Loughborough University CBE



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 \checkmark

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, Yu Xiang, Alexandra Stolzing		
email address	j.tarum@lboro.ac.uk		
Location	H25, H27, H34		
Project / Activity /	Wellcome Project: A volatilome-based signature for age-related recovery & resilience		
Supervisor Name	Alexandra Stolzing		

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COSHH Forn	n	Reference	SAF/MEME/2316,2317
Location	H25, H27, H34	Originator	Janelle Tarum, Yu Xiang, Alexandra S
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Project / Activity / Task |Wellcome Project: A volatilome-based signature for age-related recovery & resilience

CHEMICAL NAME		~	<u>^</u>		Hazard		X
Methylglyoxal			$\langle \mathbf{v} \rangle$		High	OVERAL	.L
CAS No. M0252	Amount Period of used use (hrs)	The process is: Semi Closed	Physical State Non-Volatile Liquid	 ✓ Eyes ✓ Skin ☐ Inhaled ✓ Ingested 	Exposure Potential Low	RISK: Medium	n
This chemical has a high health risk assoc	iated with it.						
Hazard Statement ar	nd Description		Precaution Statem	ent and Desc	ription		+
H290 May be corrosive to metals.		P201 Obtain sp	ecial instructions before us	e.	<u> </u>		x
H302 Harmful if swallowed.		P202 Do not ha	ndle until all safety precaut	ions have been	read and unde	erstood.	x
H315 Causes skin irritation.		P234 Keep only	in original container.				x
H317 May cause an allergic skin reaction	n.	P261 Avoid bre	athing dust/fume/gas/mist	/vapours/spray.			x
H318 Causes serious eye damage.		P264 Wash t	horoughly after handling.				x
		P281 Use perso	nal protective equipment a	as required.			x
		P301 + P312 IF	SWALLOWED: Call a POISO	N CENTER or do	ctor/physician	if you feel unw	x
		P302 + P352 IF	ON SKIN: Wash with plenty	of soap and wa	ter.		x
		P304 + P340 IF	INHALED: Remove victim to	o fresh air and ke	eep at rest in a	position com	x
		P305 + P351 + F	P338 IF IN EYES: Rinse cauti	ously with wate	r for several mi	inutes. Remov	x
		P311 Call a POIS	SON CENTER or doctor/phy	sician.			x
		P363 Wash con	taminated clothing before	reuse.			x
		P390 Absorb sp	illage to prevent material c	lamage.			x
		P404 Store in a	closed container.				x
		P308 + P313 IF	exposed or concerned: Get	medical advice	/attention.		x
Justify the use of this chemical:		Collagen cro accumulate v structure and known to for connective ti Very small an instructions f	ss-linking by advance with ageing and comp d repair capacity. Meth m AGEs and very com issue in vitro to study nount of MGO (6ul) is for use, storage and di	d glycation e promise conr nylglyoxal is imonly used ageing and r being used a isposal will b	end-product nective tissu natural meta to cross-linl related conc and specific e applied.	is (AGEs) e function, abolite < litions.	
How will the precautions listed above be implemented?							
The work will take place in a ducted BSC. The content will be aliquoted and only tiny amount (5-6ul) will be used for the cross- linking the collagen. Following SOP037, all relevant PPE will be worn to ensure safe handing and avoid contact with skin.							
Special Storage and Containment Measures Disposal Method				+			



COSHH Form (Continued)

Must be stored in a cool (4C), well ventilated area with the lid being tightly closed and appropriately labelled.		Aqueous waste - the solution will be disposed after being diluted. It will be diluted further in Virkon in aspiration bottle. After treating with Virkon for 24h, the waste is disposed off the drain (SOP004).				
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				
Absorbent cloth / tissue. All spi	llages will be dealt accordi	ing to SOP038				
CHEMICAL NAME		Hazard	X			
DNeasy blood & tissue kit	Rating High		.L			
CAS No.	Amount Period of used use (hrs)	The process is: Physical State				
W.E.L. (Itel / stel)	0.2 ml 1	Semi Closed Non-Volatile Liquid Inhaled Low Ingested	n			
This chemical has a high health risk asso	ciated with it.					
Hazard Statement a	nd Description	Precaution Statement and Description	+			
H334 May cause allergy or asthma sym	ptoms or breathing difficulties i	P261 Avoid breathing dust/fume/gas/mist/vapours/spray.				
H315 Causes skin irritation.		P280 Wear protective gloves/protective clothing/eye protection/face protection.				
H317 May cause an allergic skin reaction.		P285 In case of inadequate ventilation wear respiratory protection.				
H319 Causes serious eye irritation.		P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at				
H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inh		P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/p				
		P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.				
		P362 Take off contaminated clothing and wash before reuse.				
Justify the use of this chemical:		Proteinase K, Buffer AL, Buffer AW1 are required to isolate DNA from biological material without any other suitable alternative. Small amounts are used and the specific protocol will be followed as stated by the manufacturer.				
How will the precautions listed	How will the precautions listed above be implemented?					
Wear the correct PPE. 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				
Must be stored in a room temperature, well ventilated area with the lid being tightly closed and correctly labelled.		The generation of waste should be avoided or minimized wherever possible. Empty containers may retain some product residues. This material and its container must be disposed of as chemical waste				
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				
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.

If Inhaled

Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.

In Case of Skin Contact

COSHH Form (Continued)

 Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.

 In Case of Eye Contact

 Flush with copious amounts of water for at least 15 minutes. Consult a doctor.

 If Swallowed

 Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

 Sources of information and references

 https://www.sigmaaldrich.com/GB/en/sds/sigma/m0252?

 userType=anonymous

 https://www.giagen.com/us/knowledge-and-support/product-and

technical-support/quality-and-safety-data/sds-search?sid=80000000562

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

Loughborough University CBE



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 Numb	pers			
Risk Assessment	Method Statement	COSHH Assessment SAF/MEME/2316,2317			
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:

18/03/2025

Review comments