## Reference Number-

**JOB SAFETY ANALYSIS FORM**

**UNIVERSITY OF KUALA LUMPUR**

**(MICET)**

* Safety data sheets for NEW chemicals used in your project (and NOT available in the laboratory) need to be attached WITH this form.*

* Once this assessment has been signed by you, technician(s), laboratory manager, your project supervisor and safety health officer; an assigned reference number will be given, please submit:*

* *the original document of this assessment to be kept by you.*
* *The copy of the document of this assessment to TECHNICIAN IN-CHARGED [TIC] of main laboratory used; to be kept in the laboratory safety file.*
* *If more than one laboratory used in this project, submit a copy of this document to the TIC to be kept in the laboratory safety file.*
* *Ensure this assessment is resubmitted for approval when work out of office hour.*

* Ensure this assessment is read and signed annually by all concerned.*

* *POSTGRADUATE STUDENT is required to submit AFTER HOURS RISK MANAGEMENT procedure together with this submission.*

* Ensure this assessment is reviewed annually by the project supervisor for posrgraduate.*

***Remember that anything that you put in this form you must follow!***

# 1. Title of Research Project

# 2. Name of Supervisor

|  |  |
| --- | --- |
| Supervisor  |  |
| Co supervisor |  |

# 3. Details information

|  |  |
| --- | --- |
| Name |  |
| Researcher Identification No.[Student ID – UniKL MICET or IC No – others] |  |
| Contact No. |  |
| UniKL MICET (Program) | PROCESS / ENV. / POLYMER / FOOD / BIOPROCESS / BIOSYSTEM / ICOLE |
| External Researcher ( School/College/University/Company) |  |
| Fyp Starting Time | Date: |
| Expiry Date*(Diploma – 1 semester;**Degree – 2 semester**Master – 2 years; PhD: 4 years**External – as specified in Letter of intention)* | Date: |

# 4. Method / Procedure

***PLEASE WRITE FULL STEPS OF YOUR METHODOLOGY USE IN YOUR PROJECT; INCLUDING MOBILITY TO A SAMPLING SITES.***

***[ALL STEPS IN THE RESEARCH METHODOLOGY AT THE LABORATORY AND SAMPLING SITES]***

***DO NOT PROVIDE A FLOW CHART OR NAME OF THE TEST ONLY.***

***IDENTIFY ALL HAZARDS IN STEP AND SUBSTANCES USED.***

***[ANY CHANGES OF THE METHOD / PROCEDURE USE IN YOUR PROJECT. NEED TO BE INFORMED AND SUBMIT A REVISED JSA FOR APPROVAL ]***

## 5. Type of hazards identified in this project.

 *i. All hazards must be identified during sampling in & out the campus, performing the experiment in the laboratory and analyzing of results.*

 *ii. If your experiment is going to be carried out at external laboratory, it is a requirement to do hazard identification at those laboratories.*

##

|  |  |  |
| --- | --- | --- |
| Type of hazards | Table to be completed | Potential Hazards |
| Yes | No |
| Physical hazards | Please fill in table 5a |  |  |
| Biological hazards | Please fill in table 5b |  |  |
| Chemical hazards | Please fill in table 5c |  |  |

## 5a. Hazards that have potential to cause harm (potential hazard)

( *Do not forget to include ergonomic hazards AND all the physical hazards)*

|  |  |
| --- | --- |
| **Physical hazards identified** **[at ALL sites; sampling site, laboratory etc]** | **Precautions /** **Emergency action**  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

## 5b. Hazards that have potential to cause harm (potential hazard)

( *All the biological hazards)*

|  |  |
| --- | --- |
| **Biological hazards identified** **[at ALL sites; sampling site, laboratory etc]** | **Precautions /** **Emergency action**  |
|  |  |
|  |  |
|  |  |

## 5c. Substances used which have potential to cause harm (potential hazard)

### *NB: This section is concerned with hazards inherent in the substances rather than the way they might be used in this procedure. All columns must be filled according to Safety Data Sheet.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Substance** | **Hazards identified***(e.g. toxic, flammable)* | **EXPOSURE LIMIT (MEL or OEL)** *(if assigned- do not quote LD50 etc.)* | **Precautions in handling***(if gloves required state type)* | **Emergency action** *in the event of spillage etc.* |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**Skin Contact** – Flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and wash before reuse. Unless contact has been slight obtain medical attention.

