

Chemical Management

Follow these steps to sustainably manage chemical waste from experiments.



Plan your experiments

Create a risk assessment: determine what chemical waste will be produced, its concentration, and if it can be poured down the sink, according to Trade Waste Sewer Acceptance Criteria (sustainability.uq.edu.au/files/745/pro_ChmWste.pdf).

If it is not eligible to be poured down the sink, order chemical waste disposal containers from the UQ Science Store. Each waste stream should have a separate container. The water used when rinsing affected glassware must also be collected into the container.

What happens to this chemical waste?

If poured down the sink, chemical waste is treated at a wastewater treatment plant. Eligible chemicals are already found in wastewater or will easily degrade, posing no environmental harm.

Chemicals in a waste container can either be recycled (e.g. silver, gold), or brought to a stable condition through heat. It is then encapsulated in concrete and stored in a disused mine shaft.

Order what is needed

Do not over-order chemicals and only order when needed. Once exposed to air, chemicals are no longer grade quality, limiting their use. Discuss if sharing chemicals between groups is possible.

Green chemistry

Some chemicals can be substituted with greener alternatives to reduce toxic waste. My Green Lab has developed a resource for choosing environmental substitutes mygreenlab.org/greenchemistry.html.

Separate waste streams

Use one container for each waste stream to avoid hazardous reactions. Label all containers with a generated UQ Science Store label, regardless if you order a container or use your own.

Return empty bottles

Return empty chemical bottles to the UQ Science Store. Confirm with uqsciencestore@uq.edu.au what bottles can be reused. If returned, do not rinse bottle or deface label, so they know what chemicals were inside.

Track the chemical

Scan bottle barcodes to track when chemicals enter and exit the lab. This creates an up-to-date inventory.

Chemical handover

Prevent chemicals from being forgotten by providing a chemical inventory during project handover and labelling chemicals with the researcher's name.

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