyor places the neutral orange panel 40x30cm on the front and rear of the vehicle (if subject to the ADR), paying attention to also place the square mark "**R**" (40x40cm) on the rear of the vehicle to the right and in order to be clearly visible.

10. DOCUMENTS ACCOMPANYING THE WASTE

Waste identification form.



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Waste data sheet O.1

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Waste data sheet O.1 – Spent lubricating oils

1. WASTE DESCRIPTION

The name lubricating oils identifies a class of non-chlorinated liquid mixtures, oils and emulsions, used for lubricating mechanical organs, engines, gears, generator sets, rotary pumps, compressors, and lathes.

They must be grouped as defined with the **Safety and Prevention Unit**.

2. POSSIBLE WASTE LIST CHAPTERS

- 13 spent oils and liquid fuel residues
- 20 recycable waste

Examples of CER: 130205* non-chlorinated motor, gear and lubrication mineral oils 130105* non-chlorinated emulsions

The CER code is assigned by the Safety and Prevention Unit

3. POSSIBLE HAZARDOUS CHARACTERISTICS OF THE WASTE

HP14

4. ADS HAZARD CLASS

The choice is made according to the hazard characteristics (indicated by the letters HP), chemical analysis, safety data sheets, and waste characterization sheets provided by the producer, depending on the production cycle or treatment that originated it, after also hearing the opinion of the ADR consultant.

ADR Classification Example:

UN 3082 WASTE, ENVIRONMENTALLY HAZARDOUS MATTER, LIQUID, N.O.S., 9, III, (E)

The specification of the various elements:

- UN 3082 identifies the chemical-scientific name of the waste;
- 9 indicates the ADR (corrosive) hazard label;
- packaging group III indicates that the waste presents a low hazard;
- the tunnel code type (E) indicates that transit is prohibited regardless of the method of transport.

5. METHODS OF COLLECTION

The waste *internal waste producer* shall:

- 1. group the waste by homogeneous groups, keeping the oils separate from the emulsions;
- 2. introduce the waste in packaging agreed upon with the **Safety and Prevention Unit**, filling the containers to no more than 90 percent of the total capacity.



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6. PACKAGING SELECTION INSTRUCTIONS

Hazardous waste must be packed in good quality packaging; this packaging must be strong enough to withstand the shocks and stresses that normally characterize transportation. Packaging that is directly in contact with the waste must not be weakened by the waste, must not cause hazardous effects by reacting with its contents.

The **Safety and Prevention** Unit shall provide suitable packaging to contain waste as required.

7. METHODS OF DISPOSAL

The waste *internal waste producer* shall:

for the via Sommarive site:

deliver the waste according to the schedule arranged with the **Safety and Prevention Unit** at the temporary chemical waste storage "deposito temporaneo dei rifiuti chimici".



8. PACKAGE LABELING

Once the waste has been delivered to the "*deposito temporaneo*", the **Safety and Prevention Unit** will label it in order to have a correct identification of the waste.

R	Waste:	
	EWC (Italian CER) CODE:	
	HP Hazard Characteristics:	
	CLP/GHS pictograms	
	ADR	

Example of hazardous waste label applied on the package



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Waste name: EWC (Italian CER) Code: Remarks:

Example of hazardous waste label applied on the package

9. VEHICLE LABELING

When transporting hazardous waste in **packages**: the conveyor places the neutral orange panel 40x30cm on the front and rear of the vehicle (if subject to the ADR), paying attention to also place the square mark "**R**" (40x40cm) on the rear of the vehicle to the right and in order to be clearly visible.

10. DOCUMENTS ACCOMPANYING THE WASTE

Waste identification form.



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Waste data sheet R.1 – End-of-life electrical and electronic equipment – WEEE (Italian RAEE)

1. WASTE DESCRIPTION

The acronym **WEEE (in Italian RAEE**) stands for **Waste Electrical and Electronic Equipment**, i.e. what remains of equipment that needed electric currents or electromagnetic fields for proper operation, are for example: keyboards, mice, fans, monitors, LCD screens, telephones, antennas.

