SAFETY TRAINING RECORD

INCLUDING WORK INVOLVING BIOLOGICAL MATERIALS

In accordance with the University Biological Safety Policy and the CBE Code of Practice, all workers handling hazardous materials should receive appropriate training and instruction in order to carry out their work safely. The Research Group Leader/Principal Investigator of a given research group, or the Supervisor/Manager of a unit or work area, should ensure that all workers they are responsible for supervising receive the appropriate safety information and training.

The model training record proforma provided below should assist those with supervisory or managerial responsibilities to identify workers training needs. In relation to work in the of the Centre for Biological Engineering (CBE) Containment Level 2 Laboratory Unit, all persons handling biological materials must be able to recognise how exposure to biohazards can occur and how it can be prevented. The information and instruction provided must include, as a minimum:

* The local Code of Practice for working in the CBE Laboratory Unit
* The relevant standard operating procedures (SOPs), work protocols and guidelines
* The disinfection procedures
* The waste disposal procedures
* The emergency response procedures
* Details of the risk assessments for the work to be undertaken explaining both the nature of the hazards and the use of control measures
* Equipment Training

The University Health, Safety and Environment Department and the CBE LEARN page have information on a wide range of biosafety related subjects and workers should be referred to some of these documents as part of the information and instruction provision.

Workers must be trained and should be proficient in safe working practices and techniques to ensure the safety of themselves and other persons in the laboratory unit. Training must specifically include all safety related matters in order that workers know how to effectively apply routine and emergency control measures. The degree of training required should be proportionate to the risk and may be determined on a case by case basis e.g. for students, visiting RAs etc. Where work involves handling of pathogens (or materials that may contain these) or genetically modified microorganisms, specific training should be given on how to work safely with these, based on an assessment of risk.

The amount of training that needs to be provided will also depend on the experience of the person being trained but supervisors should not assume competence until it has been demonstrated. Provision of information and instructions and attendance at training courses must be supplemented by practical demonstration and assessment of competence in the laboratory. A suitable training programme should be drawn up locally taking into account the nature of the work concerned. On the job training is important and work practices should be monitored. A shortfall in standards should be brought to the attention of the Laboratory Manager/Supervisor, or Research Group Leader/Principal Investigator, and addressed immediately.

A training record proforma is provided for workers in the CBE Containment Level 2 Laboratory Unit. This proforma is intended to be used as the basis of a training record for all biological workers in the Unit. Once completed, the Safety Documentation must be signed in order to gain authorised access to the designated laboratory. **All subsequent training requirements identified as a result of risk assessments for specific work activities eg use of specific procedures or equipment such as bioreactors, should be recorded in separate documentation and placed in the individual’s training file.**

**All equipment related training MUST be recorded in individual Training records to comply with PUWER regulations.**

**SAFETY TRAINING RECORD FOR WORK**

**INVOLVING BIOLOGICAL MATERIAL**

|  |  |
| --- | --- |
| **Department/School:** | Centre for Biological Engineering (CBE) |
| **Laboratory:** | CBE Laboratory Unit |
| **Personal Details:** | Name: |
|  | Position: |
|  | Supervisor/Manager: |
| **Date Started:** |  |
| **Proposed project end date** |  |
| **Have you submitted a Hepatitis B and Biological Agents form to Occupational Health ? (https://www.lboro.ac.uk/services/health-safety/forms/)** |  |
| **Hepatitis B Vaccination Status** |  |
| **I will be working with HTA Licensable Material** | YES Plea  (Please complete additional HTA training record)  No |

**SECTION A**

All new staff/students must complete the section below:

|  |
| --- |
| **A1: Qualifications and Experience**  ***Please include time periods.*** |
| 1. **Qualifications:** 2. **Experience:** 3. *Biological experience*   ( brief description of previous biological experience e.g cell culture, aseptic  technique.   1. *Chemical experience*   ( brief description of experience with chemicals, e.g COSHH assessments.. )   1. *Laboratory equipment:*   ( brief description of equipment used previously e.g Biological Safety Cabinets, autoclaves, fume hoods…)   1. *Genetically Modified Organisms ( GMO) experience*      1. *External Training courses:*   ( brief description of any relevant external training e.g Aseptic techniques)  ------------------------------------------------------------------------------------------------------  Authorisation required for ( *Please tick*):  CBE Containment Level 2 Laboratories ( Holywell Park)  Proposed Laboratory ( CBE)    CBE Tissue Engineering Laboratories  ( Wolfson School) |

