

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 [-X] 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	Sotiria Toumpaniari
email address	s.toumpaniari@lboro.ac.uk
Location	T207, H25
Project / Activity / Task	Dissection of porcine heart to isolate components of the tissue.
Supervisor Name	Prof Sotiris Korossis

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	
<input type="text" value="N/A"/>	<input type="text" value="Cutting/severing"/>	<input type="text" value="N/A"/>	<input type="text" value="N/A"/>	<input checked="" type="radio"/>
Category 2: Workplace				
<input type="text" value="Confined work area (striking objects)"/>				<input checked="" type="radio"/>
Category 3: Hazardous and/or Harmful substances				
<input type="text" value="Irritant substances"/>				<input checked="" type="radio"/>
Category 4: Work activity				
<input type="text" value="N/A"/>				<input checked="" type="radio"/>
Category 5: Work organisation				
<input type="text" value="N/A"/>				<input checked="" type="radio"/>

Explain the risks associated with these hazards

People / Groups at risk	<input type="text" value="Operator only"/>			<input checked="" type="radio"/>
Enter risk details here:-	Impact	Probability	Risk Score	
<input type="text" value="Cut wounds that can lead to infection and nerve damage"/>	<input type="text" value="Harmful"/>	<input type="text" value="Likely"/>	High	
What are the control measures?	Lowers Impact	Lowers Probability	<input checked="" type="radio"/>	
<input type="text" value="Cut-resistant glove level 5"/>	<input type="text" value="Significantly"/>	<input type="text" value="Significantly"/>	<input checked="" type="radio"/>	
			Residual Risk	
			<input type="text" value="Low"/>	
People / Groups at risk	<input type="text" value="Operator and people in proximity"/>			<input checked="" type="radio"/>
Enter risk details here:-	Impact	Probability	Risk Score	
<input type="text" value="Aerosols from disinfectants"/>	<input type="text" value="Harmful"/>	<input type="text" value="Likely"/>	High	
What are the control measures?	Lowers Impact	Lowers Probability	<input checked="" type="radio"/>	
<input type="text" value="Nitrile gloves, lab coats, goggles"/>	<input type="text" value="Significantly"/>	<input type="text" value="Significantly"/>	<input checked="" type="radio"/>	
			Residual Risk	
			<input type="text" value="Low"/>	

+ Add another Risk

Process Risk Assessment Form (Continued)

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
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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	1	0	0	0	0	1
Technical Staff	0	0	0	0	0	0	0
Research Staff (PDRA)	0	2	0	0	0	0	2
Research Students (PhD)	0	2	0	0	0	0	2
Students (Undergraduate / MSc)	0	0	6	0	0	0	6
Visitors	0	0	0	0	0	0	0
Others - Over-type as needed	0	0	0	0	0	0	0
Total	0	5	6	0	0	0	11

With these controls in place, the risk is:

The activity is LOW RISK - and is effectively controlled

Loughborough University

Centre for Biological Engineering

Safety Method Statement

Reference CBE/SAF/132

Location T207, H25

Originator Sotiria Toumpaniari

Project / Activity / Task Dissection of porcine heart to isolate components of the tissue.

What equipment will be used in this activity?	+
Disposable single unit scalpels	X
Forceps	X
Dissection tray	X
Container	X
Polypropylene Round Buckets with Plastic Handle- 5.6 L	X
Sterilin™ Polystyrene Containers	X
Scalpel handle	X
Blade for scalpels	X
Scalpel blade remover	X

What training must be completed to do this activity?	+
Sharps use	X
Biological spill response	X
Decontamination and disposal of biological waste	X

What chemicals are being used? (These must be included in the COSHH Form)	+
1% Virkon	X
70% IMS	X
Chemgene	X
PBS	X
Penicillin/ Streptomycin	X

Spill and accident procedures.	+
Container with 1% Virkon solution	X

Procedure in the event of an emergency. (How to leave the process in a safe condition in such an event)	+
Dispose scalpels in sharps bin. Put tissue in a container with PBS. Dispose contaminated gloves. Leave note with a name of the operator and sate mentioning not to move anything from the area.	X

References.	+
CBE code of practice, SOP003, SOP037, SOP038	X

Detailed sequential description of the process

Process step	Precautionary measures and comments	+

Safety Method Statement (Continued)

