

Safety Documentation

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

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 compl	ete these fields
School or Service	Wolfson School of Mechanical, Electrical and Manufacturing Engineering
Department	Wolfson School
Originator name	Dr Janelle Tarum
email address	j.tarum@lboro.ac.uk
Location	CBE labs H23, H31 and H34 (mainly)
Project / Activity /	Lone working for the Culture of Cells in 3DP scaffolds and their analysis
Supervisor Name	Prof Carmen Torres-Sanchez



Safety Method Statement

Sarcty Meth	ou statement		Reference	SAF/MEME/8381	
Location	CBE labs H23, H31 and H34 (mainly)	Originator	Dr Janelle	Tarum	
Project / Activity / Task	Lone working for the Culture of Cells in 3DP scaffolds an	d their analysis	5		
What equipment wil	I be used in this activity?				+
BSC's, centrifuges, CO2 i	ncubator				X
Microscopes					X
Nucleocounter					X
Microplate reader (Ome	ga)				X
Fridge and freezers (retr	ieval and deposit of materials. Also to check correct funct	tioning)			X
Peristaltic pump (checki	ng correct functioning)				X
Water bath					X
Heat blocks (for warming	g at 37C)				X
What training must k	pe completed to do this activity?				+
Must be competent with	n all equipment listed above and have undergone CBE in	duction			X
What chemicals are I	being used? (These must be included in the CO	SHH Form)			+
none, no chemicals are t	to be used during lone working				X
Spill and accident pr	ocedures.				+
CBE SOP038 Biological s	pill response				X
Procedure in the eve	ent of an emergency. (How to leave the process in a s	safe condition	in such an e	vent)	+
I one hours - if possible r	make area safe (power down equipment), evacuate area.	inform Securit	v 888 from i	iniversity phone	

Lone hours - if possible make area safe (power down equipment), evacuate area, inform Security 888 from university phone or 01509 222141 from mobile.	X
Microscope, Microplate reader, nucleocounter, centrifuge, etc - leave as is and walk away. If needed, unplug from mains.	X
Incubator, fridge/freezer, water bath - close doors (or lid), leave as is and walk away.	X
Pump - unplug from mains	X
Material and work ongoing in BSC - cap all bottles and flasks. Shut the sash and walk away	X
BSC - leave on and abandon the room	X

References.

CBE/BRA/147 v4 (APril 2024)

Detailed sequential description of the process

Process step Precautionary measures and comments	Process step	Precautionary measures and comments	+
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+

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Safety Method Statement (Continued)

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Process step	Precautionary measures and comments	+
As part of the work covered in risk assessment CBE/BRA/147 it may be necessary to change media or do basic non-hazardous tasks out- of-hours when an experiment is time-dependent	 Only necessary time-dependent processes will be completed out-of-hours When it is necessary to work out-of hours: a) Complete the Holywell Park out of hours register by completing the online form using the following link. https://www.lboro.ac.uk/services/security/out-of-hours/ The lone working App is also still active - instruction for use at https://www.lboro.ac.uk/services/health-safety/documents/lone-working-app-instructions/ b)Complete the out of hours book in the CBE office. (a and b are to ensure Security are aware of who is in the building in the event of a fire or evacuation.) 	x
	c) Notify co-workers of presence in the building via text message or whatsapp message	
 Tasks may include: 1. Thawing of cryopreserved cells 2. Culture of cells in incubated T-flasks with growth medium. 3. Cryopreservation of cells using DMSO-based cryoprotectant media and placed in Mr Frosty, then at -80C 4. Culture of cells on and within titanium disks in multi-well plates 5. Collection of spent growth medium and storage in freezers. 6. Collection of cell lysate for measurement of DNA, ALP and protein concentration 7. Checks on the functioning of the peristaltic pump and visual check for leaks of the chambers (inside the incubator) where the cells are incubated 	All usual safety protocols should be followed and standard PPE worn - Lab coat, shoe covers, gloves	x
I shall not use the autoclave(s) within working hours if i am the only one in the labs or under no circumstances outside working hours		x
I shall not attempt to move large objects (eg emptying the water bath) outside working hours		x
I shall not access cryostores outside working hours if alone in the lab		x
I shall not use chemicals outside working hours if alone in the lab		x
I will minimise any cleaning or mopping of the floor when working alone or outside working hours due to the risk of slippage on the floor (except if absolutely necessary in the case of a spill that cannot wait)	If spillage has taken place and NOT been adequately cleaned then a yellow 'sign' will be displayed and this information must be passed on to 'others' (including lab managers) that share/work in this lab area so that it can be cleared away later	x
		X
		X
		X
		X
		X
		X
		X

Safety Method Statement (Continued)

X
X
X
X
X
X
X
X
X
X



Reference SAF/MEME/8381

Risk Assessment

Location	CBE labs H23, H31 and	d H34 (mainly)	Originator	Dr Janelle Tarum
Project / Activity / Task	Lone working for the	Culture of Cells in 3DP scaffolds a	and their analys	is
Is this process risk as	ssessment for a :		⊖ General use	e 🔿 Event

