

## Chemical Waste (Frequently Asked Questions)

**I have a tray containing around 1l of a 2% Virkon solution, can I just pour it to drain?**

Assuming that no active biological material is present then the disposal of working concentrations of Virkon (1-2% in water) to drain should be fine. Care should be taken to ensure that the Virkon solution is flushed to drain with a large excess of water to ensure adequate dilution. However, it's worth remembering that Virkon is acidic and may react with some other substances to produce toxic gases (e.g. cyanide salts or hypochlorite bleach) and care should be taken to ensure it is not mixed with other incompatible materials during disposal.

**I have autoclaved a large number of agar plates to destroy any biological material, can I pour the sterilised liquid to drain after the autoclave run has finished?**

There are two reasons why disposal of large amounts of agar to drain is not acceptable. Agar forms a liquid at high temperatures it can solidify when it enters the drainage system potentially leading to obstructions and blockages in pipework. Secondly, agar can act as a source of food for bacteria and other organisms and as such can be treated as a pollutant leading to algal blooms, de-oxygenated water and other environmental effects. While it may be acceptable to flush small quantities of agar residue to drain with dilution, bulk material should be retained for disposal.

**The guidance states that DNA stains should not be flushed to drain, does that include some of the newer, less toxic DNA stains such as SYBR Safe?**

As new products come to market they will have to be subjected to a CoSHH assessment prior to use in the laboratory. Part of this assessment should include an evaluation of the environmental impact to ensure they are properly disposed of at the end of their life. In this case SYBR Safe is reported as having a low environmental impact therefore it could be flushed to drain at the working concentration if no other hazardous substances are present. However, any unused stock that was no longer required should be disposed of as hazardous waste.

**We use large quantities of TAE / TBE buffers in our research yet your notes say that we can't dispose of it via the drainage system, do we have to retain it for disposal?**

Due to the amount of this material used and the extremely low concentration when diluted we have made an exception for the disposal of large quantities of this material which can be run to drain with copious quantities of water in the working concentration assuming that no other harmful materials are present. However, any stock solutions that are not required **must** be disposed of as chemical waste and may not be diluted for the purposes of disposal.

**I have a bottle containing concentrated hydrochloric acid, can I pour it to drain with lots of water to ensure it is properly diluted?**

No, while disposing of small quantities of dilute acid by running them to drain with copious quantities of water is acceptable it is not permitted to dispose concentrated chemicals by dilution. In this case the correct course of action would be to retain the excess acid for disposal using the university's approved chemical waste contractor (Veolia).

**I am working with extremely low concentrations of the one of the substances on the priority list of substances that must not go down the drain. If the concentration is very low is it acceptable to dilute these with lots of water and pour them to drain?**

The simple answer is no. It is illegal to release these substances to drain in any quantity therefore they must be treated as significant pollutants even if diluted to very low concentrations and retained for disposal via an approved contractor.

**The approved list for disposal to drain states that I can pour simple metal salts to drain, does this include a small quantity of silver chloride?**

Silver chloride and other heavy metal salts are extremely damaging to the environment and may persist for long periods of time therefore heavy metal salts and transition metal wastes should generally be retained for collection.

## **Further Information and Guidance**

For the most part it is possible to accurately identify which chemicals are likely to pose an environmental or safety risk during disposal from the information available from the supplier along with the guidance provided by SEPS. The disposal of chemical waste should form a part of the CoSHH assessment carried out prior to use. In the event that you are unsure then the default position should be to aim for compliance with our target of “zero to drain”.

If you require further information on disposal of specific chemicals this can be obtained by contacting Safety and Environmental Protection Services using the details below:

<b>General Office:</b>	0141 3305532
<b>Biological Safety Adviser:</b>	0141 3305854
<b>Chemical Safety Adviser:</b>	0141 3302799
<b>Environmental Adviser:</b>	0141 3307105