

Safety Documentation

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

Method Statement

Risk Assessment

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	CBE
Originator name	Janelle Tarum
email address	j.tarum@lboro.ac.uk
Location	CBE
Project / Activity / Task	Wellcome Project: A volatilome-based signature for age-related recovery & resilience
Supervisor Name	Alexandra Stolzing

Safety Method Statement

Reference SAF/MEME/7887

Location Originator

Project / Activity / Task

What equipment will be used in this activity?

	+
Centrifuge	X
BSC	X
Incubator	X
Flow Cytometry	X
Microfluidic System (Pump, Pressure/flow controller)	X
Plate reader	X
-80 and -20 °C freezer, fridge	X
Liquid nitrogen dewar	X
Autoclave	X
Mantarray platform	X
Cooling device/Mr Frosty	X

What training must be completed to do this activity?

	+
CBE Safety Training (online, practical), HTA training	X

What chemicals are being used? (These must be included in the COSHH Form)

	+
InSolution Doxorubicin, Hydrochloride	X
5-Aza-2-deoxycytidine	X
Bafilomycin A1	X
DDAO galactoside (9H-(1,3-Dichloro-9,9-Dimethylacridin-2-One-7-yl) β -D-Galactopyranoside)	X
Dimethylsulfoxide (DMSO)	X
EDU (5-ETHYNYL-2' -DEOXYURIDINE)	X
Penicillin Streptomycin solution	X
Triton X-100	X
Paraformaldehyde (PFA) Solution	X
Fetal Bovine Serum (FBS)	X
Liquid nitrogen	X
Ethanol	X

Spill and accident procedures.

	+
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable closed container for disposal. As detailed in SOP039.	X

Procedure in the event of an emergency. (How to leave the process in a safe condition in such an event)

	+
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Safety Method Statement (Continued)

Leave a note with details of the user and name of the chemical asking not to move anything from the area. If fire alarm sounds continuously make equipment safe then evacuate the building. Only return when informed that it is safe to do so	X
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References.

CBE code of practice, SOP004, SOP036, SOP037, SOP038, SOP048	+
	X

Detailed sequential description of the process

Process step	Precautionary measures and comments	+
Culturing cells	<p>Wear PPE appropriate to task, risk, and local lab rules</p> <p>Routine culturing of cells in T-flasks at 37°C, 5% CO₂ in a humidified, static incubator until sufficient proliferation has occurred required for testing. Cells might be passaged with cell detaching enzyme(s) and either sub-cultured in the same conditions detailed above or cryo preserved and stored for future use.</p> <p>If any hazardous chemicals are to be used in the future, they will be risk assessed by COSHH regulation, which will be reviewed and modified accordingly.</p> <p>All procedures will be conducted in accordance with the laboratory Quality Management System requirements, Good Cell Culture Practice, Good Aseptic Technique, the local Code of Practice and the University Biological Safety Policy.</p>	X
Cell counting	<p>A series of cell counting methods might be used. Details are described in SOP034 "Viable Cell Count Assessment Using Haemocytometer", SOP041 "Use and Maintenance of Cedex", SOP102 "Use and Maintenance of the Countess Automated Cell Counter" and SOP121 "Use and Maintenance of Chemometec NC100 Nucleo-counter".</p> <p>All procedures will be conducted in accordance with the laboratory Quality Management System requirements, Good Cell Culture Practice, Good Aseptic Technique, the local Code of Practice and the University Biological Safety Policy.</p>	X
Cryopreservation and subsequent revival of cells	<p>Performed according to SOP031 and SOP032 as basic processes (these will vary as a core part of the experiments). All procedures will be conducted in accordance with the laboratory Quality Management System requirements, Good Cell Culture Practice, Good Aseptic Technique, the local Code of Practice and the University Biological Safety Policy.</p>	X
An enzyme-linked immunosorbent assay (ELISA) assay	<p>The antigen (target macromolecule) is immobilized on a solid surface (microplate) and then complexed with an antibody that is linked to a reporter enzyme. Detection is accomplished by measuring the activity of the reporter enzyme via incubation with the appropriate substrate to produce a measurable product. The fluorescence intensity of the plates will be measured in Microplate reader.</p> <p>All ELISA experiment waste will be disposed as liquid waste. The general PPE items, such as gloves and lab coats, will be autoclaved as per SOP003.</p>	X

