

Safety Documentation

Please select the forms you require by selecting the check boxes below.
You can select more than one.

Risk Assessment **Method Statement** **Chemicals COSHH**

Once you have made your selections, scroll down and complete the forms.

Buttons: [+] will add a row to a list [-] will delete a row from a list

You may save this file to a local drive at any time.
When you have finished, save the file to a local drive and email it to your supervisor for authorisation.

Supervisors - There is a sign-off section at the end of the document set that must be completed.

Staff may "self authorise", (as a supervisor), but the forms must still be submitted to the DSO for approval.

IMPORTANT:

YOU **MUST NOT** START ANY PRACTICAL WORK UNTIL THESE FORMS HAVE BEEN RETURNED TO YOU
WITH **BOTH** YOUR SUPERVISOR'S AND DSO'S APPROVAL SIGNATURES ATTACHED.

Please complete these fields

| | |
|---------------------------|--|
| School or Service | Wolfson School of Mechanical, Electrical and Manufacturing Engineering |
| Department | Centre for Biological Engineering |
| Originator name | J. Bowdrey |
| email address | j.bowdrey@lboro.ac.uk |
| Location | Centre for Biological Engineering , Garendon Wing, Holywell Park |
| Project / Activity / Task | Use and Maintenance of Manual Pipettes |
| Supervisor Name | Carolyn Kavanagh |

Risk Assessment

Reference

Location Originator

Project / Activity / Task

Is this process risk assessment for a : Laboratory / Workshop General use

| Category 1: Machinery & work equipment: | | | | |
|---|---------------------|--------------------|-------------------|---|
| Design and Construction | Mechanical hazards | Electrical hazards | Radiation hazards | |
| N/A | Stabbing/Puncturing | N/A | N/A | + |
| Category 2: Workplace | | | | |
| Slips/Trips/Falls on the level | | | | + |
| Category 3: Hazardous and/or Harmful substances | | | | + |
| Biological substances (Infection) | | | | + |
| Pipetting of small volumes of chemicals (Would have individual COSHH). | | | | + |
| Category 4: Work activity | | | | |
| Highly repetitive actions | | | | + |
| Lone working out of hours | | | | + |
| Category 5: Work organisation | | | | |
| N/A | | | | + |

Explain the risks associated with these hazards

| | | | | |
|--|---|--|------------|---|
| People / Groups at risk | <input type="text" value="Operator only"/> | | | + |
| Enter risk details here:- | Impact | Probability | Risk Score | |
| <input type="text" value="Stabbing/ puncturing when using/attaching tips"/> | <input type="text" value="Slightly Harmful"/> | <input type="text" value="Highly Unlikely"/> | Low | |
| What are the control measures? | Lowers Impact | Lowers Probability | + | |
| <input type="text" value="Use pipettes correctly, make sure pipette tips are disposed of in sharps containers to avoid punctures from tips."/> | <input type="text" value="Slightly"/> | <input type="text" value="Slightly"/> | + | |
| <input type="text" value="Make sure that tips are attached firmly by firmly pressing the pipettes into the tips in the rack."/> | <input type="text" value="Slightly"/> | <input type="text" value="Slightly"/> | + | |
| <input type="text" value="Use the ejector button to eject of used tips into the sharps boxes. Staff are trained not to eject tips into bags as these can puncture the bags which could cause a sharps injury."/> | <input type="text" value="Slightly"/> | <input type="text" value="Slightly"/> | + | |
| <input type="text" value="Staff not familiar with using pipettes have specific training on how to use them."/> | <input type="text" value="Moderately"/> | <input type="text" value="Moderately"/> | + | |