They are collected by the IT service officers in charge and must be grouped as arranged with the **Safety and Prevention Unit**.

2. POSSIBLE WASTE LIST CHAPTERS

16 - wastes not otherwise specified (electrical and electronic equipment)

Examples of CER: 160213* end-of-life equipment, containing hazardous components 160214 end-of-life, non-hazardous equipment 160215* hazardous components removed from discarded equipment 160216 components removed from end-of-life equipment other than those mentioned in 160215*

There are wastes that can be described with both a hazardous and a non-hazardous CER code (Mirror Code: CER 160213*- CER 160214).

The CER code is assigned by the Safety and Prevention Unit

3. POSSIBLE HAZARDOUS CHARACTERISTICS OF THE WASTE

HP5, HP6, HP14

4. ADS HAZARD CLASS

The choice is made according to the hazard characteristics (indicated by the letters HP), chemical analysis, safety data sheets, and waste characterization sheets provided by the producer, depending on the production cycle or treatment that originated it, after also hearing the opinion of the ADR consultant.

5. METHODS OF COLLECTION

The waste *internal waste producer* shall:

- divide the waste into homogeneous groups, keeping the equipment separate from the components and the cables, and the hazardous wastes separate from the non-hazardous ones.



Examples:

Electrical equipment	Electric components	Electronic Components	Electric cables

6. PACKAGING SELECTION INSTRUCTIONS

Hazardous waste must be packed in good quality packaging; this packaging must be strong enough to withstand the shocks and stresses that normally characterize transportation. Packaging that is directly in contact with the waste must not be weakened by the waste, must not cause hazardous effects by reacting with its contents.

The **Safety and Prevention** Unit shall provide suitable packaging to contain waste as required.

7. METHODS OF DISPOSAL

The waste *internal waste producer* shall:

- > for the **via Sommarive site**:
 - for electronic equipment such as computers, monitors and printers: transport them to the end-of-life equipment storage room "deposito obsoleti", maintaining hazardous waste separate from non-hazardous waste;
 - **for other equipment:** store them in the packaging provided, keeping hazardous waste separate from non-hazardous waste;
 - **for electrical components:** deposit them in the packaging provided, keeping hazardous waste separate from non-hazardous waste;
 - for electrical cables: place them in the box provided.

8. PACKAGE LABELING

R	Waste:	
	EWC (Italian CER) CODE:	
	HP Hazard Characteristics:	
	CLP/GHS pictograms	
	ADR	

Example of hazardous waste label applied on the package



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Waste data sheet R.1

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Waste name: EWC (Italian CER) Code: Remarks:

Example of hazardous waste label applied on the package

9. VEHICLE LABELING

When transporting hazardous waste in **packages**: the conveyor places the neutral orange panel 40x30cm on the front and rear of the vehicle (if subject to the ADR), paying attention to also place the square mark "**R**" (40x40cm) on the rear of the vehicle to the right and in order to be clearly visible.

10. DOCUMENTS ACCOMPANYING THE WASTE

Waste identification form.





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Waste data sheet R.2

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Waste data sheet R.2 – Medical waste

1. WASTE DESCRIPTION

Medical wastes may be at risk of infection, come from laboratory activities, from waste of: human-type blood and/or derivatives, animal-type blood and/or derivatives, cell cultures (stabilized cell lines and primary cultures), bacterial cultures, toxins.

They must be grouped as defined with the **Safety and Prevention Unit**.

2. POSSIBLE WASTE LIST CHAPTERS

18 - Waste produced by the health sector

Examples of CER: 180103* waste that must be collected and disposed of applying special precautions to avoid infections;

180104 wastes whose collection and disposal is not subject to special requirements in order to prevent infection

The CER code is assigned by the Safety and Prevention Unit

3. POSSIBLE HAZARDOUS CHARACTERISTICS OF THE WASTE

HP9

4. ADS HAZARD CLASS

The choice is made according to the hazard characteristics (indicated by the letters HP), chemical analysis, safety data sheets, and waste characterization sheets provided by the producer, depending on the production cycle or treatment that originated it, after also hearing the opinion of the ADR consultant.

