

## Risk Assessment: Transportation of Research Chemicals, Research Samples & Research Waste

Hazards	Who Might be Harmed and How?	Existing Control Measures	Further Actions Required	Responsible Person	Date
Chemical exposure following chemical spillage	<p><i>Staff, PhD students and temporary visitors transporting chemicals within the Purdie Building or surrounding area. Examples include: (i) movement of research chemicals from Purdie Stores to research laboratories, (ii) movement of chemical waste from laboratories to waste storage areas, (iii) movement of stock chemicals from storage areas to Purdie Stores, (iv) movement of research chemicals from delivery vehicles to Purdie Stores.</i></p> <p><i>Members of the public who could be exposed in the event of a major spillage.</i></p> <p>Research chemicals are typically stored and transported in glass or plastic containers. If a container breaks during transit and releases its contents there is a risk of chemical exposure either through direct contact or inhalation.</p> <p>Depending on the hazards associated with the materials, a person could sustain chemical burns, severe eye injuries or be exposed to highly toxic materials.</p>	<p>All persons must use a trolley or appropriate carrier (plastic or metal container, preferably with a handle) to transport chemicals. Trolleys and Winchester carriers are made available through Purdie Stores.</p> <p>Chemicals must not be carried by hand without using a secondary container. This helps limit the spread of research chemicals in the event a container breaks and releases its contents.</p> <p>Safe transportation of chemicals around the building is covered in H&amp;S induction training and includes a description of how to safely use the lift and chemical dumbwaiter.</p> <p>All persons are advised during H&amp;S training to wear suitable clothing and footwear when transporting research chemicals / waste.</p> <p>Emergency eye-wash stations can be used as emergency showers in the event of a major chemical spillage that covers a building users clothing.</p>	<p>Selected departmental First Aiders are to be provided with a spare set of clothes and shoes for anyone whose clothing has been exposed to chemical contamination following a spillage.</p> <p>The Purdie Building has no emergency shower provision. This will be requested during building renovation discussions.</p> <p>Produce a guidance document for building users outlining emergency responses for chemical spillages.</p>	N.A.	N.A.

Hazards	Who Might be Harmed and How?	Existing Control Measures	Further Actions Required	Responsible Person	Date
Chemical exposure following chemical spillage <i>continued</i>		Building users are encouraged to wear safety glasses when transporting chemicals to prevent eye injuries in the event of a spillage.  Spill kits are provided throughout the Purdie Building to help confine and absorb chemical spillages.		N.A.	N.A.
Fire	<i>Staff, PhD students and temporary visitors working in the Purdie Building. Members of the public impacted by fire or smoke</i>  If a flammable research chemical (e.g. hexane, diethyl ether) is spilt during transit, a flammable atmosphere could develop. If an ignition source is introduced, the flammable vapour could ignite and lead to a fire. This is mainly restricted to confined, poorly ventilated spaces.	Spill kits are provided throughout the Purdie Building to help confine and absorb chemical spillages. This helps limit the amount of flammable vapour and reduce the overall risk of fire.  As part of the emergency response, natural ventilation will be maximised (e.g. by opening outer doors) to limit the concentration of flammable vapour that can develop.	NA		
Broken Glass	<i>All persons transporting chemicals and anyone in the vicinity.</i>  There is a risk of cuts from broken glass following accidental breakage of glass containers.	A trolley, Winchester carrier or suitable secondary container is required to transport chemicals around the Purdie Building. This helps reduce the likelihood of accidental breakages and the risk of cuts.  In the event of a spillage, the H&S Manager will be alerted and cut-resistant gloves will be worn used to clean any broken glass.	NA	N.A.	N.A.

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Slips, Trips and Falls	<p><i>Any person transporting chemicals around the building.</i></p> <p>If a chemical spillage results in a slippery surface (e.g. spillage of waste vacuum oil during transportation) there is a risk of slips and falls.</p> <p>Slips and falls could result in sprains or broken bones.</p>	<p>Spill kits are provided throughout the Purdie Building to help confine and absorb chemical spillages. This helps address the issue of slippery surfaces. Signs informing building users will be displayed if a spillage occurs.</p>	NA	N.A.	N.A.