**Manchester Institute of Biotechnology - MIB Risk Assessment Form**



| Date: 26/01/15 | Assessed by: Derren Heyes | Validated by: Tanya Aspinall | Location: MIB 3.056 |  | Review date: 26/01/16 |
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| Task **Use of high-pressure stopped-flow instrument** |

| Activity  | Hazard  | Person(s) in danger  | Existing measures to control risk  | Risk rating  | Result  |
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| Use of stopped-flow | 1. Electrical failure2. Use of high voltage photomutiplier tubes3. Possible exposure to toxic chemicals during sample preparation4. Multiple moving parts during operation.  | User | 1. All stopped-flows to be fully maintained in accordance with manufacturer’s instructions. Their servicing and repair to be carried out by the manufacturer or by suitably qualified personnel.All electrical equipment to be fully PAT tested2. a. Users to be instructed in the safe operation of instrumentation by Senior Experimental Officer of Fast Reaction Facility (Dr Derren Heyes, ext. 65159).b. Always turn voltage off when handling photomultiplier tubes.3. All hazardous chemicals to be used in full accordance with COSSH regulations (provided by the user). 4. a. Ensure that all moving parts are not impeded by anything.b. Whenever equipment does not work according to training and/or expectation, report the fault to the Senior Experimental Officer who will check the system before further use. | Medium | A |
| Use of stopped-flow | 5. Possible exposure to UV radiation from Xenon light sources6. Very hot lamp housings after continued use | User | 5. Care to be taken when handling Xenon light sources. Avoid looking directly at the light source. 6. Avoid touching lamp housing when in use  | Medium | A |
| Changing Xenon arc lamps  | Possible risk of explosion of hot lamps | User | Only change lamps when they are coldBS EN 374 compliant eye protection (chemical splash proof safety glasses) must be worn in case the bulb explodes. A selection of safety glasses and goggles are available from MIB Stores; users are advised to visit Stores and select eye protection which fits well and is comfortable to use. Regular lab inspections monitor the wearing of PPE; users found not to be wearing PPE when the risk assessment states that it must be worn will be subject to the MIB compliance policy. | Medium | A |
| Use of N2 gas | Risk of leak of N2 gas into lab | User | All gas lines are checked regularly and used with an approved regulator.Never exceed the stated pressure.Low-level O2 monitors present in lab. | Medium | A |
| Generation of high pressures | Explosion hazard while using high pressure | User | High pressure system to be inspected and maintained in accordance with manufacturer’s recommendations.Users to be instructed in the safe handling and usage of high pressure systems by Senior Experimental Officer.Ensure all seals and O-rings are clean and all connections are tight to maintain high-pressure | Medium | A |

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| **Authorisation by Facility Manager** **I confirm that I have considered and understand the experiment and the associated hazards. I am satisfied that all of the hazards have been identified and that the control measures to be followed will reduce the risks to acceptable levels.** **Print name: Signed:****Date:** |

**Declaration by researcher**

**I confirm that I have read this Risk Assessment and that I understand the hazards and risks involved and will follow all of the safety procedures stated. Where PPE has been identified as a control measure, I will ensure that it is worn.**

**Declaration by Facility Manager**

**I confirm that the researcher who has signed below is competent to undertake the work. My counter-signature indicates that I am happy for the work to proceed.**

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| **Name (please print)** | **signed** | **Facility Manager countersignature** | **date** |
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