Health monitoring requirements

Posted by Anonymous on Wed, 2019-08-28 12:00

Health monitoring requirements: Is health monitoring for exposure to hazardous chemicals required for chemicals in the List of Recommended Chemicals/ Chemical Management Handbook? Do you have any advice?

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Showing 1-1 of 1 Responses

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Submitted by sat on 28 August 2019

The hazardous chemicals used in school science and included in our resources are generally used infrequently in small quantities and for a short exposure time. Control measures determined by a risk management approach in consultation with the information found in the chemical's Safety Data Sheet, should be in place such as engineering controls (e.g. fume cupboard) and relevant Personal Protective Equipment (PPE) to further limit the exposure.

By following Science ASSIST recommendations and jurisdictional policies for working with hazardous chemicals, there should be no situations that warrant health monitoring in school science.[1]

The model WHS Regulations:

The model WHS Regulations set out instructions regarding the requirement for health monitoring in regulations 368, 405 and 435. Health monitoring, such as testing body fluids or function, is required 'if the worker is carrying out ongoing work using, handling, generating or storing hazardous chemicals and there is a significant risk to the worker's health because of exposure to a hazardous chemical referred to in Schedule 14, table 14.1, column 2(Reg 368)' and there are valid tests available; and for lead risk work (Reg 405) and asbestos (Reg 435).[2]

There are only two chemicals from schedule 14, chromium and mercury, that are included in the list of recommended chemicals:

- Chromium: metal and chloride/nitrate salts, are used rarely in the science curriculum
- Mercury: it is recommended that only a small quantity be kept for demonstration purposes and that it be stored in a tightly sealed container.

Schedule 10 in the Regulations sets out prohibited carcinogens in table 10.1, and restricted carcinogens in table 10.2. There are no chemicals from either of these lists in the list of recommended chemicals.

Schedule 10 in the Regulations also sets out restricted hazardous chemicals with restricted use in Table 10.3. They are not permitted to be used in certain concentrations for abrasive blasting or spray painting processes Chemicals from this list which are included in the list of recommended chemicals include chromium and its compounds; cobalt and its compounds; lead and compounds, methanol, nickel and its compounds, nitrates, nitrites, and tin and its compounds. By implementing relevant controls these chemicals should not be used in ways to create dust, fumes or aerosols that would contribute to exposure to the hazardous chemicals.

While chemicals other than those listed in Schedules 10 and 14 can also be the focus for health monitoring[2], chemicals used in schools should not be used in a manner that would pose a significant risk to staff or students.

It is the responsibility of a person conducting a business or undertaking (PCBU) to determine if health monitoring is required. The Guide for Medical Practitioners[3] sets out the factors to consider in making such a determination.

A note about sensitisers:

It is important to be aware that amongst hazardous chemicals, there are a number of chemicals used in schools which may be classified as sensitisers.[4,5] These may be respiratory[6] and/or skin[7] sensitisers and the GHS classification, would carry the exclamation or health hazard pictogram and relevant hazard statement.

These chemicals are used infrequently, in small quantities and for short exposure times. By

implementing relevant control measures, the likelihood of an adverse reaction, is very low.

However, in the case where a staff member or student has existing chemical sensitivities, e.g. latex allergies,[8] additional precautions should be taken to avoid further contact, just as a school would in other cases where allergies are noted and appropriate safety measures are taken.

References and further reading

[1] Queensland Department of Education. 2019. Appendix 2a – effects of chemical exposure in *Guideline for managing risks with chemicals in DoE workplaces*, Queensland Department of Education website, https://education.qld.gov.au/initiativesstrategies/Documents/guideline-managing-chemicals.PDF

[2] Safe Work Australia. 2019. Safe Work Australia website. *Model Work Health and Safety Regulations'*, https://www.safeworkaustralia.gov.au/doc/model-work-health-and-safety-regulations

[3] Safe Work Australia. 2013. Safe Work Australia website. *Health Monitoring for Exposure to Hazardous Chemicals – Guide for medical practitioners,* https://www.safeworkaustralia.gov.au/doc/health-monitoring-exposure-hazardous-chemicals-guide-medical-practitioners

[4] 'Sensitizer', Interactive Learning Paradigms Incorporated website, http://www.ilpi.com/msds/ref/sensitizer.html (Accessed August 2019)

[5] 'Experiencing an Adverse Immune Response', The Extension TOXicology NETwork housed on the Oregon State University website, http://extoxnet.orst.edu/faqs/senspop/immune.htm (August 1997)

[6] 'Factsheet 39 – Respiratory sensitisers', The European Agency for Safety and Health at Work website, https://osha.europa.eu/en/tools-and-publications/publications/factsheets/39/view (2003)

[7] 'Factsheet 40 – Skin sensitisers', The European Agency for Safety and Health at Work website, https://osha.europa.eu/en/tools-and-publications/publications/factsheets/40/view (2003)

[8] Science ASSIST. 2017. *AIS: Latex allergies in schools,* Science ASSIST website, https://assist.asta.edu.au/resource/4243/ais-latex-allergies-schools

Safe Work Australia. 2018. Safe Work Australia website. '*Model code of practice: Managing risks of hazardous chemicals in the workplace*' https://www.safeworkaustralia.gov.au/doc/model-code-practice-managing-risks-hazardous-chemicals-workplace