**SECTION B**

**IDENTIFICATION OF TRAINING REQUIREMENT**

***PRACTICAL INSTRUCTION, TRAINING, DEMONSTRATION AND ASSESSMENT OF COMPETENCE***

The Supervisor/Manager should identify any practical instruction or training required.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Practical training/instruction  *(include details)* | Provider/  Trainer | Date | | Signed by: | |
| Start | Compn | Worker | Manager/  Supervisor |
| **Mandatory Training** |  |  |  |  |  |
| **Introductory Meeting to discuss project and Training** |  |  |  |  |  |
| General introduction to the CBE ( Fire exits, toilets, desk space etc) |  |  |  |  |  |
| University Biological Safety Policy | **Mandatory**  Self study |  |  |  |  |
| Introduction to Risk Assessments Training Presentation. ( LEARN) | **Mandatory**  Self Study |  |  |  |  |
| **CBE safety training induction presentation**  ( Laboratory safety, local procedures & emergency response procedures) LEARN | **Mandatory**  Self Study |  |  |  |  |
| Laboratory Tour |  |  |  |  |  |
| **Practical Mandatory Training** |  |  |  |  |  |
| Cryostorage & Liquid Nitrogen Handling |  |  |  |  |  |
| Biological Safety Cabinets (specify location CBE/Wolfson) |  |  |  |  |  |
| Fume Cupboard |  |  |  |  |  |
| Waste Disposal |  |  |  |  |  |
| Autoclaves |  |  |  |  |  |
| Pro-Curo Sample Tracking Software Training |  |  |  |  |  |
| **Laboratory Leader Induction(s)**  i)Centrifuge/Incubator/Water bath operation  ii)Lab housekeeping/operation  iii)Space allocation ( Fridge/Freezer/drawers)  iv) Aseptic Technique |  |  |  |  |  |
| **Optional additional training** |  |  |  |  |  |
| **( to be identified by supervisor, *please tick*)** :  Cell culture  Aseptic technique  Liquid handling  Manual Handling  Basic microscopy  Gas cylinder training |  |  |  |  |  |

**CBE Equipment Training Record**

**Adequate training for work equipment must be given and recorded under PUWER Regulations. Please list details of equipment training below and continually update.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Equipment** | **Location** | **Date Trained** | **Details of Training** | **Trainee Signature** | **Trainer Signature** |
|  |  |  |  |  |  |
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###### AUTOCLAVE TRAINING AGREEMENT

ALL STAFF TRAINED TO USE THIS AUTOCLAVE MUST COMPLETE THE FOLLOWING

Autoclave Training Agreement

Location of Training: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Autoclave model and type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name of Instructor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date training completed: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I agree that I have received training from an authorised instructor(s) on the use of this Autoclave and its associated components.

I also agree that I have read and understood the Risk Assessments and SOP for use and maintenance of this Autoclave.

Name of Trainee:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

It is agreed that the above named is fully trained to use this equipment for the duration of their work.

Name of Instructor:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**QS-Form-016: Biological Safety Cabinet Training Agreement**

|  |  |  |
| --- | --- | --- |
| BIOLOGICAL SAFETY CABINET (BSC) TRAINING AGREEMENT ALL STAFF TRAINED TO USE THIS BSC MUST COMPLETE THE FOLLOWING | | |
| Location of Training: |  | |
| BSC Type and Model: |  | |
| Name of Instructor: |  | |
| Date Training Completed: |  | |
| *I agree that I have received training and instruction from an authorised instructor(s) on the use of this BSC, including 1. Classification of cabinets; 2. Appropriate and inappropriate use of cabinets; 3. Mode of operation and function of all controls and indicators; 4. Limitations of performance; 5. How to work at cabinets safely; 6. How to decontaminate after use; 7. Principles of airflow and operator protection tests.8.To understand the different types of BSC ( recirculatory/ducted)*  *I also agree that I have read and understood the Instruction Manual and relevant SOP for use and maintenance of this BSC.* | | |
| Name of Trainee: | | |
| Signature: | | Date: |
| *It is agreed that the above named is fully trained to use this equipment for the duration of their work.* | | |
| Name of Instructor: | | |
| Signature: | | Date: |

