

Appendix 1a: Explanation of the classification of hazardous waste

Hazardous waste at the USPB is divided into six categories. The categories are shown in table 1.

Table 1. Categories of hazardous waste

Category number	Category name
I	Acidic inorganic substances in solution (pH ≤ 7)
II	Alkaline inorganic substances in solution (pH > 7)
III	Non-halogenated organic substances
IV	Halogenated organic substances
V	Special waste
VI	Waste with exceptional hazards

You can always put waste into one of these categories. You will find a detailed overview of this categorisation and of the most common subcategories on the waste card in Appendix 1 'Categorisation of hazardous waste'.

You can use this classification to define the category (or subcategory) in which a particular waste material should be collected. The hazard symbol on the packaging and the hazard statements (H statements) on the packaging also indicate the category to which a substance belongs. For mixtures of waste materials, the classification partly depends on the separate substances, their properties and content. If in doubt, contact your organisation's ADR Safety Advisor.

Office waste

Office waste can also contain small hazardous waste (see list of examples in KAM rule 07). The relevant hazardous waste from this list can be submitted to the secretariat of the organization / department. The secretariat will take care of the further disposal (via SelfService).

Waste categories (category I to IV inclusive)

The waste categories I to IV inclusive have been subdivided into several subcategories. A separate ADR classification standard label and waste container is applicable to each subcategory. Hazardous waste may be collected in one waste container if it originates from subcategories from a single category with the same hazard label(s) (see Appendix 1). If no hazard label is applicable to the subcategory, then the waste may be added to the waste with the hazard label from the same category (and conversely, whereby the hazard label needs to be stuck to the waste container).

A common waste material concerns pigments and staining reagents (colourants) in organic solvents and/or watery solutions. Provided they are not carcinogenic substances, these solutions are classified in the category high cal solvents (category III). If halogenated, in category halogen-rich solvents (category IV).

Category V (special waste)

Unknown substances form a separate subcategory in the category special waste (category V). In principle, unknown substances do not occur. Laboratories are obliged to label all hazardous substances. Should a label be unexpectedly missing from a particular bottle/pot or the label has become illegible, try to find out as much relevant information as possible, in particular what the substance was used for. If the categorisation cannot be defined on this basis (or with mixtures of chemical/biological), then contact your organisation's ADR safety advisor.

Category VI (waste with exceptional hazards)

The category of waste with exceptional hazards (category VI) shows subcategories that may not be packaged and/or transported together. In general, a separate KAM rule or disposal procedure is applicable to each subcategory. E.g. KAM rule 09 is applicable to gas cylinders (category VI). KAM rule 08 is applicable to material infected by pathogens (category VI) as well as biological waste that is chemically contaminated. Appendix 2 includes more detailed information about these categories. Peroxide-forming chemicals and potentially explosive substances (both also category VI) are detailed in appendix 5 and appendix 6 respectively.

The different subcategories from categories V and VI are **always disposed of separately**. This means a different container or storage facility per subcategory. Further, these categories include various subcategories (such as mercury salts, sodium, cyanides, unstable organic peroxides and potentially explosive substances), for which there is no standard procedure. Waste for which there is no standard procedure, is reported separately via SelfService or the Logistics Centre by means of a form (see attachment 4).

Safety

Safety during collection and processing is a defining factor when selecting the categorisation. Properties such as toxicity and chemical reactivity are therefore a reason for forming separate categories. Inorganic substances in solution are separated into:

- a category 'acidic inorganic substances in solution' and
- a category 'alkaline inorganic substances in solution'.

This prevents problems such as uncontrolled heat generation when mixing acidic and alkaline waste, the premature precipitation of heavy metals in an alkaline environment and the development of hydrocyanic gas when combining acids and cyanides. For this, see an elaboration of dangerous combinations in appendix 7 'Dangerous chemical combinations'. In the interests of safety, a separate category has also been set for 'waste with exceptional hazards' (category VI), information on this is given in appendix 2. The hazardous aspects of the waste are expressed by the additional label.

The waste may contain nanomaterials. Depending on the composition, nanomaterials should be disposed of as carcinogenic waste or as hazardous waste in one of the other subcategories (for this, see KAM rule 03).

Non-empty packaging (pots/bottles) with chemicals (opened/unopened) that are no longer used and for which there is no interest from another laboratory, may be sent to the PSP in the original packaging. If the size of the packaging allows, provide these pots/bottles with the correct category label and put them in a separate drip tray per category (acidic, basic, flammable and toxic), such that no breakage or leakage can occur. This can be done e.g. by putting glass and plastic packaging in the crate alternately, or by putting a piece of cardboard between two bottles. Separate containers are available via SelfService for the disposal of large quantities of chemical residues.