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	
	N/A	Electrical test lables current	N/A	+
				x
Category 2: Workplace				
Slips/Trips/Falls on the level				+
				x
Category 3: Hazardous and/or Harmful substances				
Cancer causing substances				+
				x
Category 4: Work activity				
Lone Working out of hours				+
				x
Category 5: Work organisation				
				+
				x

Explain the risks associated with these hazards				
People / Groups at risk	<input type="text" value="Operator and people in proximity"/>			x
Enter risk details here:-	Impact	Probability	Risk Score	
<input type="text" value="Slips/trips/falls on the level"/>	<input type="text" value="Harmful"/>	<input type="text" value="Highly Unlikely"/>	Low	
What are the control measures?	Lowers Impact	Lowers Probability	+	
<input type="text" value="Organise room to have nothing on the floor that can be a trip hazard. Reduce movement between labs if possible. Remove spillages asap according to SOP039"/>	<input type="text" value="Significantly"/>	<input type="text" value="Significantly"/>	x	
			Residual Risk	
			Low	
People / Groups at risk	<input type="text" value="Operator and people in proximity"/>			x
Enter risk details here:-	Impact	Probability	Risk Score	
<input type="text" value="Aerosols/splashes from irritant substances & sensitiser"/>	<input type="text" value="Harmful"/>	<input type="text" value="Highly Unlikely"/>	Low	
What are the control measures?	Lowers Impact	Lowers Probability	+	
<input type="text" value="Work in fume hood or BSC (must be within current LEV inspection date)"/>	<input type="text" value="Significantly"/>	<input type="text" value="Significantly"/>	x	

Process Risk Assessment Form (Continued)

Wear PPE	Significantly	Significantly	X	
			Residual Risk	
			Low	
People / Groups at risk	Operator only			X
Enter risk details here:-	Impact	Probability	Risk Score	
Lone working	Slightly Harmful	Unlikely	Low	
What are the control measures?	Lowers Impact	Lowers Probability	+	
Loughborough University Lone working policy to be followed, with the use of the lone working app and contacting security on occasions of lone working.	Significantly	Slightly	X	
			Residual Risk	
			Low	
+ Add another 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	0	0	0	0
Technical Staff	0	0	0	0	0	0	0
Research Staff (PDRA)	0	0	0	0	0	0	0
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	0	0	0	0

With these controls in place, the risk is:

The activity is LOW RISK - and is effectively controlled


COSHH Form

Reference SAF/MEME/2164-2175

Location CBE

Originator Janelle Tarum

Project / Activity / Task Wellcome Project: A volatilome-based signature for age-related recovery & resilience

CHEMICAL NAME						Hazard Rating High	X	OVERALL RISK:
InSolution Doxorubicin, Hydrochloride	CAS No. 25316-40-9	Amount used 0.04 ml	Period of use (hrs) 48	The process is: Semi Closed	Physical State Non-Volatile Liquid	<input type="checkbox"/> Eyes <input type="checkbox"/> Skin <input type="checkbox"/> Inhaled <input checked="" type="checkbox"/> Ingested	Exposure Potential Low	Medium
W.E.L. (Itel / stel) 								

This chemical has a high health risk associated with it.