###### FSOP013.1: USE & HANDLING OF LIQUID NITROGEN IN CBE LABORATORIES - TRAINING AGREEMENT

|  |  |  |
| --- | --- | --- |
| USE AND HANDLING OF LIQUID NITROGEN IN CBE LABORATORIES TRAINING AGREEMENT ALL STAFF TRAINED TO USE AND HANDLE LIQUID NITROGEN IN CBE LABORATORIES MUST COMPLETE THE FOLLOWING | | |
| Location of Training: |  | |
| Name of Instructor: |  | |
| Date Training Completed: |  | |
| *I agree that I have received training and instruction from an authorised instructor(s) on the use and handling of liquid nitrogen and associated equipment and components within CBE Laboratories, including 1. Hazards and Risks of liquid nitrogen; 2. Safe working practices and risk controls, 3. Appropriate and inappropriate use of liquid nitrogen Dewar’s and cryostores; 4. Transport of Dewar’s and cryostorage units; 5. Filling the cryostorage unit; 6. Storing and removing samples from the cryostorage unit; 7. Emergency response procedures.*  *I also agree that I have read and understood the relevant risk assessments, SOPs for use and handling of liquid nitrogen.* | | |
| Name of Trainee: | | |
| Signature: | | Date: |
| *It is agreed that the above named is fully trained to use this equipment for the duration of their work.* | | |
| Name of Instructor: | | |
| Signature: | | Date: |



**Centre for Biological Engineering**

**Lab Leader Induction & Aseptic cell culture training session**

Date of training session:

Trainee:

Administered by:

Procedures covered:

1. General good practice, glove procedure, disinfectants, liquid handling, workspace organisation, air flow, UV, pipette/pipetbuoy cleaning, tips and stripettes, filters, de-lidding practice, waterbath maintenance, incubator maintenance, slimline CAPA/reporting of incidents, identification of contamination.
2. Lab Specific Training ( Please list)………………………………….
3. Aseptic Technique for cell culture

**Outcome:**

New CBE Laboratory users trained for good laboratory practice and aseptic technique.

Signed and dated

Administrator:

Trainee:

**Safety Training Reading Material**

The University Health, Safety & Environmental Department and the CBE LEARN page have information on a wide range of biosafety related subjects and workers should be referred to some of these documents as part of the information and instruction provision. Below is a list of reading that support training provision. Supervisors can add to this list anything they feel will enhance training. Please sign and date when read.

|  |  |
| --- | --- |
| **Mandatory Reading** | **Date Read** |
| **SOP003** ‘Disposal of Biological Waste’ |  |
| **SOP004** ‘ General Laboratory Housekeeping’ |  |
| **SOP005** ‘ Storage & Transport of Biological Agents’ |  |
| **SOP008** ‘ Management & control of incoming biological material**’** |  |
| **SOP013** Safe Use and Maintenance of Liquid Nitrogen |  |
| **SOP025** Use and Maintenance of Systec VX95Autoclaves  ( CBE) |  |
| **SOP054** Use and Maintenance of the Systec DX90- Autoclave  ( T208b) |  |
| **SOP037** ‘ Use of personal protective equipment’ |  |
| **SOP038** ‘ Biological Spill Response’ |  |
| **SOP039** ‘ Storage, handling & disposal of chemicals |  |
| **SOP048** ‘ Generation of Risk Assessments for new materials or processes |  |
| **SOP050** Corrective & Preventative Action Procedure |  |
| **Risk Assessment – Autoclave DX90 ( T208b)** |  |
| **Risk Assessment – Autoclaves VX95 ( CBE)** |  |
| **Risk Assessment- Liquid Nitrogen and Cryostores** |  |
| **Cell Culture Related:** |  |
| **SOP031 ‘** Cryopreservation and storage of Mammalian cell lines |  |
| **SOP032 ‘**Resuscitation of cryopreserved mammalian cell lines |  |
| **HTA-PR-SOP005\_Tracking HTA Material-ProCuro database\_January 2022.pdf** |  |
| **Recommended Reading material** |  |
| CBE Code of Practice |  |
| Control of Substances Hazardous to Health Regulations 2002 (as amended). Approved Code of Practice and guidance L5 (6th edition). 2005. |  |
| Requirements under the Genetically Modified Organisms (Contained Use) Regulations 2000 |  |
| CBE Code of Practice & guidance note for work with chemical carcinogens, mutagens, substances toxic to reproduction & cytotoxins. |  |
| Risk Assessment guidance on CBE LEARN page |  |
|  |  |
| **Additional Reading/SOPS Identified by supervisor** |  |
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**RISK ASSESSMENTS:**