Process step	Precautionary measures and comments	+
Wear PPE mentioned above.	Check if PPE is damaged and replace if it is.	X
Put in a container 1% Virkon and in another container PBS x1.	Pour solutions with care avoiding spillages. If there is a spillage follow SOP038.	X
Prepare dissection tray.	Put some absorbent paper towel underneath the tray.	X
Prepare and label containers where isolated tissue will be collected.	Check if they have any cracks and replace damaged ones.	X
Pour PBS with 1% Penicillin/Streptomycin in containers where isolated tissue will be collected.	Avoid spillages	X
Place a heart on the tray.	Be cautious, so the organs will not slip from your hands.	X
Remove scalpel from sheath.	Use disposable single unit scalpels and open sheath from the side of the handle. If disposable single unit scalpels are not available, place the scalpel on the handle maintaining the scalpel in the protective sheath. In any case, wear cut-resistant glove level 5 on hand that does not hold the scalpel.	X
Using forceps hold/stabilise the heart and cut the desired area using a scalpel.	Do not cross hands to avoid cutting or puncturing yourself.	X
Place isolated tissue in labeled container using forceps.	Avoid touching the outside of the container with the isolated tissue. If you do, after the container has been closed with its lid, clean outside using Chemgene wipes and 70% IMS.	X
Place parts of heart that are not required (waste) in 1% Virkon to be treated for 24 h.	Put the disposed cardiac tissue in 1% Virkon without splashing.	X
At the end of the procedure discard the scalpels in sharps bin.	Put the disposable single unit scalpel in the bin placing the blade part in first. Otherwise, use scalpel blade remover to remove blade from handle and dispose it in sharps bin.	X
Disinfect forceps, dissection tray and working area using 70% IMS and Chemgene wipes.	According to CBE code of practice and SOP003.	X
Put all contaminated gloves and tissues in yellow bag for disposal.	According to SOP003.	X
After 24h dispose tissue left in 1% Virkon in yellow bag and pour Virkon down the sink.	According to CBE code of practice and SOP003.	X


COSHH Form

Reference

Location

Originator

Project / Activity / Task

CHEMICAL NAME						Hazard Rating <input type="text" value="High"/>		OVERALL RISK: <input type="text" value="Medium"/>
<input type="text" value="Penicillin /Streptomycin"/>	CAS No. <input type="text" value="3810-74-0"/>	Amount used <input type="text" value="5"/> <input type="text" value="ml"/>	Period of use (hrs) <input type="text" value="48"/>	The process is: <input type="text" value="Closed"/>	Physical State <input type="text" value="Non-Volatile Liquid"/>	<input type="checkbox"/> Eyes <input checked="" type="checkbox"/> Skin <input type="checkbox"/> Inhaled <input checked="" type="checkbox"/> Ingested	Exposure Potential <input type="text" value="Low"/>	

This chemical has a high health risk associated with it.

Hazard Statement and Description	Precaution Statement and Description	
<input type="text" value="H302 Harmful if swallowed."/>	<input type="text" value="P280 Wear protective gloves/protective clothing/eye protection/face protection."/>	+
<input type="text" value="H317 May cause an allergic skin reaction."/>	<input type="text" value="P280 Wear protective gloves/protective clothing/eye protection/face protection."/>	+
Justify the use of this chemical:	Penicillin-Streptomycin is used to supplement cell culture media to control bacterial contamination. If the tissues get contaminated, they will have to be disinfected and discarded without being used for assessment or decellularization putting in jeopardy other projects.	
How will the precautions listed above be implemented?		
<input type="text" value="Wear PPE- nitrile gloves, lab coat and goggles."/>		
Special Storage and Containment Measures	Disposal Method	+
	<input type="text" value="Store in cool place. Keep container tightly closed in a dry and well-ve"/>	+
How will spillages be dealt with?		
<input type="text" value="Absorbent cloth / tissue"/>		

+ Add another chemical

Statement of work (Process to be undertaken)

Show Image

Personal protection requirements not covered in the precaution statements above.

Sources of information and references

Reference to **existing approved** Risk Assessment

COSHH Form (Continued)

With the current controls, the risk of using these chemicals is: Medium

Supervisor to check that the process involving the safe use of these chemicals has been satisfactorily evaluated

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

CBE/SAF/132

Method Statement

CBE/SAF/132

COSHH Assessment

CBE/SAF/131

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:

18/03/2020

Review comments