Hazard Statement and Description	Precaution Statement and Description	+
H302 Harmful if swallowed.	P201 Obtain special instructions before use.	X
H340 May cause genetic defects.	P202 Do not handle until all safety precautions have been read and understood.	X
H350 May cause cancer.	P264 Wash ... thoroughly after handling.	X
H360FD May damage fertility. May damage the unborn child.	P270 Do not eat, drink or smoke when using this product.	X
	P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.	X
	P308 + P313 IF exposed or concerned: Get medical advice/attention.	X
Justify the use of this chemical:	This chemical is essential for inducing cell senescence. It is widely used in other groups and research facilities and it is the gold standard for inducing cell aging. Currently there are no other safer alternatives in existence Chemical will be used to induce cell senescence. Once cells have been treated with 4 ul of Doxorubicin diluted in 20 ml cell culture media (to achieve 20 nM of Doxorubicin) for 48 hours in the incubator, the solution will be aspirated and replaced with fresh cell culture media without Doxorubicin	
How will the precautions listed above be implemented?		
Following SOP037, all relevant PPE will be worn to ensure safe handling and avoid contact with skin. These include a standard side fastening white laboratory coat with elasticated sleeves, gloves, safety glasses. Gloves will be removed in accordance with good practice, without touching the outer surface, thereby avoiding skin contact with the substance. Once removed, used gloves will be disposed of as biohazardous waste (SOP003) and will be placed into the autoclave waste stream. The entire procedure will be undertaken within a BSC, thereby ensuring adequate ventilation and reducing the risk spillage or getting in contact with skin. All solid waste such as tips will be disposed in the cytotoxic boxes (purple) while liquid waste will be placed in a single container and when full, it will be transferred to Gas pod 1.		
Special Storage and Containment Measures	Disposal Method	+
-20C appropriately labelled	Aqueous waste - Check with Technician or Supervisor	X
How will spillages be dealt with?	<i>Please note: any material used to clean up a spill of hazardous material must also be disposed of as hazardous material.</i> Click here to see spill procedures	
Spill kit. All waste will be treated as cytotoxic and will be disposed off through the cytotoxic waste route. All solids will be disposed of in purple cytotoxic sharps container while all liquid will be placed in carefully labeled glass bottled before placing in gas pod 1 when full. All spillages will be dealt with according to SOP038.		

COSHH Form (Continued)

CHEMICAL NAME 5-Aza-2-deoxycytidine						Hazard Rating High	OVERALL RISK: Medium
CAS No. 2353-33-5	Amount used 0.0004 ml	Period of use (hrs) 48	The process is: Semi Closed	Physical State Non-Volatile Liquid	<input checked="" type="checkbox"/> Eyes <input checked="" type="checkbox"/> Skin <input checked="" type="checkbox"/> Inhaled <input checked="" type="checkbox"/> Ingested	Exposure Potential Low	
W.E.L. (Itel / stel)							

This chemical has a high health risk associated with it.

Hazard Statement and Description	Precaution Statement and Description	
H302 Harmful if swallowed.		+
H315 Causes skin irritation.	P201 Obtain special instructions before use.	x
H319 Causes serious eye irritation.	P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.	x
H335 May cause respiratory irritation.	P302 + P352 IF ON SKIN: Wash with plenty of soap and water.	x
H341 Suspected of causing genetic defects.	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	x
H360 May damage fertility or the unborn child.	P308 + P313 IF exposed or concerned: Get medical advice/attention.	x
		x

Justify the use of this chemical:

The chemical will be used to induce cell senescence. It works differently from Doxorubicin and there are no other safer alternatives.

Once cells have been treated with 5-Aza-2-deoxycytidine diluted in 20 ml of cell culture media (0.4 ul of 10 mM to achieve 200 nM) for 48 hours in the incubator, the solution will be aspirated and replaced with fresh cell culture media without 5-Aza-2-deoxycytidine

How will the precautions listed above be implemented?

Following SOP037, all relevant PPE will be worn to ensure safe handling and avoid contact with skin. These include a standard side fastening white laboratory coat with elasticated sleeves, gloves, safety glasses. Gloves will be removed in accordance with good practice, without touching the outer surface, thereby avoiding skin contact with the substance. Once removed, used gloves will be disposed of as biohazardous waste (SOP003) and will be placed into the autoclave waste stream. The entire procedure will be undertaken within a BSC, thereby ensuring adequate ventilation and reducing the risk spillage or getting in contact with skin.

All solid waste such as tips will be disposed in the cytotoxic boxes (purple) while liquid waste will be placed in a single container and when full, it will be transferred to Gas pod 1.

Special Storage and Containment Measures	Disposal Method	
-20C appropriately labelled	Aqueous waste - Check with Technician or Supervisor	+
How will spillages be dealt with?	<i>Please note: any material used to clean up a spill of hazardous material must also be disposed of as hazardous material. Click here to see spill procedures</i>	

Spill kit. All waste will be treated as cytotoxic and will be disposed off through the cytotoxic waste route. All solids will be disposed of in purple cytotoxic sharps container while all liquid will be placed in carefully labeled glass bottled before placing in gas pod 1 when full. All spillages will be dealt with according to SOP038.

