

Factsheet

Disposal of Medical Waste

Dispose of medical waste properly

Apart from the ecological aspects of the correct disposal of medical waste, particular emphasis is placed on hygiene and safety. Protective measures applying to handling must also be observed throughout the disposal procedure.

Medical waste is categorized in four main groups, A to D

Group A: unproblematic medical waste

Unproblematic medical waste is comparable to normal household waste and can be disposed of in the same way. Generally, it does not pose an increased risk.

Examples: normally soiled dressing material, disposable gloves, emptied disposable containers, empty syringes without cannulas, empty medication containers, and small pieces of tissue.

At ETH, you can dispose of the unproblematic medical waste in press containers at the central collection points of the respective building area (central collection points of the Facility Management department).

Groups B-D: hazardous medical waste

Specific risks must be considered carefully when disposing of hazardous medical waste. Likewise, special rules apply for disposing of hazardous medical waste.

Group B comprises, among other things, «expired» medication. Thereby, «expired» medication is used for medication which became unusable due to one of the following reasons:

- The use-by date is elapsed.
- The use-by date is exceeded after the opening of the container by the user or after production of the ready to use preparation.
- Its application is cancelled for other reasons (e.g. a recall).
- Medication the owner wants to dispose of.

Table 1: Hazardous medical waste (based on «Disposal of medical waste», Federal Office for the Environment (FOEN), 2004)

Group	Description of waste
B1	Waste with a contamination risk
B1.1	- Waste comprising body parts, organs and tissues posing a risk of contamination («pathological waste»)
B1.2	- Waste including blood, excreta and secreta posing a risk of contamination
B2	Waste which carries a risk of injury («sharps»)
B3	«Expired» medication
B4	Cytostatic waste
C	Infectious waste
D	Other hazardous waste – hazardous waste that is also generated in locations other than healthcare facilities. This category is described in the ETH Zurich « <u>Waste Disposal Guideline</u> ».

Detailed descriptions of medical waste classes B and C are provided in tables 2 and 3. They also encompass details about their packaging and storage, as well as information about their disposal at ETH.

Category D of the hazardous medical waste – listed in table 1 – includes all hazardous waste (as defined by the Ordinance on Movements of Waste (OMW)) that can also be generated in locations other than healthcare facilities and medical research laboratories. Examples include batteries, developing and fixing baths, fluorescent tubes, etc. However, group D also includes waste such as mercury-containing used equipment, broken thermometers, amalgam waste, waste chemicals, etc. The disposal of such hazardous waste is conducted in accordance with the statutory regulations on waste, including OMW in particular, and in compliance with the ETH «Waste Disposal Guideline» and the internal Factsheet «Disposal of Hazardous Waste – Basic Principles». Waste must only be consigned for disposal to one of the ETH hazardous waste disposal facilities or to a facility with a cantonal licence.

You can consign the following types of medical waste to the ETH hazardous waste disposal facilities:

- Class B1
- Class B2
- Class B3
- Class C

For the disposal of class B4 medical waste, please contact SSHE in advance by sending an email to: sgu-sonderabfall@ethz.ch →.

If you have questions about classification and options for transporting your medical waste, please email sgu-gefahrgut@ethz.ch →.

Legal basis

- Ordinance on Movements of Waste (OMV) of 22 June 2005 [SR 814.610]
- Lists for Movements of Waste (LVA) of 18 October 2005 [SR 814.610.1]
- European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) of 30 September 1957 [SR 0.741.621]
- Ordinance on the Carriage of Dangerous Goods by Road (SDR) of 17 April 1985 [SR 741.621]
- Containment Ordinance (ContainO) of 25 August 1999 [SR 814.912]
- Federal Act on the Protection of the Environment (EPA)
- Technical Ordinance on Waste (TVA)
- Ordinance on the Avoidance and the Disposal of Waste (Waste Ordinance, ADWO)
- DETEC Ordinance on Lists for Movements of Waste (LVA)
- Federal Act on Combating Communicable Human Diseases (Epidemics Act; EpidA)

Table 2: Medical waste groups B 1 to B 4 – Waste posing a risk of contamination and infectious waste

