

Procedure with risk assessment (SOP): **Disposal of solvent waste**

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Version 001

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Page 1 av 3

1. INTRODUCTION/PURPOSE

This document describes the disposal of solvent waste.

2. RESPONSIBILITIES AND SAFETY

The general responsibility for HSE at the Department of Chemistry lies with the Head of the Department. However, the room responsible person must have control and knowledge of all ongoing activities that take place in space, ensure that activities follow established procedures, and provide adequate labelling of laboratory chemicals. For more details on responsibility, see KI's HSE manual.

See the general UiO procedure [Risk management policy in laboratories](#) for an overview of responsibilities at UiO.

General laboratory safety applies. For more information, see KI's [HSE manual](#).

3. NECESSARY SAFETY EQUIPMENT



4. CHEMICAL HAZARD

4.1 Chemicals (some examples)

Acetone

[179124 from Sigma Aldrich](#)
(MSDS)

67-64-1



H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.



P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.

P242 Use non-sparking tools.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing

<p>Dichloromethane 32222-M from Sigma-Aldrich (MSDS) 75-09-2</p> 	<p>H315 Causes skin irritation. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H351 Suspected of causing cancer.</p> <p>P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray. P302 + P352 IF ON SKIN: Wash with plenty of water. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313 IF exposed or concerned: Get medical advice/ attention.</p>
<p>Dimethylformamide (DMF) 319937 from Sigma-Aldrich</p> 	<p>H226 Flammable liquid and vapor. H312 + H332 Harmful in contact with skin or if inhaled. H319 Causes serious eye irritation. H360D May damage the unborn child.</p> <p>P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313 IF exposed or concerned: Get medical advice/ attention.</p>

Other typical solvents:

Non-halogenated solvents: hydrocarbons, alcohols, ketones, etc.: hexane, toluene, benzene, methanol, ethanol, acetone etc.

Halogenated solvents: carbon tetrachloride, chloroform, dichloromethane, trichloroethylene, chlorobenzene, etc.

5. SPECIAL CAUTIONS NECESSARY DUE TO REPRODUCTIVE TOXICITY

Generally, it is not recommended to work with a chemical that has carcinogenic or reproductive effects if you are planning to be or are pregnant. If a chemical is proven to pass into breast milk, it is not recommended to perform the procedure if you are breast-feeding.

Solvent waste contains many different solvents chemicals and should therefore not be handled by a pregnant or breast-feeding person.



Postal address:

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6. PROCEDURE – DISPOSAL OF SOLVENT WASTE

All organic solvent waste should be separated into:

- Halogenated solvent waste
- Non-halogenated solvent waste

Mark waste canisters clearly. Labels can be downloaded [here](#).



Packaging: for solvent waste special plastic canisters are available in the central storage. The canisters come in 10 and 20 l and are marked with an UN-code such as 3H1/X1.9/200. The X represents a packaging code. Containers must have either X or Y as packaging code to be used for solvent waste. No other plastic cans should be used.

Smaller plastic solvent bottles can be used given they have a UN code with X or Y. If solvent bottles are used, original labels need to be removed or cross out and a liquid waste label with the appropriate information needs to be attached.

Labels: use the “[liquid waste labels](#)” and cross off the appropriate information.

Rules for handling of solvent:

- The water content in solvent waste needs to be below 10%. If you have solvent waste with water content > 10%, please collect it separately and contact the HSE coordinator for disposal.
- Maximum filling of the plastic can is 90% of total capacity.
- The solvent waste should not contain strong acids or bases.
- The solvent waste cans must be kept in a ventilated area with a tray underneath that can collect the whole volume of the container.
- Avoid mixing reactive chemicals in the waste solvent containers.
- Oil, PCB, cyanides, isocyanides, phthalates, cadmium, mercury and any waste containing one of them should always be collected separately. Cyanides in solution should be made unreactive (quenched).
- Do not add any substances that can cause polymerization or gel-formation to the solvent waste.

Disposal:

Full solvent waste canisters (5, 10 and 20L only) can be delivered to the HSE coordinator at the Central Storage once a week. Only canisters probably labelled with the “liquid waste label” will be accepted. Find weekday and time [here](#). 2.5 L canisters are only accepted upon special waste collection, usually in May/June and November/December.

