### Risk Assessment Form

**Group:**
NIHR Cambridge BRC Phenotyping Hub

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<th>All staff listed on</th>
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<td><a href="https://www.med.cam.ac.uk/nihr-cambridge-brccell-phenotyping-hub/staff-and-links/">https://www.med.cam.ac.uk/nihr-cambridge-brccell-phenotyping-hub/staff-and-links/</a></td>
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**Activity being assessed:**
The electrical hazard of our microscopes and flow cytometers

The major measure to reduce risk is completion of training on each instrument

**Hazards identified:**

- **Electric shock:** Potentially fatal at 240V if currents greater than 30mA flow through the body for more than 40ms. Minor shocks may also cause injury following involuntary muscle contraction.

- When operating cell sorters, high voltage plates are in use (up to 5 kV). Although the currents are minimal, this represents significant electrical hazard and contact with the plates must be avoided.

- The hazard of live electrical plates is stressed during in-house training. A clearly lit button signals voltage status.

- Explosion and fire caused by electrical sparks, short circuits, overload heating, poor wiring, in the presence of flammable material.
Control measures to reduce level of risk

N.B. Please refer to '12 Rules for Electrical Safety’ at http://www.admin.cam.ac.uk/offices/safety

- All persons using lab equipment should receive training in specific to that machine.

Electrical equipment should be frequently inspected. In particular, cables should be in good condition and free from breaks in the insulation.

Faulty machines must be labeled, taken out of use and reported to technical manager:

Simon McCallum 07872525130

If fluid leakage is discovered, equipment should remain off until the source of the leak is identified and eliminated. If damage is suspected. A relevant engineer should be consulted before switching on.

It is permissible if necessary to feed one six/four way extension block from a single socket, but it must be fused and must only feed low power equipment (less than 500W/2A). Extension leads must not be daisy chained. Items with a higher power demand such as kettles, microwaves, heaters must be fed from an installed socket point. Other adaptors are banned.

Never attempt to power up items of electrical equipment with wet hands or gloves.

Electrical equipment can cause ignition. It must not be used in the vicinity of flammable or explosive gasses.

Emergency procedures

First Aid: Switch off current, if safe to do so. Secure release from contact. Send for a doctor or ambulance. Place the casualty in the recovery position. If casualty not breathing, commence respiratory resuscitation immediately.

Assessor: Simon McCallum

Date of assessment: 28th September 2021
<table>
<thead>
<tr>
<th>Signature of assessor:</th>
<th>Revision due date:</th>
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<tr>
<td></td>
<td>1st October 2022</td>
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