**Manchester Institute of Biotechnology - Risk Assessment**

TUOM_4COL

| **Date:**  26/01/15 | **Assessed by**:  Rehana Sung | **Validated by**:  Tanya Aspinall | **Location : MIB** | **Review date:**  25/01/16 |
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| **Task**: Use of High Pressure Liquid Chromatography (HPLC) systems |
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| **Activity** | **Hazard** | **Person(s) in danger** | **Existing measures to control risk** | **Risk rating** | **Result** |
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| Use of HPLC | Use of solvent – chemical hazard through inhalation/skin contact, flammable | Individual user and others in the lab | All staff must be trained in safe use of HPLC.  The following items of PPE must be worn: Howie-style laboratory coat, BS EN3-74 compliant gloves (nitrile) and BS EN166 compliant eye protection (chemical splash proof safety glasses). 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.  All Solvents used have COSHH forms, which must be read and signed before beginning work.  Solvent bottles are placed at height so a safety step stool should be used if necessary.  It is recommended that users have completed a Working at Height course.  The system operates at high pressure with hazardous solvents so eye protection should be worn. | Low | A |
| Use of HPLC | Use of sample – chemical hazard through inhalation/skin contact | Individual user and others in the lab | Staff trained in safe use of HPLC.  The following items of PPE must be worn: Howie-style laboratory coat, BS EN3-74 compliant gloves (nitrile) and BS EN166 compliant eye protection (chemical splash proof safety glasses). 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. | Low | A |
| Use of HPLC | UV radiation (190-700nm) radiation below 400nm is hazardous to the eyes | Individual user and staff | Staff must be trained in safe use of HPLC.  UV lamp in closed enclosure, no or limited exposure | Low | A |
| Use of HPLC | Risk of injury due to needle during injections | Individual user and staff | Staff must be trained in safe use of HPLC.  Needle contained in auto sampler. Limited access hence limited risk | Medium | A |
| Use of HPLC | Electrical hazard | Individual user and staff | All equipment and power supplies are safety tested and regularly maintained.  During training by supervisor, all users are made aware of potential risks from electric shocks.  Equipment with out of date, failed or untested labels are not be used until retested.  Any obvious danger, sparks/damaged cables are reported immediately to technical staff and the equipment not used or switched off if in use  No panels are removed (unless specifically trained to do so) | Low | A |
| Use of HPLC | Mechanical hazard | Individual user and staff | All guards must be in place before starting the operation  All users must be fully trained in using the equipment (from the EO responsible for the equipment) | Low | A |
| Use of HPLC | Manual Handling | Staff | The LC is heavy and requires assistance to move;  All staff are trained in correct manual handling techniques. | Low | A |

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| **Authorisation by PI**  **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 PI**

**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** | **PI countersignature** | **Date** |
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