CHEMICAL NAME Bafilomycin A1						Hazard Rating High	OVERALL RISK: Medium
CAS No. 88899-55-2	Amount used 0.00001 g	Period of use (hrs)	The process is: Semi Closed	Physical State Non-Volatile Liquid	<input checked="" type="checkbox"/> Eyes <input checked="" type="checkbox"/> Skin <input checked="" type="checkbox"/> Inhaled <input type="checkbox"/> Ingested	Exposure Potential Low	
W.E.L. (Itel / stel)							

COSHH Form (Continued)

Hazard Statement and Description	Precaution Statement and Description	+
H318 Causes serious eye damage.	P261 Avoid breathing dust/fume/gas/mist/vapours/spray.	X
H335 May cause respiratory irritation.	P280 Wear protective gloves/protective clothing/eye protection/face protection.	X
H315 Causes skin irritation.	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove	X
	P302 + P352 IF ON SKIN: Wash with plenty of soap and water.	X
How will the precautions listed above be implemented?		
<p>Following SOP037, all relevant PPE will be worn to ensure safe handling and avoid contact with skin. These include a standard side fastening white laboratory coat with elasticated sleeves, gloves, safety glasses. Gloves will be removed in accordance with good practice, without touching the outer surface, thereby avoiding skin contact with the substance. Once removed, used gloves will be disposed of as biohazardous waste (SOP003) and will be placed into the autoclave waste stream. The entire procedure will be undertaken within a BSC, thereby ensuring adequate ventilation and reducing the risk spillage or getting in contact with skin.</p> <p>All solid waste such as tips will be disposed in the cytotoxic boxes (purple) while liquid waste will be placed in a single container and when full, it will be transferred to Gas pod 1.</p>		
Special Storage and Containment Measures	Disposal Method	+
-20C appropriately labelled	Aqueous waste - Check with Technician or Supervisor	X
How will spillages be dealt with?		
<p><i>Please note: any material used to clean up a spill of hazardous material must also be disposed of as hazardous material. Click here to see spill procedures</i></p>		
<p>Spill kit. All waste will be treated as cytotoxic and will be disposed off through the cytotoxic waste route. All solids will be disposed of in purple cytotoxic sharps container while all liquid will be placed in carefully labeled glass bottled before placing in gas pod 1 when full. All spillages will be dealt with according to SOP038.</p>		
CHEMICAL NAME		X
Dichloro-9,9-Dimethylacridin-2-One-7-yl	Hazard Rating Low	OVERALL RISK: Low
CAS No. <input style="width: 100%;" type="text"/>	Amount used: <input style="width: 50px;" type="text"/> ml Period of use (hrs): <input style="width: 50px;" type="text"/> hrs The process is: <input style="width: 100px;" type="text"/> Physical State: <input style="width: 100px;" type="text"/>	
W.E.L. (Itel / stel) <input style="width: 100%;" type="text"/>	<input type="checkbox"/> Eyes <input type="checkbox"/> Skin <input type="checkbox"/> Inhaled <input type="checkbox"/> Ingested Exposure Potential Low	
Hazard Statement and Description	Precaution Statement and Description	+
No Hazard Statements applicable	No Precaution statements applicable	X
How will the precautions listed above be implemented?		
<p>Following SOP037, all relevant PPE will be worn to ensure safe handling and avoid contact with skin. These include a standard side fastening white laboratory coat with elasticated sleeves, gloves, safety glasses. Gloves will be removed in accordance with good practice, without touching the outer surface, thereby avoiding skin contact with the substance. Once removed, used gloves will be disposed of as biohazardous waste (SOP003) and will be placed into the autoclave waste stream. The entire procedure will be undertaken within a BSC, thereby ensuring adequate ventilation and reducing the risk spillage or getting in contact with skin.</p>		
Special Storage and Containment Measures	Disposal Method	+
-20C appropriately labelled	Aqueous waste - Check with Technician or Supervisor	X
How will spillages be dealt with?		
<p><i>Please note: any material used to clean up a spill of hazardous material must also be disposed of as hazardous material. Click here to see spill procedures</i></p>		
Absorbent cloth / tissue		

