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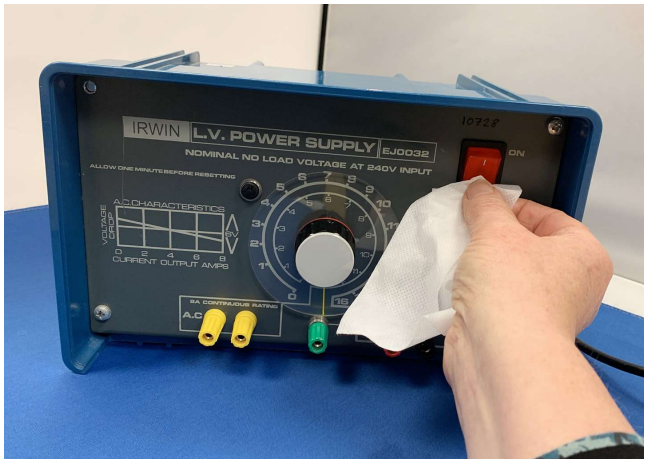
Bulletin 272 Health & Safety

Coronavirus and the cleaning of equipment

From the beginning of the coronavirus outbreak, quite an emphasis was placed on the cleaning/sanitising of hands and surfaces. This was for perfectly good reasons: more familiar viruses, especially flu, are definitely transmitted this way and some early research in April [1] showed that the virus could last for some considerable time on surfaces. As a result, looking at this and other advice from the Scottish Government, we suggested that shared science equipment should be either disinfected between uses or, where that wasn't possible, left for 72 hours or longer to quarantine.

But science changes, particularly when dealing with something new. In July, a paper in The Lancet Infectious Diseases [2] suggested that the previous research overstated the case as it had involved 'infecting' the surfaces with quantities of virus that were far larger than would be likely to occur in real-life situations. They did say, however, that no actual tests had been done to see if this was in fact the case. Recently though, such a study has indeed been carried out and published in the same journal [3]. The researchers conclude that:

> "Our findings suggest that environmental contamination leading to SARS-CoV-2 transmission is unlikely to occur in real-life conditions, provided that standard cleaning procedures and precautions are enforced."



As a result of this, and other, research, the Scottish Government has changed some of its advice in the latest update to its guidance for schools. It says:

> Careful hand washing with soap and warm water/use of alcohol-based hand sanitiser before and after handling text books, jotters (or other pieces of equipment) mitigates the need for quarantine for 72 hours before, and 72 hours after.

SSERC's interpretation is that this can also be applied to equipment used in science and technology. It is important to note that this does NOT mean a return to >>

Other topics

normality. The virus is still here and all possible measures should still be taken to prevent its spread. In health and safety matters, we often use the concept of 'so far as is reasonably practicable'. This means that when we consider a safety measure, we weigh the possible gains against the costs, not just financial but also in terms of time and convenience and indeed the possible impact on learning. Given the increasing evidence that with good hand hygiene, the risk of picking up coronavirus from touching a surface is low, we think that in normal conditions there may not be an absolute requirement to disinfect/quarantine equipment between classes – provided that:

a) Disinfecting/quarantining of the equipment is difficult or time-consuming to the point where practical activities are reduced or not taking place and learners' education is affected. For example, whilst it is practicable to wipe down the rotary control on a physics power supply every time it is used, sanitising or quarantining connecting leads and small components is far less so.

b) An effective system is in place for careful hand sanitising with soap and warm water/use of alcohol-based hand sanitiser before and after handling items.

c) Users of such equipment, teachers as well as learners, should avoid touching their faces. If they do so then they should re-clean their hands before touching the equipment.

d) If there is an event that could potentially lead to greater contamination – such as someone coughing or sneezing on equipment then the item should be cleaned or quarantined before another user touches it. (The chances of this being an issue are greatly lessened in situations where the user is wearing a face covering).

e) Items that might come into direct contact with the face, such as microscope/spectroscope eyepieces should still be wiped with an antiseptic between users.

PPE such as eye protection should still continue to be disinfected in the same way as before as it is in direct contact with the face.

Note that this is between classes – sharing of equipment between individuals in the same class should still be kept to an absolute minimum. In the same way that evidence suggests surface transmission is less important, it is also suggesting that transmission by droplets and aerosols is more important. The sharing of equipment at the same time in a group will inevitably mean they are in close proximity and maximising distance is thus an important factor in minimising the spread of the virus. <<

References
[1] https://doi.org/10.1016/S2666-5247(20)30003-3
[2] https://doi.org/10.1016/S1473-3099(20)30561-2
[3] https://doi.org/10.1016/S1473-3099(20)30561-2

Update of chemistry risk assessments

Any chemistry teacher will no doubt be aware that all of the many chemistry activities listed on our website come with their own model risk assessment that you can customise for your own use.

Over the past few weeks all of these have been reviewed, updated to take account of any changes in procedure and classification since they were last reviewed and converted to an updated format.

All the links on the pages for the chemistry activities have been updated to point to the revised versions and anyone who wishes to download all of them in a single zip file can do so here:

https://www.sserc.org.uk/wp-content/uploads/2020/12/01-Chemistry-Risk-Assessments-2020.zip