Procedure for the Control of Substances Hazardous to Health 2002 [COSHH]

Approval date:	**March 2022**
Version number:	**5**
Author:	**Lawrence Green, Health and Safety Lead**
Review date:	**January 2025**
Security classification:	**GREEN**

If you would like this document in an alternative language or format, please contact Corporate Services on 01595 743069.

Document reference number: **HRSSPR0002**

NHS Shetland Document Development Coversheet*

Name of document	Procedure for the Control of Substances Hazardous to Health 2002 [COSHH]		
Document reference number	**HRSSPR0002**	**New or Review?**	**Review**
Author	Lawrence Green, Health and Safety Lead		
Executive lead	Lorraine Hall, Director of Human Resources and Support Services		
Review date	January 2025		
Security classification	GREEN		

Proposed groups to present document to:		
Health, Safety and Wellbeing Committee		

Date	**Version**	**Group**	**Reason**	**Outcome**
Jan 2022	5	Health, Safety and Wellbeing Group	**PO, FA**	**A, INT**

Examples of reasons for presenting to the group	**Examples of outcomes following meeting**
• Professional input required re: content (PI)	• Significant changes to content required – refer to Executive Lead for guidance (SC)
• Professional opinion on content (PO)	• To amend content & re-submit to group (AC&R)
• General comments/suggestions (C/S)	• For minor revisions (e.g. format/layout) – no need to re-submit to group (MR)
• For information only (FIO)	• Recommend proceeding to next stage (PRO)
• For proofing/formatting (PF)	• For upload to Intranet (INT)

• Final Approval (FA)	• Approved (A) or Not Approved, revisions required (NARR)

Please record details of any changes made to the document in the table below

Date	Record of changes made to document
July 2018	A full review and revision of the procedure to bring it in line with the requirements for the H&S Control Books. Also the addition of generic COSHH assessments to help Control Book managers with specific, common COSHH issues.
January 2022	A full review of the procedure to ensure it remains up to date and current. 7. Add roles and responsibilities including the Chief Executive's responsibilities. Remove references to Health & Safety Manager with Health & Safety Lead. Remove references to Health & Safety Committee with Health, Safety & Wellbeing Committee.

Contents

1. Executive Summary 6
2. Health and Safety Control Books 6
3. Introduction to Legislative Framework 6
3.1. Substances Hazardous under COSHH Regulations-Chemical Agents with potential risk to health 6
3.2. COSHH regulations do not apply to 7
3.3. Exposure Routes 7
4. COSHH Assessment Guide 8
5. NHS Shetland Management of specific types of 'Hazardous Substances' 10
5.1. Medicines & Pharmaceutical products 10
5.2. Cytotoxic and Cytostatic Drugs 11
5.3. Biological agents, Blood Borne Viruses & Clinical sharps injuries 11
5.4. Water Borne Bacteria 11
6. COSHH Assessments 11
6.1. COSHH Assessment Review 12
7. Roles and Responsibilities 12

1. Executive Summary

Many materials or substances used or created at work could be harmful to health, for example: dusts, gases or fumes that can be breathed in, liquids, gels or powders that come into contact with eyes or skin, harmful micro-organisms that can cause infection, an allergic reaction or are toxic. Harmful substances can be present in anything from paints and cleaners to dusts and solder fumes, blood or healthcare waste.

2. Health and Safety Control Books

Delivery of Health and Safety legislation is managed through the area Health and Safety Control Books. The Health and Safety Control Book has been designed as a practical tool to assist line managers to evidence their departmental Health and Safety arrangements by providing a framework to develop departmental safety management systems including risk and COSHH assessment production and recording.

3. Introduction to Legislative Framework

Ill health caused by 'hazardous substances' used at work is preventable. Many substances can harm health but, used properly, they almost never do. *Control of Substances Hazardous to Health (COSHH) Regulations, 2002* (as amended) require the employer to control substances with potential to harm the health of employees, other workers, volunteers, patients, visitors and anyone else using the Board's premises and or/services.

For the purpose of this document the Board defines:

i. **Employee** - Any member of staff who holds a contract directly with the Board.
ii. **Worker** - Any person carrying out work on behalf of or for the Board who does not hold a contract of employment directly with the Board. This includes self-employed staff and those staff supplied and paid by contractors and agencies.
iii. **Volunteer** - Any person undertaking designated tasks on behalf of the Board and who is unpaid.

3.1. Substances Hazardous under COSHH Regulations-Chemical Agents with potential risk to health

There are a number of warning signs that must be posted on the packaging of substances considered 'hazardous' – however, substances that pose a risk to health require assessment under COSHH.