COSHH Form (Continued)

CHEMICAL NAME Dimethylsulfoxide (DMSO)						Hazard Rating Low	OVERALL RISK: Low
CAS No. 67-68-5	Amount used 5	ml	Period of use (hrs) 0.1	The process is: Semi Closed	Physical State Non-Volatile Liquid	Exposure Potential Low	
W.E.L. (Itel / stel)							

Hazard Statement and Description	Precaution Statement and Description	+
No Hazard Statements applicable	No Precaution statements applicable	x

How will the precautions listed above be implemented?
N/A

Special Storage and Containment Measures	Disposal Method	+
Must be stored in a cool, well ventilated area with the lid being tightly closed. DMSO is combustible and must hence not be stored near sources of ignition.	Before being diluted with FBS, DMSO must be disposed via the cytotoxic waste route. Once diluted with FBS, the freezing mix can be disposed via biological liquid route.	x

How will spillages be dealt with?
Please note: any material used to clean up a spill of hazardous material must also be disposed of as hazardous material. [Click here to see spill procedures](#)

Alert people in immediate area of spill when the leak is small (<10ml). In case of a leaking container, turn the container leak-side up. Cover the spill area with paper towels soaked with 1% Virkon solution and leave for 10 minutes. Place the soaked paper towels (and other Virkon solution and place the used towels and gloves in the yellow biohazard disposal bag/container. Remove all PPE immediately if contaminated. Place all reusable contaminated PPE (eg labcoat, goggles etc) in an autoclave bag/container for decontamination. Place non-reusable items (eg. gloves, shoe covers) in a yellow biohazard disposal bag. Wash hands and other potentially contaminated areas again with soap and water. Inform lab staff when clean-up is completed and fill in the Spill Record in the logbook.

For a large spill (greater than 10ml), alert other laboratory staff and leave the laboratory immediately. Leave the BSC switched on and any cultures inside the cabinet. Close the lab doors and post warning signs to prevent others entering the laboratory. Report the incident to the laboratory manager. For sign large spills (>100ml) contact the local DSO for advice before proceeding. If authorised, assemble a clean-up team consisting of three people: one to observe and direct the clean-up procedure, and the other two who must be properly trained to carry out the procedure.

CHEMICAL NAME Fetal Bovine Serum						Hazard Rating Low	OVERALL RISK: Low
CAS No.	Amount used 45	ml	Period of use (hrs) 0.1	The process is: Open	Physical State Non-Volatile Liquid	Exposure Potential Low	
W.E.L. (Itel / stel)							


Hazard Statement and Description	Precaution Statement and Description	+
No Hazard Statements applicable	No Precaution statements applicable	x

How will the precautions listed above be implemented?
N/A

Special Storage and Containment Measures	Disposal Method	+
Stored in -20 freezer for long term storage, short term storage fridge.	Biological waste-aspirate and treat with Virkon before disposal down the sink with copious amounts of water.	x

How will spillages be dealt with?
Please note: any material used to clean up a spill of hazardous material must also be disposed of as hazardous material. [Click here to see spill procedures](#)

COSHH Form (Continued)

CHEMICAL NAME Liquid nitrogen		Hazard Rating High	X	OVERALL RISK: Medium	
CAS No. <input type="text" value="n/a"/>	Amount used <input type="text" value="5"/> <input type="text" value="l"/>	Period of use (hrs) <input type="text" value="0.1"/>	The process is: <input type="text" value="Open"/>		Physical State: <input type="text" value="Non-Volatile Liquid"/>
W.E.L. (Itel / stel) <input type="text"/>			<input type="checkbox"/> Eyes <input type="checkbox"/> Skin <input type="checkbox"/> Inhaled <input type="checkbox"/> Ingested		
Exposure Potential Medium					