5. METHODS OF COLLECTION

The waste *internal waste producer* shall:

- for prickles and sharps (e.g., syringes, slides, etc.): place them in the dedicated approved packaging.
 Once closed, will be introduced into the approved 60-liter flexible packaging of infectious medical waste;
- **For other solids with infectious risk:** place them in the approved 60-liter flexible packaging, leaving space to allow them to be closed, using the special plastic strap.

6. PACKAGING SELECTION INSTRUCTIONS

The waste must be packaged in approved packaging, made available by the Safety and Prevention Unit.



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7. METHODS OF DISPOSAL

The Safety and Prevention Unit shall send the timetable for the collection of health related waste at risk of infection to the staff concerned.

The waste *internal waste producer* shall:
 for the via Sommarive site:

 once the 180 liters (three packages) have been reached, place the flexible packaging on the dedicated cart, informing the Safety and Prevention Unit.

8. PACKAGE LABELING



Example of hazardous waste label applied on the package

Waste name:	
EWC (Italian CER) Code:	
Remarks:	

Example of hazardous waste label applied on the package

9. VEHICLE LABELING

When transporting hazardous waste in **packages**: the conveyor places the neutral orange panel 40x30cm on the front and rear of the vehicle (if subject to the ADR), paying attention to also place the square mark "**R**" (40x40cm) on the rear of the vehicle to the right and in order to be clearly visible.

10. DOCUMENTS ACCOMPANYING THE WASTE

Waste identification form.





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Waste data sheet T.1

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Waste data sheet T.1 – Fluorescent tubes

1. WASTE DESCRIPTION

Fluorescent tubes and other mercury-containing waste. They can be neon lamps, lighting fixtures.

They must be grouped as defined with the Safety and Prevention Unit.

2. POSSIBLE WASTE LIST CHAPTERS

20 - recycable waste

Examples of CER 200121* fluorescent tubes and other mercury-containing wastes

The CER code is assigned by the Safety and Prevention Unit

3. POSSIBLE HAZARDOUS CHARACTERISTICS OF THE WASTE

HP6

4. METHODS OF COLLECTION

The waste *internal waste producer* shall:

- insert the tubes to be replaced into the original casing of the new tube, preventing breakage.

5. PACKAGING SELECTION INSTRUCTIONS

Hazardous waste must be packed in good quality packaging; this packaging must be strong enough to withstand the shocks and stresses that normally characterize transportation. Packaging that is directly in contact with the waste must not be weakened by the waste, must not cause hazardous effects by reacting with its

The **Corporate Assets** Unit uses the original wrappings of the new packaging.

6. METHODS OF DISPOSAL

The waste *internal waste producer* shall:

> for the **via Sommarive site**:

- introduce the packed tubes inside the used neon tubes container marked "tubi neon usati" in the neon area, alternatively, deliver them, in the presence of the **Safety and Prevention Unit** officer, according to the schedule agreed, to the temporary chemical waste storage marked "deposito temporaneo dei rifiuti".



Neon Lamp Case



Safety and Prevention Unit

Waste data sheet T.1

7. PACKAGE LABELING

Once the waste has been delivered to the "*deposito temporaneo*", the **Safety and Prevention Unit** will label it in order to have a correct identification of the waste.

R	Waste:	
	EWC (Italian CER) CODE:	
	HP Hazard Characteristics:	
	CLP/GHS pictograms	
	ADR	

Example of hazardous waste label applied on the package

8. DOCUMENTS ACCOMPANYING THE WASTE

Waste identification form.



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Contacts

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Contacts

Head of the Safety and Prevention Unit,

Mario Russo

ph. 0461 314 307

email: <u>russo@fbk.eu</u>

Prevention and Protection Service

Paola Villani

ph. 0461 314 301

email: pvillani@fbk.eu

Safety and Prevention Unit

help-safety@fbk.eu

safety@fbk.eu

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