

# Handling of waste in the Laboratories

## Ordinary waste



Gels, Microplate, microtiter plate, tubes, rod pipettes, pipette tips, paper, gloves that have NOT been contaminated with dangerous chemicals or infectious substances is dispose as ordinary waste.

This includes waste containing diluted chemicals that no longer classified as dangerous.



Pipette tips, rod pipettes, microtiter plates, paper, gloves etc. contaminated with chemicals with irritants properties and other diluted dangerous chemicals, can and **MUST** be collected as ordinary waste.



Disposable covers, surgical wipes, etc., where blood, pus or tissue fluids have been absorbed is collected as ordinary waste.



Empty and rinsed packaging and chemical packaging which have contained harmless chemicals must be collected as ordinary waste.

## Glass waste from the laboratory



Glass waste from the laboratory, both clear and colored glass, cannot be recycled as we do with the glass from the household at this moment!

Therefore, there is set up a special glass waste container to glass waste from the laboratory.

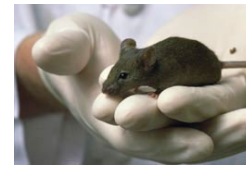


Evaporate and rinse the empty glass bottle, a complete cleaning of the bottle is not necessary – but there must not be any residue in the bottle!

If there is content in a glass bottle, it must be collected as chemical waste (Z).

# Handling of waste in the Laboratories

## Waste Infectious substance (Yellow packagings = Infectious Substance)!



Blood- and tissue samples and other samples containing human or experimental animals.

Pipette tips, paper, gloves etc. That have been contaminated by materials from humans or animals. However, with the exception of disposable covers, surgical wipes, etc., where blood, pus or tissue fluids have been absorbed, can be handled as ordinary waste.

Needles/sharp components must be collected in needle boxes.



### Autoclave and disinfectants:

Autoclaving and other disinfecting methods can be used to destroy the infectious substance.

Typically, microbial material is autoclaved, equipment and instruments are dry sterilized.

Chemical substances can be used for disinfection, such as Virkon S, Rodalon og Ethanol.



**The procedures by which the laboratory has been approved regarding GMO and class 2 must be strictly followed!**

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## Chemical Waste:

- Liquified chemicals are collected in UN-approved jerricans.
- **You must not mix chemicals which can react violent when mixed together!**



- Solid chemical waste is collected to a plastic bag or a plastic container. Only the above items are collected if the chemical is marked with:



- Needles/sharp components contaminated with chemicals must be collected in needle boxes o.l.).



## Marking

Packaging containing chemical waste must be marked with:

- Content
- Identification, lab number or initials.
- The letter from the sort key.

Fill the jerrican up til **90 %** of the capacity and tighten the lid with the lid wrench.

Place the jerrican in the waste room.



Indeholder et stof, der er omfattet af dansk arbejdsmiljøregulering med hensyn til kræftisiko

If the waste contains carcinogenic chemicals, you must put this yellow mark on the waste container.

- H350 is collected until 0,1 %
- H351 is collected until 1 %
- Some carcinogenic chemicals have a lower limit, for more information see "Kræftbekendtgørelsen".

Waste must be stored after the same rules which applies to chemicals, example toxic substances must be placed in a locked cabinet and the storage limits for flammable liquids must not be exceeded.

## Radioactive waste:

The radiation protection coordinator must make a waste management plan before the work can start and this plan **MUST** be followed.




# Handling of waste in the Laboratories

## Fortums Sort Key – Chemical waste:

YES 

NO 

Description:	Group:	Examples:
Does the waste contain oxidizing substances, organic peroxides, substances that reacts violent with water or substances that emit acid vapors or flammable gasses when it is in contact with water?	<b>O</b> 	<i>Chlorates and perchlorates, Chromates and dichromates, Hydrogenperoxide, Manganates and permanganates, Nitrite- and nitrate salts, Perchloricacid, Picricacid, Silvernitate Inorganic/organic peroxides, Zinkchloride, Alkalimetals, Hydrides, Lithiumaluminiumhydride, Phosphides, Silicides etc. Must be separated for each chemical.</i>
Does the waste contain mercury?	<b>K</b>	<b>K1</b> Liquids and <b>K5</b> solid waste with COD-reagents, Kjeldahl reagents, Energy saving bulbs, Mercury lamps, Mercury thermometers etc.
Does the waste contain aerosols, pressure bottles, emptied packaging, asbestos, medicines, isocyanates, batteries without mercury or mixed waste in small packages?	<b>Z</b>	<i>Small packages with chemicals from clean-up or pilot trail, batteries, aersols etc. Collect in origin container or small container. <b>Z1</b> chemicals in origin packagings. <b>Z2</b> pharmaceuticals, toxins, etc.</i>
Does the waste contain pesticides?	<b>T</b>	<i>Waste containing pesticides.</i>
Does the waste contain inorganic substances?	<b>X</b>	<b>X1</b> Hydrochloric-, sulfuric- and/or phosphoric acid. <b>X2</b> Nitric acid. <b>X3</b> Sodium and potassium hydroxide, hypochlorite solutions etc. <b>X10</b> Hydroflouric acid solutions.
Does the waste contain mineral oil products, but no emulsifiers?	<b>A</b>	<i>Diesel oil, heating oil, gear oil, engine oil, oil filters, lubricating oil etc.</i>
Does the waste contain organic substances with halogens or sulfur?	<b>B</b>	<b>B2</b> Chloroform, Bromoform, Dichlormethane, Ethidumbromide, Mercaptoethanole etc.
Is the waste liquid and has a calorific value of a least 18 MJ/kg and is the concentration > 50%?	<b>C</b>	<b>C1</b> Methanol, Ethanol, Acetone, Acetonitrile, Hexan, Xylen, Isopropanole etc.
Are the waste organic chemicals without halogens and sulfur or mixed organic and inorganic substances?	<b>H</b>	<b>H1</b> C1-waste diluted, formaldehyde solutions, glutaraldehyde solutions, refrigerants and lubricants, oil from oil baths. <b>H2</b> Solid waste contaminated with hazardous chemicals. <b>H3</b> Vials containing organic chemicals. <b>H4</b> Mixtures of phenol, formaldehyde and waste from ammonium analysis. <b>H5</b> Waste from nitrite-, nitrate- and phosphorous analysis.