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| University of Glasgow logo |  CoSHH Risk Assessment |
| **Assessment Title:** Name of the process being undertaken, this may be a general procedure or a more specific experiment |
| **Assessment Reference Number:** Give your assessment a unique reference number to help identify it |
| **School / Service / Location:** Name of your School or Management Unit and the location where the work will be undertaken  |
| **Safety Coordinator:** Who is the safety coordinator for your School / Management Unit |
| **Details of Hazardous Substances** (Please attach safety datasheets where available) |
| **Name of Substance**(Include all substances used or produced) | **Quantity****kg / g / ml** | **Physical Form** | **GHS Hazard Classification** (Tick all that apply) |
| Image result for ghs explosiveExplosive | Image result for ghs flammableFlammable | Image result for ghs oxidiserOxidiser | Image result for ghs compressedComp. Gas | Image result for ghs irritantHarmful | Image result for ghs corrosiveCorrosive | Image result for ghs toxicToxic | Image result for ghs explosiveHealth Hazard | Image result for ghs oxidiserEnvironment |
| In this section include the name of each substance involved in your process (remember to include solvents, separating columns, cleaning materials and quenching agents). Consider how much you could spill when selecting the quantity of each rather than focussing on how much is involved in your process and don’t forget the physical form as this affects the likely exposure routes and control measures needed. | In this section all you need to include is a cross (X) in the box for the relevant hazard properties associated with each substance. This will help you to identify which substances are most hazardous and will therefore require the most stringent control measures. |
| **Special Hazards** (\*Separate risk assessment may be required) |
| Image result for ghs explosive**Carcinogenic Substance** | Note here if any substances in use are known or suspected carcinogens. These should be substituted where possible and strictly controlled if they cannot be excluded. | Image result for ghs explosive**Skin****Sensitiser** | Skin sensitisers (e.g. latex) can cause occupational dermatitis and should be handled with care. Note that you don’t have to include irritants in this section only sensitising chemicals. | Image result for ghs explosive**Respiratory Sensitiser** | Some substances can cause individuals to develop asthma if they are regularly exposed. These substances should be identified and appropriate control measures identified. |
| **Biological****Material\*** | If the process involves hazardous biological substances details should be included here. You may also need to complete a biological CoSHH assessment.  | Image result for radiation**Radioactive Substances\*** | If the process involves radioactive sources the details should be included here. You will also need to complete a risk assessment covering radioactive substances. | Image result for wikimedia commons flammable**Explosive Atmosphere\*** | If the process could cause a flammable or explosive atmosphere to be generated then you will need to complete a separate DSEAR assessment covering the work. |
| **Further Details / Other Special Hazards:** This section is optional and should be used to highlight any other hazards presented by the procedure which are not included in the standard information above. This could include work being carried out at high / low temperature, under pressure etc. or details of substances with unusual reactivity such as pyrophoric substances, chemical incompatibilities etc. |
| **Exposure to Hazardous Substances** | **Workplace Exposure Limits** |
| **Substance** | **Possible Exposure Route** (Please tick) | **8h TWA** | **15min STEL** |
| **Inhalation** | **Ingestion** | **Skin** | **Injection** | **Other (State)** |
| 1 | Consider here the most likely routes of exposure based on the physical form of the chemicals in use and the process being undertaken and identify the most likely routes by which individuals could be exposed to each substance. Where substances are used as gases, vapours, mists or aerosols then inhalation should always be considered, where needles are in use the likelihood of injection is significantly increased. | Most common chemicals will have been assigned short term exposure limit (15min) and a time weighted average (8h) exposure limit. These refer to the maximum amount of the material which can be inhaled in the reference period (although we should always aspire to minimise this) and can be found on the SDS or in the HSE publication EH40. |
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| **Description of Activity** (Continue on a separate sheet if required) |
| This section should include a brief overview of your experimental procedure covering he work you are going to undertake, as an alternative to this you could append your experimental procedure as an appendix to the document. Remember to cover all of the steps of your process including preparation, experimental procedures / chemical reactions, quenching steps, purification procedures (e.g. chromatography columns) quenching /destruction and cleaning / decontamination processes required to complete your work safely. Keep the description brief but include sufficient detail to ensure that the hazards associated with the process are identified.There is an optional continuation page which can be used for longer procedures and you may wish to append a copy of any relevant standard operating procedures (SOPs) or techniques which are relevant. A good example of this would be the Aldrich technical bulletin AL-134 which covers the handling of air sensitive reagents. |
| **Persons at risk:**Include in this section a list of the individuals who might be at risk as a result of the procedure being undertaken and how they might come to harm. Try to include everyone not just yourself and your colleagues in the laboratory or workspace e.g. cleaners, estates staff, visitors etc. This will help you to identify any additional control measures required to protect these individuals e.g. induction sessions for cleaners, provision of an escort for contractors etc. |
| **Summary of Control Measures** |
| **Assessment of the risks posed to users by substances involved in this procedure (include details of any existing standard control measures already in place)** | *In* this section you should summarise the risks posed by your procedure to the individuals identified in the previous section, on the assumption that you use the existing controls in the workspace. For example, if the workspace is well ventilated or work is undertaken in a controlled environment with standard rules / precautions then it may not be necessary to change your working practices at all.Keep this section quite simple and use it to prioritise which hazards will need to be controlled and whether existing control measures are adequate or new measures will be required. |