Consider a semi closed system process

Hazard Statement and Description	Precaution Statement and Description	+
H281 Contains refrigerated gas; may cause cryogenic burns or injury.	P282 Wear cold insulating gloves/face shield/eye protection.	X
How will the precautions listed above be implemented?		
Wear PPE incl labcoat, insulating gloves (no nitrile gloves underneath) and face protection.		
Special Storage and Containment Measures	Disposal Method	+
Make sure area is well ventilated. Keep liquid nitrogen containers clean and free of oil, grease or other materials which may become hazardous in contact with cryogenic fluids or condensed oxygen. Containers stored in a location away from fire risk, sources of heat and ignition. Container caps in place.	Allow liquid nitrogen to evaporate into the atmosphere.	X
How will spillages be dealt with?	<i>Please note: any material used to clean up a spill of hazardous material must also be disposed of as hazardous material. Click here to see spill procedures</i>	

Minor spill (<100ml):




1. Relocate other persons from the area and allow evaporation.
2. Open doors for further ventilation (oxygen monitor alarms).
3. If alarms go off (<18% O2), immediately evacuate the area and contact Lab Manager and Department Safety Officer

Major External Spill (>100ml) out of CBE lab:

1. Evacuate the area
2. Cordon off the spill area and prevent anyone from accessing the area.
3. Allow liquid nitrogen to evaporate.
4. Contact Lab Manager and Departmental Safety Officer.

Major internal Spill (>100ml) inside the CEB lab:

1. Everyone must be evacuated from the area (risk of asphyxiation)
2. Immediately contact Lab Manager and Departmental Safety Officer.
3. If the spill is very large (>10L) and/or in closed space, complete evacuation of the building may be necessary.
4. The Fire Service should also be alerted to the situation if there is serious risk of combustion.

CHEMICAL NAME PFA Solution	  	Hazard Rating High	X	OVERALL RISK: Low	
CAS No. <input type="text" value="3025-89-4"/>	Amount used <input type="text"/>	Period of use (hrs) <input type="text" value="g"/>	The process is: <input type="text" value="Semi Closed"/>		Physical State: <input type="text" value="Non-Volatile Liquid"/>
W.E.L. (Itel / stel) <input type="text"/>			<input checked="" type="checkbox"/> Eyes <input checked="" type="checkbox"/> Skin <input type="checkbox"/> Inhaled <input type="checkbox"/> Ingested		
Exposure Potential Medium					

This chemical has a high health risk associated with it.

Hazard Statement and Description	Precaution Statement and Description	+
H351 Suspected of causing cancer.	P201 Obtain special instructions before use.	X
H317 May cause an allergic skin reaction.	P202 Do not handle until all safety precautions have been read and understood.	X
H318 Causes serious eye damage.	P281 Use personal protective equipment as required.	X
	P280 Wear protective gloves/protective clothing/eye protection/face protection.	X

COSHH Form (Continued)

	P261 Avoid breathing dust/fume/gas/mist/vapours/spray.	X	
	P264 Wash ... thoroughly after handling.	X	
	P272 Contaminated work clothing should not be allowed out of the workplace.	X	
	P309 + P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physicia	X	
	P302 + P352 IF ON SKIN: Wash with plenty of soap and water.	X	
	P363 Wash contaminated clothing before reuse.	X	
	P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.	X	
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remov	X	
	P338 Remove contact lenses, if present and easy to do. Continue rinsing.	X	
	P310 Immediately call a POISON CENTER or doctor/physician.	X	
Justify the use of this chemical:	PFA is the only chemical which will ensure complete fixation of biological samples for immunohistochemical analysis. The quantity used is limited to 4% PFA solution (diluted in PBS) and a small amount of this chemical is therefore used.		
How will the precautions listed above be implemented?			
Wear the correct PPE. Avoid breathing in vapor, mist or gas. Ensure adequate ventilation. Work under the Chemical Fume hood. Use small aliquots. Avoid spillages. Keep the work surface clean and organized.			
Special Storage and Containment Measures	Disposal Method	+	
Store in a cool place. Ensure the containers is tightly closed, and stable, in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.	Check with technician/supervisr. Dispose waste in separate container (50ml), labeled correctly and disposed properly according to SOP039.	X	
How will spillages be dealt with?	<i>Please note: any material used to clean up a spill of hazardous material must also be disposed of as hazardous material. Click here to see spill procedures</i>		
Refer to SOP039- Section 5.10 Dealing with Chemical Spills			
CHEMICAL NAME			X
Triton X-100	Hazard Rating	OVERALL RISK:	
CAS No. 9036-19-5	High	Medium	
W.E.L. (ltel / stel)	Exposure Potential		
Amount used: 5 ml	Low		
Period of use (hrs): 24	<input checked="" type="checkbox"/> Eyes <input checked="" type="checkbox"/> Skin <input type="checkbox"/> Inhaled <input checked="" type="checkbox"/> Ingested		
The process is: Semi Closed	Physical State: Non-Volatile Liquid		
Hazard Statement and Description	Precaution Statement and Description	+	
H302 Harmful if swallowed.	P273 Avoid release to the environment.	X	
H315 Causes skin irritation.	P280 Wear protective gloves/protective clothing/eye protection/face protection.	X	
H318 Causes serious eye damage.	P302 + P352 IF ON SKIN: Wash with plenty of soap and water.	X	
H410 Very toxic to aquatic life with long lasting effects.	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remov	X	
	P313 Get medical advice/attention.	X	
How will the precautions listed above be implemented?			