**Inhalation** – Remove to fresh air, rest and keep warm. If breathing is difficult give artificial respiration and obtain medical attention.

**Eye contact** – Irrigate with copious amounts of eye wash or water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Obtain medical attention

**Ingestion** – Do not induce vomiting. If conscious provide water for person to thoroughly wash out mouth (and sip if required). Obtain medical attention.

**Full safety data sheets for the above chemicals must available in file at the laboratory in use.**

**Please ensure data sheets for any previously unused chemical are added to the laboratory's safety file.**

*Nomenclature*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *CoSHH:* | *Control of Substances Hazardous to Health* | *MEL:* | *Maximum exposure limit* | *TWA:* | *Time weighted average* |
| *SDS :*  |  *Safety Data Sheet [or the old term is called CSDS-CHEMICAL SAFETY DATA SHEET or MSDS-MATERIAL SAFETY DATA SHEET* | *OEL:* | *Occupational exposure limit* | *TLV:* | *Threshold limit value* |

## 5d. Equipment used in the procedure which may cause harm

### *NB: This section is concerned with hazards inherent in the equipment rather than the way it might be used in this procedure.*

|  |  |  |
| --- | --- | --- |
| **Equipment** | **Nature of hazard** | **Precautions to be taken** |
|  |  |  |
|  |  |  |
|  |  |  |

*NOTE:*

*ALL EQUIPMENTS USED ELECTRICAL POWER WILL HAVE ELECTRICAL HAZARDS.*

**6. Laboratories required**

 **[*NAME ALL LABORATORY TO USED]***

**6a. First Aid & Fire Fighting Equipment (FAFFE) Available**

|  |  |  |
| --- | --- | --- |
| FAFFE | LABORATORY: | LABORATORY: |
| Eye wash & emergency shower | Model:Last date checked:Condition: GOOD /  NOT GOOD | Model:Last date checked:Condition: GOOD /  NOT GOOD |
| Antiseptic cream | Expire:  | Expire: |
| Dressing |  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Eyemo | Expire:  | Expire: |
| Yellow lotion | Expire:  | Expire: |
| Dettol | Expire:  | Expire: |
| Chemical spill kit |  |  |
| Fire Extinguisher | Checked on:Next checking on: | Checked on:Next checking on: |

## 7. Disposal routes for waste materials

### *Tick [* **☑***] or complete appropriate box for each category of waste WITH reference to FIRST SCHEDULE of ENVIRONMENTAL QUALITY (SCHEDULED WASTES) REGULATIONS 2005.*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Nature of waste:** |  | **Route** | **for** | **disposal:** |  |  |
|  | Sink | Black bag | Black bin(e.g. SW410) | Solvent drum (SW311; SW322; SW323) | Sharps bin | Other route (specify) |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

*NOTE:The following list of scheduled wastes are not exhausted, the above regulation must be referred to complete this section.*

*SW109 Waste containing mercury or its compound*

*SW206 Spent inorganic acids*

*SW311 Waste of oil or oily sludge*

*SW322 Waste of non-halogenated organic solvents*

*SW323 Waste of halogenated organic solvents*

*SW421 Rags, plastics, papers or filters contaminated with scheduled wastes (Mixture)*

*SW410*

*NOTE:*

*PLEASE SPECIFY YOUR BIOHAZARD WASTE - ROUTE OF DISPOSAL*

## 8. Specific risk assessment for procedure and precautions to be taken

**THIS IS ONLY A SAMPLE. PLEASE CHANGE ACCORDING TO YOUR PROJECT NEED.DO NOT COPY ONLY.**

***SAMPLE:***

*During preparation of reagent solutions there is a LOW risk of contact with hazardous chemicals if all precautionary measures stated in Table 5a and b (handling) are followed.*