Process Risk Assessment Form (Continued)

| | | | | |
|--|------------------|--------------------|---------------|---|
| Gloves are worn at all times | Slightly | Slightly | x | |
| | | | Residual Risk | |
| | | | Low | |
| People / Groups at risk | Operator only | | | x |
| Enter risk details here:- | Impact | Probability | Risk Score | |
| Highly repetitive actions | Harmful | Unlikely | Medium | |
| What are the control measures? | Lowers Impact | Lowers Probability | + | |
| Staff are discouraged from pipetting continuously for long periods of time. If they do need to do this they should consider asking for help to share work load. Staff are encouraged to take breaks. | Slightly | Slightly | x | |
| | | | Residual Risk | |
| | | | Low | |
| People / Groups at risk | Operator only | | | x |
| Enter risk details here:- | Impact | Probability | Risk Score | |
| Lone Working | Slightly Harmful | Likely | Medium | |
| What are the control measures? | Lowers Impact | Lowers Probability | + | |
| All staff must have a valid approved out of hours risk assessment . Only full trained staff can work out of hours. | Moderately | Moderately | x | |
| Staff must use lone working app (lone working register app instructions available at Uni H&S site) Always have your mobile phone available and ensure that your supervisor and a colleague are aware | Moderately | Moderately | x | |
| | | | Residual Risk | |
| | | | Low | |
| People / Groups at risk | Operator only | | | x |
| Enter risk details here:- | Impact | Probability | Risk Score | |
| Risk from Biological hazard | Harmful | Highly Unlikely | Low | |
| What are the control measures? | Lowers Impact | Lowers Probability | + | |
| All Biological material used must have an approved risk assessment before use. Most biological material has good provenance and is screened or will be used in quarantine conditions. | Moderately | Moderately | x | |
| Volumes of biological material potentially pipetted will be minimal. | Slightly | Slightly | x | |
| Gloves are worn at all times and users are trained how to work with biological material. | Moderately | Moderately | x | |
| | | | Residual Risk | |
| | | | Low | |
| People / Groups at risk | Operator only | | | x |
| Enter risk details here:- | Impact | Probability | Risk Score | |
| Risk from Hazardous chemicals | Harmful | Highly Unlikely | Low | |

Process Risk Assessment Form (Continued)

| | | | | |
|--|----------------------------------|--------------------|------------|---------------|
| What are the control measures? | Lowers Impact | Lowers Probability | + | |
| Users wear gloves and safety glasses when working with hazardous chemicals. | Moderately | Moderately | x | |
| All hazardous chemicals used have a valid COSHH | Moderately | Moderately | x | |
| Minimal amounts of chemicals are pipetted | Slightly | Slightly | x | |
| | | | | Residual Risk |
| | | | | Low |
| People / Groups at risk | Operator and people in proximity | | | x |
| Enter risk details here:- | Impact | Probability | Risk Score | |
| Slips trips falls | Slightly Harmful | Highly Unlikely | | |
| What are the control measures? | Lowers Impact | Lowers Probability | + | |
| Make sure area is kept clear and tidy. Any spills to be cleaned up to current SOP038 | None | Moderately | x | |
| | | | | Residual Risk |
| | | | | Low |
| + Add another Risk | | | | |

Who may be at risk as a result of this activity?

| Personnel Group | Maximum (Task setup/ Re-configuration) | High (Performing the task) | Medium (Observing the task) | Low (Present, but not involved) | Lone Working (Out of hours) | No Exposure Permitted | Total |
|--------------------------------|---|-------------------------------|--------------------------------|------------------------------------|--------------------------------|-----------------------|-----------|
| Academic Staff | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Technical Staff | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| Research Staff (PDRA) | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| Research Students (PhD) | 0 | 6 | 0 | 0 | 0 | 0 | 6 |
| Students (Undergraduate / MSc) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Visitors | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Others - Over-type as needed | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 10 | 0 | 0 | 0 | 0 | 10 |

With these controls in place, the risk is:

Process Risk Assessment Form (Continued)

The activity is LOW RISK - and is effectively controlled

Safety Method Statement

Reference SAF/MM/6553

Location Centre for Biological Engineering , Garendon Wing, Hol Originator J. Bowdrey

Project / Activity / Task Use and Maintenance of Manual Pipettes

What equipment will be used in this activity?

| | |
|---|---|
| All manual pipettes in CBE, Holywell Park and T208b, Wolfson School | + |
| | X |

What training must be completed to do this activity?

