

What guidelines do I need to follow?

There are various regulations that govern the disposal of laboratory waste in the UK. Some of the most important regulations include control of hazardous substances (COSHH), hazardous waste regulations, environmental protection act and radioactive substances act.

If you reside outside of the UK it is recommended that you consult with your local authority on which local guidelines you need to follow.

How can we ensure adherence to waste management regulations?

Proper waste management systems must be put in place, this may include the segregation of different types of waste, such as halogenated and non-halogenated solvent waste, chemically contaminated glass and plastic and biological laboratory waste. Proper labelling and waste storage solutions are also important.

Recycling

Waste should always be recycled where possible to reduce the impact on the environment. Every laboratory should have a waste container for clean glass (such as waste solvent bottles).

Any contaminated waste glass or plastic should be put into a controlled waste container.

Sharps disposal

All sharps including needle tips, syringes where the needles cannot be removed, blades and broken glass should be stored in designated sharps bins and then sent for incineration once full.

Chemical treatment

Some chemical waste may require neutralising before it can be disposed of, this is true of any waste that may be considered to be pyrophoric or extremely acidic. This may involve diluting the solution or treating with acetone.

Solid waste

Solid waste consists of any chemical found in solid form at room temperature. Solid waste generally consists of salts and other general reagents or analytical standards. Solid waste should be disposed of in properly labelled solid waste containers.

Gas cylinders

Empty gas cylinders can be sent back to your supplier for recycling.

Biological waste

All biological waste should be disposed of in properly labelled containers and sent for incineration.

How can we cut down on laboratory waste?

There are numerous strategies that can be employed in order to cut down on laboratory waste. Optimizing laboratory procedures and sample extractions to use as little hazardous material as possible is encouraged.

Also, keeping a detailed inventory of stock can minimize waste, by ensuring that chemicals that are due to expire soonest are used first. Keeping a detailed inventory can also avoid accidental over ordering of reagents.

Understanding waste management and the environment

When laboratory waste is disposed of improperly it may have serious consequences for the environment. Commonly used chemicals within the laboratory can pollute soils, rivers and other water bodies as well as ground water. This can have negative effects on the health of both humans and animals. As well as causing potential irreversible harm to the environment, laboratories who fail to dispose of their waste in a proper manner may face both legal and regulatory sanctions.

Tips for ensuring safe disposal of laboratory waste

It is important that hazardous waste is disposed of safely to protect laboratory staff as well as the environment. Safety data sheets should always be read and understood before disposing of chemical waste.

- Hazardous or non-hazardous waste should always be separated.
- Dispose of sharps in properly labelled sharps bins.
- Use correctly labelled bins to separate waste.
- Fume hoods and ventilation systems should be used to aid the removal of harmful substances from the air.