*Extra care must be taken to avoid chemical spillage.*

*PPE must be worn at all times.*

*Work in a well-ventilated area (i.e. fume cupboard).*

*During sample analysis there is a LOW risk of contact with chemicals because the sample solution contains low concentration. Avoid aerosol and fume formation by selecting a moderate stirring speed.*

*Turn on electrical equipment ONLY after all components have been connected, and the cables checked for any damage.*

***After following all the above precautions the overall risk assessment for this procedure is LOW.***

## 9. Level of supervision required and suitability for out-of-hours work

### *Please mark box [* ☑ *] to indicate appropriate supervision category for this procedure.*

|  |  |  |
| --- | --- | --- |
|  | Category A | *work may not be carried out except under the direct supervision of a specified member of staff who is present continuously* |
|  | Category B | *work may not be started without the supervisor's advice and approval, some additional training and initial direct supervision* |
|  | Category C | *work may not be started without the supervisor's advice and approval and some additional training - no direct supervision required* |
|  | Category D | *although extra care must be observed, workers should already be competent and adequately-trained for this task* |
|  | Category E | *risks are insignificant and supervision unnecessary* |

**9a. Is this procedure authorised for out-of-hours work?**

**YES :\_\_\_ NO:\_\_\_\_**

***[TO BE FILLED FOR WORK TO BE DONE OUT OF OFFICE HOURS ]***

|  |  |  |  |
| --- | --- | --- | --- |
| Date and time | Supervisor Approval  | HOS Approval | SHO Approval |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**10. Emergency Contact**

|  |  |  |
| --- | --- | --- |
| No | NAME | CONTACT NO |
| 1. | Security Guard | 06-5512054 |
| 2. | Safety, Security & Health ExecutiveName: MOHD NAQUIB BIN MOHAMMAD | 016-6459211 |
| 3. | Safety and Health OfficerName: NOR AINI BTE BUROK | 019-2436965 |
| 4. | Supervisor Name: |  |
| 5. | Co-supervisor (if any)Name: |  |

*Note:*

*Supervisor is required to make hourly phone calls to check on students when they work out of office hours*

## 11. Signature of technician involved in the project.

|  |  |  |
| --- | --- | --- |
| Form Checked By(Technician):- |  | Signature(Date) |
| Form Checked By (Technician):- |  | Signature(Date) |
| Form Checked By (Technician):- |  | Signature(Date) |
| Form Checked By (Technician):- |  | Signature(Date) |

## 11a. Signature of Laboratory Manager

|  |  |  |
| --- | --- | --- |
| Approved By:- |  | Signature(Date) |
| Approved By:- |  | Signature(Date) |

##

## 12. Signature of academic supervisor and co supervisor

### Note that this assessment needs to be reviewed and signed annually to take into account any developments of the procedure [if the project is more than one year, eg postgraduate].

|  |  |
| --- | --- |
| Supervisor (Name): | Signature(Date) |
| Co-Supervisor (Name): | Signature(Date) |

## 13. Signature of authorised signatory for JSA approval

|  |  |
| --- | --- |
| Signature | Name |
| Date |

## 14. Signature and contact number of workers involved with this procedure

### Please sign annually to say you have read the attached document and understood it.

|  |  |  |
| --- | --- | --- |
| # | Name of other student involved | Contact No.(Date) |
| 1 |  |   |
| 2 |  |  |
| 3 |  |  |
| JSA reference number of other student involved |  |

## Review Section [TO BE FILLED BY POSTGRADUATE ONLY].

## 15. Signature of the reviewer/s

Note that this assessment needs to be reviewed and signed **annually** to take into account any developments of the procedure

*(This section should be signed by the technician/s in charge of the areas where the work is to be done)*

|  |  |
| --- | --- |
| Name & Signature(Date) | Could any less hazardous substance or procedure be used? |
|  |  |
|  |  |
|  |  |
|  |  |