Supervisor/Manager to identify which Risk Assessments should be read. Staff are required to complete this section to confirm that they have read and understood the Risk Assessments relevant to their work activity. This includes reviewing & recording relevant COSHH Risk Assessments .

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Risk Assessment Reference Number | Version | Title | Date Read | Signed by: | |
| Worker | Manager/  Supervisor |
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**C4: ASSESSMENT OF COMPETENCE TO AUTHORISE ACCESS**

**Safety Documentation**

**For work involving biological materials in the Containment Level 2 CBE Laboratory Unit:**

**SECTION A [Description]**

It is a legal requirement that access to Containment Level 2 laboratories be restricted to authorised people only. Contractors, Maintenance Staff or Visitors are only allowed to enter the laboratory with signed authority/permit to enter from the Laboratory Manager or designated deputy.

It is also a requirement that all personnel wishing to work in the Containment Level 2 CBE Laboratory Unit for either research or teaching purposes undergo training by an authorised member of staff in accordance with the rules and regulations outlined in the Code of Practice and University Biological Safety Policy. Once completed the user must sign the documentation in order to gain ***authorised access*** to the Containment Level 2 CBE Laboratory Unit.

New users shall be *instructed in the following areas*:

***(a) User protection***

* Hazard grouping and containment requirements
* Preventing injuries from glass and sharps
* Risk assessments relating to work to be undertaken
* The use of personal protective equipment, including white protective coats, gloves, safety goggles to minimize risk of operator contamination
* The safe use of Class II Biological Safety Cabinets, their operating conditions and maintenance
* The use of other containment equipment as identified in the risk assessment for the work activity including the safe use of consumables (e.g. plastic-ware, medium/trypsin etc) as is reasonably practical

***(b) Handling of material***

* Requirements under the COSHH Regulations for work with biological agents or materials that may contain these
* Good microbiological practice and containment (as identified for the work activity)
* Tissue culture and aseptic technique (as identified for the work activity)

***(c) Waste treatment and sterilisation***

* Disinfection and waste disposal procedures

***(d) Storage and Transportation:***

* Safe storage procedures for biological agents
* Safe transport procedures within and outside Containment Level 2 facilities for biological agents.

***(f) Emergency response and spillage:***

* Procedures for dealing with accidents and incidents
* Procedures for dealing with spillages of biological material.

***(g) General responsibilities and laboratory maintenance***

* Out of hours work
* General laboratory rules
* Standard operating procedures and protocols

**SECTION B [Agreement to gain authorised access]**

**i. Declaration (Lab Worker):**

I have read and understood the documents listed above. I believe I have been given adequate information, instruction and training for me to be able to carry out my work safely. I will at all times follow the appropriate safety instructions outlined and adopt the safe working practices that I have been shown. In the event of any situation arising where I am not sure about the appropriate control measures to take I will seek advice before proceeding. I will bring to the attention of my supervisor/manager any concerns I have about safety related matters.

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Please make sure all sections are completed in FULL before authorisation signatures are sought.**

**CBE Commitment Statement**

What we expect:

* Help with receiving deliveries and putting them away.
* Answering the door/phone – pass on messages.
* Communicate with each other if there is a problem.
* Be collegiate
* Be considerate
* Comply with policies and procedures
* Leave areas as you would expect to find them..
* Attend and participate in Laboratory meetings
* Participate in Laboratory Deep Cleans.
* Attend Mandatory Training
* Be part of the team, keep regular hours in the office.
* Play an equal part in the weekly lab duties
* Keep cell banking records up to date by filling in the cryostorage sheets and updating Pro-curro
* Ensure Risk assessments, BRAs and COSHH forms are all completed and the Laboratory Management have a copy.
* Bring to the attention of Laboratory Management any concerns regarding health and safety in the laboratory areas.
* Report any cell culture contaminations, spills, breakages and accidents.