| | |
|---|---|
| CBE lab induction | + |
| | X |
| Lab leader induction and specific pipette training if need is identified. | X |

What chemicals are being used? (These must be included in the COSHH Form)

| | |
|---|---|
| None. Any chemicals used with the pipettes will have individual COSHH | + |
| | X |
| COSHH for IMS (CBE 335 MEME 655)and Chemgene (CBE 334 MEME 654) | X |

Spill and accident procedures.

| | |
|---|---|
| All Spills must be cleaned up immediately following guidance in SOP038. | + |
| | X |
| All accidents or near misses including pipette tip sharps injury must be reported through the University online system. | X |

Procedure in the event of an emergency. (How to leave the process in a safe condition in such an event)

| | |
|--|---|
| Leave pipettes in a safe position so they cannot roll onto the floor and leave the lab through nearest exit. | + |
| | X |

References.

| | |
|---|---|
| SOP038 Biological Spill Response | + |
| | X |
| SOP057 Use and Maintenance of manual pipettes | X |
| | X |
| COSHH for IMS (CBE 335 MEME 655)and Chemgene (CBE 334 MEME 654) | X |

Detailed sequential description of the process

| Process step | Precautionary measures and comments | |
|------------------------|---|---|
| Please refer to SOP057 | Check pipettes for signs of faults. Wear PPE | + |
| | | X |

Safety Method Statement (Continued)

| Process step | Precautionary measures and comments | + |
|--|-------------------------------------|---|
| <ol style="list-style-type: none"> 1. Select a suitable pipette for the required volume for accurate dispensing. 2. Check the pipette casing and tip cone filters are clean before use. 3. Change the volume of the pipette to the correct amount. For some pipette types, they need to be unlocked first before changing the amount. 4. Push the pipette firmly down into the tip to ensure a snug fit and enable the tip to stay on and the correct amount to be drawn up. 5. Press the operating button to first stop, place tip in the liquid to be dispensed and release operating button to draw up liquid. 6. Withdraw the tip from the liquid. 7. To dispense the liquid from the tip, press the operating button smoothly to the first stop. Then press the button smoothly to the second stop and hold. 8. Remove the pipette from the vessel. 9. Release the operating button to the ready position. 10. Eject tip into a sharps bin, by gently pressing the tip ejector. | | X |
| <p>Cleaning of pipettes</p> <ol style="list-style-type: none"> 1. Daily Cleaning of the outer surface of the pipettes <ol style="list-style-type: none"> a. Clean and decontaminate the outer surface of the pipette by wiping the outer surface with 1 in 50 Chemgene/ 70% IMS. 2. Decontamination of the pipettes for annual Calibration or sending of for repair. <ol style="list-style-type: none"> a. Remove the metal or plastic tip ejector, wipe the pipette and ejector down with 1 in 50 Chemgene and 70% IMS. <p>Ensure pipette is placed back in the rack or secure location when you have finished.</p> | | X |

Supervisor and Departmental Safety Office (DSO) Sign-off.

Supervisors

Please check the documents above and if you want to approve them:

- 1) Electronically sign this document
- 2) Save it to a local drive (You will be prompted to do this)
- 3) eMail the signed document to the DSO.

DSO

Please review the documents above and if you want to approve them:

- 1) Enter the reference numbers as appropriate
- 2) Electronically sign this document
- 3) Save it to a local drive (You will be prompted to do this)
- 3) eMail the signed document to the originator

IF YOU DO NOT WANT TO AUTHORISE THE FORMS,

Please do not sign the form, but click the "Not Approved" check-box and return it to the originator by email stating why and what you expect them to do to put it right in the comments box below.

Not Approved

Supervisors Signature

Form Reference Numbers

Risk Assessment

SAF/MM/6553

Method Statement

SAF/MM/6553

COSHH Assessment

DSO Signature

This document set must be reviewed and re-approved at the following times:

- 1) After the first occurrence of the activity described above (Review only)
- 2) After any change to the procedure or reagents used
- 3) After any incident resulting from this activity
- 4) At least annually from the date of approval

Next Review:

24 Sep 2021

Review comments