Waste	Packaging and storage	Disposal
<p>Waste posing a risk of contamination and infectious waste (This waste does not include human placentas, fetuses and removed organs (pathological waste)). Examples Group B1.1a</p> <ul style="list-style-type: none"> - Human body parts - Organs - Tissues posing a risk of contamination 	<p>In a sealable container such as a 30-litre bucket (high density polyethylene, HDPE) (obtainable from one of the ETH hazardous waste disposal facilities →).</p> <p>Until consignment for disposal, store the waste in a cool place (ideally at 15°C) that is only accessible to technical staff.</p>	<p>Consign to an ETH hazardous waste disposal facility.</p> <p>Consign waste for disposal at least once per week.</p>
<p>Waste posing a risk of contamination and infectious waste (only waste whose disposal is <u>not</u> governed by the Epizootic Diseases Act (EzDA) or the Ordinance on the Disposal of Animal By-Products (DABO)) Examples Group B1.1b</p> <ul style="list-style-type: none"> - Animal carcasses - Body parts - Organs - Tissues posing a risk of contamination 	<p>In a sealable container such as a 30-litre bucket (HDPE) (obtainable from one of the ETH hazardous waste disposal facilities →).</p> <p>Until consignment for disposal, store the waste in a cool place (ideally at 15°C) that is only accessible to technical staff.</p>	<p>Consign to an ETH hazardous waste disposal facility.</p> <p>Consign waste for disposal at least once per week.</p>
<p>Waste posing a risk of contamination and infectious waste Examples Group B1.2</p> <ul style="list-style-type: none"> - Tubes filled with test material, pipettes or syringes - Redon bottles that have not been emptied - Very heavily saturated dressing material - Dialysis filters - Expired blood transfusion bags and blood preparations - Chest drains and closed suction systems with contents exceeding 100 ml - Cell salvage («Cell Saver») systems that have not been completely emptied 	<p>Tear-resistant, leak-proof and sealable containers, e.g. 10-litre bucket (HDPE), 1-litre wide-neck bottle (obtainable from one of the ETH hazardous waste disposal facilities →), sharp container (obtainable, for example, via the HCI Shop).</p> <p>Until consignment for disposal, store the waste in a place that is only accessible to technical staff.</p>	<p>Consign to an ETH hazardous waste disposal facility.</p>

Waste	Packaging and storage	Disposal
<p>Waste carrying a risk of injury – «sharps» Examples Group B2</p> <ul style="list-style-type: none"> - Cannulas of all types - Snap-off ampoules - Lancets - Piercing devices (spikes) - Capillary tubes - Scalpel blades - Pipettes and pipette tips - Microscope slides and cover slips - Kirschner wires - Disposable trocars - Acupuncture needles - Tattooing needles - Piercing needles 	<p>Puncture-proof, leak-proof and sealable containers such as sharp containers (obtainable, for example, via the HCI Shop).</p> <p>Until consignment for disposal, store the waste in a place that is only accessible to technical staff.</p>	<p>Consign to an ETH hazardous waste disposal facility.</p> <p>Do not compress waste – risk of injuries.</p>
<p>«Expired» medication, waste medication Examples Group B3</p> <ul style="list-style-type: none"> - «Expired» medication (see also definition p. 1) are medicinal products as per the definition in the Therapeutic Products Act (e.g. in the form of tablets, liquids, suppositories, plasters, sprays, ointments, tinctures). These also include medication with unknown contents. 	<p>Separate liquid and solid waste; store in the original packaging when possible. Use containers with a maximum volume of 30 litres. For liquid waste, use suitable leak-proof containers (obtainable from one of the ETH hazardous waste disposal facilities →).</p> <p>For safety reasons, store pressurised gas packages (aerosols) in separate containers.</p>	<p>Return to the supplier or specialist trade outlet. The waste must be packaged correctly for return. If you have any questions, please contact sgu-gefahrgut@ethz.ch →.</p> <p>If the item cannot be returned to the supplier / specialist trade outlet, please contact sgu-sonderabfall@ethz.ch →.</p> <p>Dispose of pressurised gas packages (aerosols) on a weekly basis.</p>
<p>Cytostatic waste Examples Group B4</p> <ul style="list-style-type: none"> - Cytostatics that are no longer used or have expired, or residues thereof, including their containers and materials contaminated with cytostatics. 	<p>Separate liquid and solid waste; store in the original packaging where possible. Use containers with a maximum volume of 30 litres. For liquid waste, use suitable leakproof containers (obtainable from one of the ETH hazardous waste disposal facilities →).</p>	<p>Return to the supplier or specialist trade outlet. The waste must be packaged correctly for return. If you have any questions about this, please contact sgu-gefahrgut@ethz.ch →.</p> <p>If the item cannot be returned to the supplier / specialist trade outlet, please contact sgu-sonderabfall@ethz.ch →.</p>

Table 3: Medical waste group C – Infectious waste

Waste	Packaging and storage	Disposal
<p>Infectious waste</p> <p>Examples Group C</p> <p>Waste from medical/microbiological diagnostics, e.g. Uricult®, as well as all waste that contains substantial quantities of pathogens of high-risk communicable diseases and that harbours the risk of onward transmission of infectious agents:</p> <ul style="list-style-type: none"> - Cholera - Haemorrhagic fever - HIV - Poliomyelitis - Anthrax - Plague - Smallpox - Dysentery - SARS - Rabies - Tuberculosis or typhoid/ - Paratyphoid fever 	<p>Until disposal, store waste in a puncture-proof, non-breakable, leak-proof and sealable container (obtainable from one of the ETH hazardous waste disposal facilities →).</p> <p>Waste generated from activities subject to the Containment Ordinance (ContainO) must be inactivated and disposed of subsequently as described in the next column.</p>	<p>Consign to a specialised disposal enterprise as per ContainO:</p> <ul style="list-style-type: none"> - For infectious waste from areas BSL1 to BSL3, inactivation and/or disposal are regulated by Annex 4, Section 2 of ContainO. - Waste that has been inactivated must be reclassified after inactivation according to the present factsheet.

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