**What we don't expect:**

* Non-compliance to health, safety and quality procedures.
* Lack of respect for the facility/equipment /other laboratory users.

**Signed:………………………………Date………………………………………..**

**Training Assessment**

|  |  |  |  |
| --- | --- | --- | --- |
| **Assessment** | **Outcome** | **Signed (Assessor)** | **Comments** |
| **CBE LEARN Training Induction Quiz** |  |  |  |
| **CBE Procedures Workshop** |  |  |  |
|  |  |  |  |
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**Competency**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Practical training/instruction | Assessor | Date | Competency demonstrated?  Mark/Comment | Signed  ( Assessor) |
| Cryostorage |  |  |  |  |
| Biological Safety Cabinets |  |  |  |  |
| Waste Disposal |  |  |  |  |
| Autoclaves |  |  |  |  |
| Further training:  ( Please list) |  |  |  |  |

Competency is required to be demonstrated by individuals to ensure confident & safe use of equipment**/**procedures.

Competency assessment must be completed before authorisation where possible or during ‘on the job training’ in the first month after authorisation

.

**Signatures required to Authorise Access to the CBE Containment Level 2 Laboratory Unit:**

***SUPERVISOR***

***Name (print): --------------------------------------- Phone ext. (at LU):-------------------***

***Signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date****:****-------------------------------------***

***LABORATORY MANAGER***

***Name (print): ---------------------------------------- Phone ext. (at LU):--------------------***

***Signature:-------------------------------------------- Date****:* ***-------------------------------------***

***SAFETY OFFICER***

***Name (print): ---------------------------------------- Phone ext. (at LU):--------------------***

***Signature:-------------------------------------------- Date****:* ***-------------------------------------***

***Authorisation approved for ( please tick) :***

***CBE Containment Level 2 Laboratories:***

***CBE Tissue Engineering Laboratory:***

***( Wolfson School)***

***CBE Safety Training Record Revision History***

|  |  |  |  |
| --- | --- | --- | --- |
| **Review Number** | **Version reviewed** | **Revision summary** | **New Version Number** |
| 1 | Reviewed 18.01.10 by Carolyn Kavanagh | i) ( pg 2)Added a Health Surveillance form status box.  ii) (Page 18) Added an extra signature for the ASA as well as the BGMSA . | 2 |
| 2 | Reviewed 14.09.11 by Carolyn Kavanagh | Review of training file to make it leaner. Please see change note 002. | 2 |
| 3 | Reviewed 13.12.11 by Carolyn Kavanagh | Following recommendation from the CBESC meeting (7.12.11) a section was added for recording Risk Assessments relevant to work activity. | 3 |
| 4 | Reviewed by C. Kavanagh  04.04.12 | Amended to include:   1. Removal of sign off for SOPs 2. Addition of statement regarding competency assessment | 4 |
| 5 | Reviewed by C. Kavanagh 13.03.13 | Review following training feedback in March 2013.  i)Addition of a ‘Date Read’ box for SOPS.  ii)Added a statement to say Please make sure all sections are completed in FULL ( exception of Competency Assessment) before authorisation signatures are sought. | 5 |
| 6 | Reviewed by A. Chandra  9 May 2014 | With the commencement of the Laboratory Leaders, a Laboratory Leader induction will take place and recorded. | 6 |
| 7 | Reviewd by A. Chandra on 23 May 2014 | Added a required reading “DSO report to Wolfson School staff meeting on the Policy on Risk Assessments” | 7 |
| 7 | Reviewed by C. Kavanagh on 9th November 2015 | Annual review.( Action from CBE safety Meeting).  i)Added three new SOPS to recommended reading  ii)Added ‘proposed laboratory to work in box’  iii)Added the SOP assessment to competency section.  iv)Added space to detail laboratory leaders induction  v)Added in box for date of intial project/training meeting  vi)Added in box to indicate /signal work with HTA licensable material. | 8 |
| 8 | 8th November 2017 by C.Kavanagh | 1. Annual review 2. Addition of lab leader induction and aseptic technique certificate. | 9 |
| 10 | 15th September 2020 by C.Kavanagh | Addition of Equipment Training List  Addition of Training Assessment | 11 |
| 11 | 21st November 2023 by C.Kavanagh | Addition of Pro -curo SOP in reading list | 12 |