COSHH Form (Continued)

Use personal protective equipment (lab coat and goggles). Do not breathe aerosols. Avoid substance contact with skin and eyes. If product enter drains, dilute it with plenty of water.		+
Special Storage and Containment Measures	Disposal Method	+
Keep solution in a tightly-closed container. Store in a dry, cool and well-ventilated place.	Triton X-100 can be discarded via drainage followed by copious amounts of water.	x
How will spillages be dealt with?	<i>Please note: any material used to clean up a spill of hazardous material must also be disposed of as hazardous material.</i> Click here to see spill procedures	
Absorbent cloth / tissue		

CHEMICAL NAME Penicillin Streptomycin solution			Hazard Rating High	X	OVERALL RISK: Low
CAS No. <input type="text"/>	Amount used: <input type="text" value="5"/> <input type="text" value="ml"/>	Period of use (hrs): <input type="text" value="4"/>	The process is: <input type="text" value="Semi Closed"/>	Physical State: <input type="text" value="Non-Volatile Liquid"/>	
W.E.L. (Itel / stel) <input type="text"/>				<input type="checkbox"/> Eyes <input type="checkbox"/> Skin <input type="checkbox"/> Inhaled <input type="checkbox"/> Ingested	

This chemical has a high health risk associated with it.

Hazard Statement and Description	Precaution Statement and Description	+
H361 Suspected of damaging fertility or the unborn child.	P280 Wear protective gloves/protective clothing/eye protection/face protection.	x
	P202 Do not handle until all safety precautions have been read and understood.	x
	P308 + P313 IF exposed or concerned: Get medical advice/attention.	x
Justify the use of this chemical:	Penicillin/Streptomycin solution will be added to cell culture media at a 1:100 dilution to prevent the contamination from adventitious agents. Preventative antibiotics are necessary to protect the user and ensure robust results	
How will the precautions listed above be implemented?		
When using the stock solution suitable PPE should be worn including lab coat, gloves, eye protection. The solutions will be handled in a biological safety cabinet. Stock solutions will be diluted 100x into cell culture media soon after thawing.		
Special Storage and Containment Measures	Disposal Method	+
Keep in properly labeled containers.	Aqueous waste - the solution will be disposed after being diluted in cell culture media. It will be diluted further in Virkon in aspiration bottle. After treating with Virkon for 24h, the waste is disposed off down the drain (SOP004).	x
How will spillages be dealt with?	<i>Please note: any material used to clean up a spill of hazardous material must also be disposed of as hazardous material.</i> Click here to see spill procedures	
Absorbent cloth / tissue as per instructions in SOP038		



CHEMICAL NAME EDU (5-ETHYNYL-2' - DEOXYURIDINE)			Hazard Rating High	X	OVERALL RISK: Low
CAS No. <input type="text" value="61135-33-9"/>	Amount used: <input type="text" value="400"/> <input type="text" value="mg"/>	Period of use (hrs): <input type="text" value="0.1"/>	The process is: <input type="text" value="Semi Closed"/>	Physical State: <input type="text" value="Dense Solid"/>	
W.E.L. (Itel / stel) <input type="text"/>				<input type="checkbox"/> Eyes <input type="checkbox"/> Skin <input type="checkbox"/> Inhaled <input type="checkbox"/> Ingested	

This chemical has a high health risk associated with it.