| **Risk Rating (Before Control)** | Use your judgement to estimate the risk based on the normal control measures in your laboratory (low, medium or high) |
| **Procedural Controls**(e.g. lone working, hygiene) | Include in this section details of any procedural / behavioural control measures that are required to undertake the process safely. This could include task specific training, prohibiting lone working or any other control measure which relies on individual to implement it properly. |
| **Engineering Controls**(e.g. fume cupboard) | Include details of any engineering controls used to reduce or control exposure to hazardous substances, these could include general room ventilation, Local Exhaust Ventilation Systems (e.g. fume hoods), enclosures, blast shields etc. |
| **PPE Requirements**(Please give details)\*\*Face fit testing required | **Dust Mask\*\*** | Insert a cross (X) into each box that applies even those that would be considered standard for your workspace. Remember to specify the type of PPE to be used where necessary (e.g. single use nitrile gloves, P3 dust mask).Where respiratory protection is indicated as part of your control measures under CoSHH it will be necessary to ensure users are formally face-fit tested by a competent person (usually an external consultant). | **Gloves** | Insert a cross (X) into each box that applies even those that would be considered standard for your workspace. Remember to specify the type of PPE to be used where necessary (e.g. single use nitrile gloves, P3 dust mask) |
| **Respirator\*\*** | **Footwear** |
| **Eye Protection** | Laboratory safety Lab Coats Personal protective equipment, others, blue,  angle, white png | PNGWing**Protective Clothing** |
| **Face Shield** | **Other (Specify)** |
| **Instruction and Training** | Does this process require users to have developed specific skills or undergone any particular training courses to be undertaken safely. Please include the details of any training that may be required. |
| **Supervision Required?** | Is there a need for supervision or assistance when undertaking this procedure? This could include the need for a second person to be present in the area when carrying out a hazardous procedure e.g. work involving cyanide salts or other high hazard substances. |
| **Other safety precautions:**(Including specialist first aid requirements) | Include the details of any other safety precautions that are not included elsewhere. This is a good place to include any particular first aid requirements (e.g. use of calcium gluconate gel for HF exposures). You should try to avoid copying and pasting and ensure you relate the precautions to your procedure. |
| **New Risk Rating** | Now that you’ve introduced your new control measures re-evaluate the level of risk to reflect this (low, medium or high) |
| **Supporting Information Checklist** (Include details for each where relevant) |
| **Waste Disposal** | Include details of the waste streams you will use to dispose of waste products at the end of your process, include details of quenching steps / sterilisation procedures and any other relevant techniques. Include details of how waste will be stored and disposed of and remember that for the most part it is not permissible to allow waste to enter the drains. |
| **Emergency Procedures**(including spill / leak control) | It is a requirement of the CoSHH Regulations 2002 that you plan ahead for foreseeable emergencies when working with hazardous substances. Consider what might go wrong e.g. exposure of people, leaks, spills, fires and unexpected reactions and include details of what you might do to mitigate the harm caused and any specialist equipment provided. It is not sufficient to say that you would call the emergency services in the event of an accident. |
| **Atmospheric Monitoring** | Where there is a known risk of individuals being exposed to one or more hazardous substances then the need for ongoing monitoring should be considered. This section should include details of the substance(s) for which monitoring will be needed and the type of monitoring that will be undertaken. |
| **Health Surveillance** | Some substances can cause occupational diseases such as dermatitis and asthma, these will generally be classified as sensitisers (i.e. substances which can cause individuals to develop as sensitivity to the substance over time with regular exposures). Where these chemicals are used in a process and a risk of exposure exists there will be a need for individuals undergo regular health surveillance. Further information can be found on the SEPS / OH websites. |
| **Supporting Risk Assessments**(Please attach where relevant)  | In these sections we are looking for the details of any other specialist risk assessments that have been completed to ensure they can be read in conjunction with this one. Include reference numbers and titles where relevant. |
| **Assessment Details** |
| **Assessed By:** Name of person completing the assessment | **Date:** |
| **Approved By**: Name of person approving the assessment (PI/PDR/Manager) | **Date:** |
| **Date of next review:** The risk assessment should be reviewed if the process is regularly repeated (1-2 years is recommended) |
| **Description of Activity** (Continuation sheet) |
| This section is optional and will only be required for long and/or complex processes. In the event that a long description is needed then it may be easier to append your experimental procedure to the risk assessment and simply refer to it in the description of activity section. |
| **Continuation sheet number:** |

**CoSHH Assessment Acknowledgement**

By signing this document I acknowledge that I have read and understood the attached CoSHH assessment and have familiarised myself with the safety control measures and protective equipment necessary to carry out the task safely. I hereby agree to follow the safe system of work required and implement the required safety procedures fully.

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| **Full Name** | **Signature** | **Date Completed** |
| This part of the form should be used to help identify individuals who have read the risk assessment and agreed to carry out the procedure using the control measures identified. It is a good way to confirm that people have read the assessment and it is recommended that individuals sign the document and record the date on which they read it (an electronic signature is fine where a hardcopy is not available or practical). |

**Colour Coding**

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|  | **Optional section (only complete if relevant to the assessment)** |
|  | **Compulsory information (where available)** |
|  | **Risk rating determined at the discretion of the**  |