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Fume cupboard plumbing

Posted by Anonymous on Thu, 2015-10-22 15:21

Fume cupboard plumbing. We are about to install a fumehood and the question has come up about its plumbing. Can it be plumbed into the normal waste water / sewer lines or is something else needed? Not sure why it should be any different from a normal sink, neither sink is for disposal of toxic chemicals?

Voting:



No votes yet

Year Level:

7

8

9

10

Senior Secondary

Laboratory Technicians:

Laboratory Technicians

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Fumehood plumbing

Submitted by sat on 29 November 2015

Answer reviewed 21 February 2023

Your school should ensure that the builder installing the fume cupboard is familiar with the regulatory requirements of their state/territory and the relevant Australian Standards.

All fume cupboards should be compliant with and sited and installed according to AS/NZS 2243.8 *Safety in Laboratories Part 8 Fume cupboards*.

You are correct that schools need to comply with local water authorities regarding disposal of chemicals.

Science ASSIST has developed:

- [GUIDELINES for the design and planning of secondary school science facilities in Australian schools](#),¹ which covers general information regarding fume cupboards in section 6.9.3 Fume cupboards.
- [Chemical Management Handbook for Australian Schools - Edition 3](#)² which includes information on chemical waste disposal.

Ducted fume cupboards are widely used in school science laboratories to protect the operator and other personnel in the laboratory from hazardous fumes and particles. They operate on a fan system that intakes air to dilute hazardous fumes or particles and exhausts them to a safe area outside of the building through a duct system. Fume cupboards also normally contain a sink with a drain to allow certain substances to be disposed of to the sewer.

Local Water authorities in each state/territory may have specific requirements for the pre-treatment of waste water before discharge to sewer. Fume cupboard sink drains, as with all laboratory sink drains, may also need to connect to an acid dilution or neutralization pit, as required by the appropriate regulatory authority.

AS/NZS 2243.8: 2014, Safety in laboratories: Fume cupboards states:

Section 2 Types, Services and Components, 2.4 Sink

“Any sink fitted to a fume cupboard needs to comply with relevant local water authority requirements.

*NOTE: AS/NZS 2982.1 specifies requirements for laboratory water services, including disposal systems.”*³

AS/NZS 2243.8:2014 Safety in laboratories Part 8: Fume cupboards contains information on the safety, performance, installation, testing and use requirements for fume cupboards. It also has further specific instructions for fume cupboards for specific applications, for example, in certain circumstances it is recommended that fume cupboard drainage does not combine with the floor waste prior to the floor trap waste. Science ASSIST considers that this would be considered best practice.

References

1 Science ASSIST. (2017). GUIDELINES for the design and planning of secondary school science facilities in Australian schools. Retrieved from the Science ASSIST website: <https://assist.asta.edu.au/resource/4175/guidelines-design-and-planning-...>

2 Science ASSIST. (2018). *Chemical Management Handbook for Australian Schools – Edition 3*, Retrieved from the Science ASSIST website: <https://assist.asta.edu.au/resource/4193/chemical-management-handbook-au...>

3 Standards Australia. 2014. AS/NZS 2243 *Safety in Laboratories, Part 8: 2014 Fume cupboards*. Sydney, Australia. This excerpt has been reproduced by ASTA with the permission of Standards Australia Limited under licence CLF1222asta. Copyright in AS/NZS 2243:8 2014, *Safety in Laboratories, Fume cupboards* vests in Standards Australia [and Standards New Zealand]. Users must not copy or reuse this work without the permission of Standards Australia or the copyright owner.

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