Hazard Statement and Description	Precaution Statement and Description	+
H340 May cause genetic defects.	P201 Obtain special instructions before use.	x
H361 Suspected of damaging fertility or the unborn child.	P202 Do not handle until all safety precautions have been read and understood.	x
	P280 Wear protective gloves/protective clothing/eye protection/face protection.	x

COSHH Form (Continued)

Justify the use of this chemical:		
How will the precautions listed above be implemented?		
The work will take place in a ducted BSC. PPE will be worn. While transferring the substrate to the cells, there will be no one around in the room and especially pregnant women. After dissolving the powder, the content will be aliquoted and only tiny amounts (1-10ul) will be used for the study of cell proliferation.		
Special Storage and Containment Measures	Disposal Method	+
Dissolve and store aliquots in the Fridge, inside the kit that has the hazardous sign	Biological waste (See specific RA)	x
How will spillages be dealt with?	<i>Please note: any material used to clean up a spill of hazardous material must also be disposed of as hazardous material. Click here to see spill procedures</i>	
Absorbent cloth / tissue and wipe multiple times with Ethanol.		

CHEMICAL NAME			Hazard Rating	x
Ethyl alcohol			High	OVERALL RISK:
CAS No. <input type="text" value="64-17-5"/>	Amount used	Period of use (hrs)	The process is:	Physical State
W.E.L. (l/ tel / stel) <input type="text"/>	<input type="text" value="50"/> <input type="text" value="ml"/>	<input type="text" value="1"/>	<input type="text" value="Semi Closed"/>	<input type="text" value="Volatile Liquid"/>
			<input checked="" type="checkbox"/> Eyes	Exposure Potential
			<input type="checkbox"/> Skin	Low
			<input type="checkbox"/> Inhaled	Low
			<input type="checkbox"/> Ingested	

Hazard Statement and Description	Precaution Statement and Description	
H225 Highly flammable liquid and vapour.	P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.	x
H319 Causes serious eye irritation.	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove	x
	P371 + P380 + P375 In case of major fire and large quantities: Evacuate area. Fight fire	x
	P403 Store in a well-ventilated place.	x
	P235 Keep cool.	x
How will the precautions listed above be implemented?		
Wear nitrile gloves, lab coat and goggles.		
Special Storage and Containment Measures	Disposal Method	+
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Hygroscopic.	Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. Notice Directive on waste 2008/98/EC.	x
How will spillages be dealt with?	<i>Please note: any material used to clean up a spill of hazardous material must also be disposed of as hazardous material. Click here to see spill procedures</i>	
Spill kit. Contain spillage, and then collect using absorbent tissue or by mopping and place in container for disposal in waste.		

+ Add another chemical

Statement of work (Process to be undertaken)

Show Image

Personal protection requirements not covered in the precaution statements above.

eye/face protection, gloves, lab coat

COSHH Form (Continued)

Sources of information and references

<https://www.sigmaaldrich.com/GB/en/sds/mm/5.04042?userType=anonymous>
<https://www.sigmaaldrich.com/GB/en/sds/sigma/a3656?userType=anonymous>
<https://www.sigmaaldrich.com/GB/en/sds/sigma/b1793?userType=anonymous>
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<https://www.sigmaaldrich.com/GB/en/sds/sigma/f9665?userType=anonymous>
<https://www.airgas.com/msds/001188.pdf>
<https://assets.thermofisher.com/DirectWebViewer/private/document.aspx?prd=ALFAAA11313~~PDF~~MTR~~CLP1~~EN~~2021-01-31%2000:12:53~~Paraformaldehyde~~>
<https://www.sigmaaldrich.com/GB/en/sds/sial/x100?userType=anonymous>
<https://www.sigmaaldrich.com/GB/en/sds/sigma/p7539?userType=anonymous>
<https://www.sigmaaldrich.com/GB/en/sds/aldrich/900584?userType=anonymous>
<https://www.sigmaaldrich.com/GB/en/sds/sial/459836?userType=anonymous>

Reference to **existing approved** Risk Assessment

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

SAF/MEME/7887

Method Statement

SAF/MEME/7887

COSHH Assessment

SAF/MEME/2164-2175

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:

19 Dec 2024

Review comments