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List of recommended chemicals

Posted by Anonymous on Thu, 2017-08-24 10:54

List of Recommended Chemicals for secondary Schools: I have to order new chemicals for our school in QLD, but have some queries about the following chemicals, which are not in the Science ASSIST List of recommended chemicals.

Lead (II) chloride, Lithium carbonate and potassium chlorate.

Are these chemicals are prohibited? Could you please clarify this for me?

Voting:



No votes yet

Year Level:

7

8

9

10

Senior Secondary

Laboratory Technicians:

Laboratory Technicians

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Recommended Chemicals for secondary Schools

Submitted by sat on 14 September 2017

Answer reviewed 10 February 2023

In brief:

The inclusion of a chemical in the List of recommended chemicals¹ or in the Chemical Management Handbook² indicates that the chemical is suitable for use in schools. We have not published a list of prohibited chemicals as this varies in each state and territory.

The absence of a chemical from the List of recommended chemicals or from the Chemical Management Handbook, does not mean that the chemical is prohibited from use in schools. However, some jurisdictions have banned the use of certain chemicals and we have taken this into consideration in the development of the List. Schools are required to follow the policies and directives of their educational jurisdiction.

The List of recommended chemicals is an evolving document and will be updated in response to feedback, changes to safety data and changes to practices in school science.

Specific chemicals mentioned:

- **Lead (II) chloride:** We are not aware of a specific curriculum requirement for this chemical. It is important to limit the amount and concentration of lead substances stored and used due to their toxicity. We have included three lead-containing substances in the List: lead metal, lead (II) nitrate and lead (II) oxide. These are included because we consider that they allow for some worthwhile demonstrations and activities and that their associated hazards can be reduced to an acceptable level with safe practices. Lead (II) nitrate is included because it is a soluble lead salt; we recommend that it is only used by students as a solution of concentration 0.5M or less. See another Q&A on [Use of lead in schools](#)³ for more detailed information.
- **Lithium carbonate:** We are not aware of a specific curriculum requirement for this chemical and have not included this because it is not very soluble. The more soluble salts have greater application and therefore, we have included lithium chloride, due to its solubility in water.
- **Potassium chlorate:** is not included in the List of recommended chemicals and we note that it is banned in Queensland Department of Education schools as it is potentially explosive.³

Ordering chemicals for your school:

Prior to purchasing chemicals for your school, it is important to conduct a risk assessment and research whether the chemical is suitable for use in your school. Aspects to consider include:

- If the chemical is prohibited or restricted in your jurisdiction.
- the hazards of the chemical.
- if a less hazardous chemical can be used.
- safe handling procedures, how it will be used and if any hazardous by-products will be produced.
- requirements for safe and secure storage especially if it is a toxic chemical, a chemical of a security concern or a chemical that may be used in the illicit drug manufacture.
- licensing/purchasing requirements or restrictions.
- disposal considerations and costs.

The Queensland Department of Education provides detailed information outlining their chemical management process, which Queensland Department of Education schools need to follow.⁴

References:

¹ Science ASSIST. (2021). *List of recommended chemicals for science in Australian schools 2021*, Retrieved from the Science ASSIST website,
<https://assist.asta.edu.au/resource/4669/list-recommended-chemicals-scie...>

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 Science ASSIST. (2023). *The use of lead in schools*, *Science ASSIST Q&A*, Retrieved from the Science ASSIST website: <https://assist.asta.edu.au/question/4070/use-lead-schools>

⁴ Department of Education, Training and Employment. (2013). *Chemical management procedure*. Retrieved from the State of Queensland (Department of Education) website:
<https://ppr.qed.qld.gov.au/pp/chemical-management-procedure>

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