



## Risk Assessment – VI-RA-002- Manual count of cells

### Scope

Manual cell counting is carried out routinely in order to establish the density of cells to be used in the follow up experimental procedure, this is carried out with Trypan Blue dye, which will render dead cells blue, the slides used are plastic as sharps are not allowed in CL3.

The risk identified with this technique is the location of the procedure (see CL3 risk assessment and Code of Practice), the chemicals used (Trypan blue) and the waste stream from the biological waste produced which requires treatment with Virkon.

<b>Carried out by:</b>	Tiphaine Bouriez-Jones	<b>Date carried out:</b>	May 2015	<b>Review Due:</b>	May 2018	
<b>Hazard (Cause and consequence)</b>	<b>Affected Groups</b>	<b>Existing controls</b>			<b>Risk</b>	<b>Further actions</b>
Exposure to Trypan Blue Health hazard: H350 May cause cancer	Staff, students and visitors	Chemical stock are available in solution only. Via skin adsorption: User must wear gloves and labcoat at all time. Only plastic slides will be used to reduce the risk of cut. Via instillation (eye): User must wear safety spectacles at all time. <b>See specific COSHH risk assessment.</b>			Medium	None
Exposure to Virkon powder or Virkon solution	Staff, students and visitors	Via inhalation: stock of powdered Virkon kept away from draft, with its lid in place. Via skin adsorption: User must wear gloves and labcoat at all time. Via instillation (eye): User must wear safety spectacles at all time. <b>See specific COSHH risk assessment.</b>			Medium	None
Infection from exposure to pathogens - Via direct contact with the pathogen (i.e. skin adsorption from splash) - Via spill of material	Staff, students and visitors	Only trained users who have shown evidence of their experience to the CL3 Safety Officer will have access to the CL3 suite out of hours.  Each user is trained to adhere to the CL3 Code of Practice, they will follow the precautions involved with handling and storing pathogens.			Medium	Bi-yearly checks on the BSC



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- Via incorrect disposal of waste		<p>Every user must double glove, wear a leak-resistant disposable gown and wear safety spectacles whilst working in the suites. The use of sharps is forbidden in the CL3 suites.</p> <p>Out of hours workers must at least have a buddy system in place or work in pairs.</p> <p>Users are familiar with emergency procedures and a spill drill is implemented as a check on measures.</p> <p>A telephone available in each CL3 suite, with up-to-date list of emergency contact details next to it.</p> <p>Waste is autoclaved within the suite, samples will be packaged in tertiary container is they need to be taken outside of the CL3 suite.</p> <p>No engineer is allowed to work out of hours in the CL3 suite.</p>		
Being trapped in the CL3 suite out of hours (door release mechanism no longer functioning)	Staff Students	Emergency release of the door mechanism present on each door.	Low	Yearly maintenance service contract
Entering the suites under duress	Staff Students	There is a duress code which can be entered instead of the normal code which will raise the alarm directly to Security Services without the knowledge of the persons entering the suites.	Low	Tested yearly by Facilities
Loss of containment	Staff Students	<p>An audible alarm is triggered in case of loss of containment to alert users.</p> <p>All users are familiar with the emergency procedure in case of loss of containment: securing their work, leaving the facility without delay and alerting Facility as soon as possible to resolve the issue.</p>	Low	Pressure monitored weekly, yearly maintenance contract.



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Injury due to misuse or faulty equipment	Staff Students	All users are trained in the correct operation of instruments. Specialised equipment such as centrifuges and incubators are under maintenance service contract.	Low	Incubators and centrifuges serviced yearly
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It is the users responsibility to ensure what controls are needed to ensure that the health of themselves and others around them. It is imperative that you **DO NOT** start any work until you are absolutely sure of the appropriate precautions that need to be employed. If you are unsure seek advice from your line/laboratory manager or your departmental safety officer (DSO).