Category 1: Machinery & work equipment:						
Design and Construction	Mechanical hazards	Electrical hazards	Radiation hazards	+		
In-house constructed	Entanglement	PAT testing current		x		
Other Design hazard (the above refers to our custom design dynamic flow unit, which will continue to be running in the lab outside office hours) Other Mechanical hazard (catching fingers in doors of incubator, centrifuge, etc))						
Category 2: Workplace				+		
Slips/Trips/Falls on the level						
Localised hot surfaces						
Localised cold surfaces				x		
Category 3: Hazardous and/or Harmful substances						
Other Substance related hazar	Other Substance related hazard (working with biological substances, eg cells and their media, additives, etc)					
Category 4: Work activity	Category 4: Work activity					
Lone working out of hours						
Category 5: Work organisa	ation			+		
N/A				x		

Explain the risks associated with these hazards People / Groups at risk Operator and people in proximity Х Enter risk details here:-Impact Probability **Risk Score** Slips/Trips/Falls on the level Harmful **Highly Unlikely** Low Lowers Impact Lowers Probability + What are the control measures? Reduce movement between the labs if possible. Ensure the lab organisation is good and remove any potential trip Significantly Slightly Х hazards from the floor Any spillages should be cleaned away in accordance with CBE SOPs

Process Risk Assessment Form (Continued)

Will be aware of all safety procedures and numbers	Significantly	Significantly	x	
			Resid	dual Risk
				Low
People / Groups at risk Operator and people in proximity				x
Enter risk details here:-	Impact	Probability	Risk S	core
Aerosols/splashes from irritant substances & sensitiser	Harmful	Highly Unlikely		Low
What are the control measures?	Lowers Impact	Lowers Probability	+	
Wear appropriate PPE, white lab coat, gloves and shoe covers, safety glasses if necessary.	Significantly	Significantly	x	
All spillages must be dealt with immediately, Refer to SOP038	Significantly	Significantly	x	
Work in BSC (any mains plug in equipment should be within current PAT inspection date)	Significantly	Significantly	x	
		Resid	dual Risk	
				Low
People / Groups at risk Operator only				x
Enter risk details here:-	Impact	Probability	Risk S	core
Use of Electrical Equipment	Slightly Harmful	Highly Unlikely		
What are the control measures?	Lowers Impact	Lowers Probability	+	
As part of the experimental process it is necessary to use electrical equipment suchs as fridges, freezers, pipette boys, centrifuges, microcentrifuges, incubators, peristaltic pump, and biological safety cabinets may be required. Training has already been completed on all of these pieces of equipment and the relevant SOPs will be followed SOP009, SOP016, SOP047, SOP088, SOP089, SOP105, SOP114, SOP129, SOP192 All items have been PAT and maintained correctly - visual inspection of cables and connectors for damage, looseness or wear is advise4d prior to use	Significantly	Significantly	x	
		F	Resid	dual Risk
				Low
People / Groups at risk Operator and people in proximity				X
Enter risk details here:-	Impact	Probability	Risk S	core
Biological spill	Slightly Harmful	Unlikely		Low
What are the control measures?	Lowers Impact	Lowers Probability	+	

Process Risk Assessment Form (Continued)

Follow instructions as per SOP038 Be fully aware of CBE waste disposal procedures Given the activity will be minimal to maintain cells alive and ests running, the spillage should be of small quantities. Use Biological spill kit to clean it up. No chemicals to be used outside official working hours. If the floor is wet (eg water or non-chemical substances), I will consider leaving it to dry until the following day, or soak it with paper towels, making sure i am not going to slip in the process. I will not attempt to mop the floor, wetting a larger area in the lab.	Moderately	Slightly	x	
		Г	Resic	lual Risk
				_OW
People / Groups at risk Operator only				x
Enter risk details here:-	Impact	Probability	Risk So	core
Lone Working out of hours	Slightly Harmful	Unlikely		Low
What are the control measures?	Lowers Impact	Lowers Probability	+	
Loughborough University Lone working policy need to be followed, and must have permissions to lone work from supervisor and lab managers prior to work commencing. Will send OOH 1st contact a text message on entry to the lab and another when leaving. Depending on the length of OOH work needed, further text updates will be used (hourly/2 hourly). It is advised to use the lone working app and inform security so that they are aware of your location (lab number and building) on campus for the duration of your lone working/out of hours, and also inform Security when you leave the premises. The lone working App is also still active - instruction for use at https://www.lboro.ac.uk/services/health-safety/documents/lone- working-app-instructions/ Inform academic supervisor and a colleague of intention to lone work and state duration of stay. Ensure you have mobile phone on person at all times - security mobile number is 0800 526966 - security staff are also trained First Aiders.	Significantly	Significantly	×	
Will be aware of all safety procedures including for emergency evacuation.	Significantly	Significantly	x	
			Resid	lual Risk
			I	ow
+ Add anothe	er 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	1	0	0	1
Technical Staff	0	0	0	1	0	0	1

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
Research Staff (PDRA)	0	0	0	0	1	0	1
Research Students (PhD)	0	0	0	0	0	0	0
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	0	0	2	1	0	3

With these controls in place, the risk is:

The activity is LOW RISK - and is effectively controlled



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.

<u>DSO</u>

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	Method Statement	COSHH Assessment
SAF/MEME/8381	SAF/MEME/8381	
DSO Signature		
This document set must be reviewed and re-approved at the following times:		

- 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:

6 Feb 2026

Review comments