Internal transporting of chemicals guidance

Care must be taken when transporting chemicals between laboratories and other areas within the University. Consideration needs to be made for your own safety as well as other you may encounter during the journey. Breakages and spills in communal areas can be highly disruptive and dangerous.

This guide does not cover transporting chemicals between sites or outside of the university. These come under the carriage of dangerous goods regulations and are covered in a separate safety standard. <http://www.exeter.ac.uk/staff/wellbeing/safety/guidance/dangerousgoods/>

The University porters can move chemicals through the ‘Move it’ form however this will need to be planned in advance. If the chemicals are within their original transport packaging there should not be an issue. The checklist used by the porters is amended at the end of this document.

General principles

Care must be taken to ensure both the person doing the transporting and anyone they may encounter between laboratory spaces is protected.

In order to protect the user and other personnel chemicals should be transported in a sealed container. A secondary container and or a carrier should be used to reduce the risk of spills or breakage.

Lab coats should not be worn in publically accessible corridors where possible. Gloves should not be worn outside of the lab due to the potential for contamination especially of door handles which may be touched with un-gloved hands.

Transporting larger stocks

Bottles of solvent and other hazardous liquids should always be transported in a solvent carrier or on a suitable trolley.

Trolleys should have fittings to prevent bottles falling off the side, this can be a bespoke carrier or simply a sturdy box. Consideration should be made as to the surfaces which the trolley must be moved over and adjustments made to minimise the risk of breakages.

Larger chemical containers should be moved in accordance with the university manual handling guidance. <http://www.exeter.ac.uk/staff/wellbeing/safety/guidance/manualhandling/>

Transporting small samples

Small samples should be placed in a sealed container for short distance transport which is then placed in a tray or other secondary container. This negates the requirement to wear lab coats or gloves outside of the lab preventing contamination of public areas.

Transporting cryogens and bottled gasses

Cryogens (primarily liquid nitrogen and dry ice) should be transported in a container designed for the purpose. Personnel should not travel in lifts with cryogens.

Personnel should not travel in lifts with bottled gasses which pose an asphyxiation hazard. Bottled gasses pose a considerable manual handling hazard and should only be transported using suitable trolleys by those trained to do so.

For more information on bottled gasses and cryogens information can be found at the relevant safety standard or by contacting your local gas safety lead. <http://www.exeter.ac.uk/staff/wellbeing/safety/guidance/bottledgas/>

Transporting biological materials

Biological materials should be treated much like chemical materials. Particular care should be taken with materials covered by GMO (genetically modified organisms) or Home Office licences. Transportation containers should be securely sealed in a ‘click shut’ style plastic container which will not open in the case of an accidental drop. This is designed to protect the material and prevent escape into the wild.

For additional guidance please contact the biological safety officer.

Transporting radioactive materials

Transportation of radioactive materials should be kept to a minimum. Radioactive materials should be double contained in case of spillage in suitable sturdy containers.

For additional guidance please contact the radiation protection officer.

Appendix: Guidance for Porters on the moving of chemicals

Guidance for porters on the moving of chemicals.

Introduction

The purpose of this document is to provide information so that porters or mailroom staff may safely and legally move chemicals around campus and between campuses. It is worth noting that the emphasis for the users is to absolutely minimise the movement of chemicals within vehicles where possible. There are however certain circumstances where this service is required. Chemicals moved in this manner come under the ‘Small Load Exemptions’ (ADR 1.1.3.6) so do not require full licencing for drivers or vehicle markings.

Please note this document is guidance only, for more information please contact the Facilities Operations Manager or the University Safety Team.

What can be moved:

Gas cylinders for barbeques (maximum 10)

Research chemicals in their original transport packaging\*

Small quantities of research samples for analysis\*

Chemical waste in some circumstances\*\*

What cannot be moved:

Explosives

Radioactive samples

Live animals (including invertebrates)

Food (due to possible contamination)

Large containers of chemicals

\*Chemicals must be in individual containers of less than 2.5l or 2.5kg. These should then be contained in a separate container to reduce the risk of spillage. The total chemical load should be less than 250kg.

\*\*Under normal circumstances chemical or other hazardous waste would be picked up from the location by the waste contractor. In rare situations where chemicals have been dumped, left behind or found in isolated locations it may be safer to move them to a central location. This is done at the discretion of the Facilities Operations managers.

Checklist for drivers

Is the packaging intact?

Does the packaging provide secondary containment if the inner packaging was to fail?

Can the package be secured safely?

Are all the containers under 2.5l?

Does the total weight of all chemicals transported come to less than 250kg?

Is the vehicle equipped with a fire extinguisher?

Is the vehicle equipped with a small spill kit?

Have staff attended a training session?

Are there no other causes for concern?

If the answers to all of the above questions are yes then the package should be safe to move. If any of the answers are no then a Facilities Operations manager should be consulted.