Substances displaying the following 'Health hazard' signage will require assessment under COSHH:

Health Hazard Signage							
	**Health Hazard**		**Corrosive**		**Serious Health Hazard**		**Acute Toxicity**

- **Any substance which has been assigned a Workplace Exposure Limit (WEL)** Specific WEL information will be contained within safety data sheets and HSE Publication *EH40/2005.* Please note- Safety data sheets now feature a 'Derived No Effect Level' (DNEL) for substances. The DNEL is a benchmark figure not an exposure limit as is provided to identify the correct risk management measures to manage exposure

- **Dusts of any kind** when present at a substantial concentration in air

- **Biological Agents** which may cause infection, allergy, toxicity or otherwise create a risk to humans where exposure is directly connected to work or incidental to work activity

- **Carcinogens, mutagens & teratogens** (substances which have chronic or delayed health effects) e.g: cytotoxic and cytostatic drugs, certain steroids

- **Asthmagens** A substance considered to cause occupational asthma as a result of exposures in the workplace. NB - a substance that 'triggers' an asthma attack in a pre-existing asthmatic is <u>not</u> considered an 'asthmagen' under COSHH

- **Any other substance which creates a risk to health** including gases and vapours which, act as simple asphyxiants e.g.: argon and helium, which, while not dangerous in themselves, can endanger life by reducing the amount of oxygen available to breathe

3.2. COSHH regulations <u>do not</u> apply to

Hazardous/dangerous substances that may be present but do not fall under COSHH as they have their own Regulations. These include, Asbestos, Lead, Radiation, substances which are capable of producing effects on health as a result of their 'explosive' or 'flammable' properties, non-hazardous substances at high pressure or extreme temperatures.

3.3. Exposure Routes

There are generally 4 ways of being exposed to substances that are hazardous to health:

- **Inhalation** of dusts, vapours, gases or fumes, can be prevented by adequate ventilation; extraction and respiratory protective equipment.
- **Ingestion** - usually linked to eating, drinking or smoking without appropriate hand hygiene and not removing contaminated clothing or washing properly.
- **Injection -** usually occurs by accident when handling sharps/ needles.
- **Absorption**- usually through the skin or contact with eyes or mucous membranes. Skin absorption can be prevented by the use of appropriate gloves, barrier clothing and footwear. Eyes can be protected by wearing suitable protection: eye goggles; face visor, etc.

4. COSHH Assessment Guide

Step 1	**Identify the '<u>Work Activity</u>' or '<u>Task</u>' that uses or creates a hazardous substance**	The completed '*Hazardous Substances Inventory'* will indicate what substances / work activities & processes require COSHH assessment. Include any hazardous 'by-products' such as dusts; vapors; clinical wastes.
Step 2	**Decide who may be harmed and how**	Identify who may be exposed to hazardous substances; where 'exposure' may occur and the type of exposure that is foreseeable, i.e. via inhalation; ingestion; absorption or injection. Think of how often staff work with the substance and for how long; could anyone else be exposed? e.g. patients, visitors, contractors, members of the public? Could anyone be accidentally exposed if the current 'control measures' fail?
Step 3	**Evaluate the risk and what precautions are needed**	Consider how you can prevent exposure to hazardous substances - do you really need to use a particular substance or is a safer alternative available? Can you change the work activity / process to remove the need to use it? If you can't 'eliminate' the hazardous substance, you **must** put in place adequate control measures to reduce exposure, e.g.: Can you substitute the substance for something less hazardous? ▪ Can you enclose the work activity/process to minimise the escape / release of the hazardous substance? ▪ Can you use closed transfer / handling systems to reduce substance handling?

		▪ Can you extract emissions near the source or use mechanical ventilation? ▪ Can you restrict access to essential people who need to be there? ▪ Personal Protective Equipment (PPE) may be used but only when it is not technically possible to eliminate, substitute or use engineering controls
Step 4	**Ensure Control measures are used and maintained**	Where the use of 'control measures' are identified as the means of controlling exposure, all reasonable steps must be taken to ensure they are used properly. Engineering controls and respiratory protective equipment (other than the disposable type) must be examined and tested at suitably identified intervals. A record of all such examinations, tests and any repairs must be kept for inspection for a period of at least 5 years. Do 'control measures' adequately control exposure to the substance(s)? If not, what further control measures are required to eliminate or adequately control exposure?
Step 5	**Monitor Exposure and Arrange Health Surveillance**	If COSHH assessment indicates that a WEL (Workplace Exposure Limit) may be exceeded or that adverse health effects may still occur as a result of exposure to a substance, then relevant environmental monitoring and health surveillance programmes must be established.

Step 6	**Prepare plans to deal with Accidents, Incidents & Emergencies**	Procedures must be in place to protect staff from an accident, incident or emergency related to the hazardous substances, where necessary, e.g. spillage and clean-up procedures, provision of appropriate first-aid facilities; relevant safety drills (where indicated); information on emergency arrangements and warning /communication systems to internal departments and external agencies.
Step 7	**Provide Information, Training & Instruction & Supervision**	Employees must understand the risk of harm from using/ exposure to hazardous substances and the importance of the control measures. Control measures will not be fully effective if they do not know their purpose, how to use them properly, or the importance of reporting faults. Suitable and sufficient information, instruction and training (including refresher training) must be provided and should be appropriate to the level of risk identified by the assessment and provided in a manner and form in which it will be understood by employees.

5. NHS Shetland Management of specific types of 'Hazardous Substances'

Medicines & Pharmaceutical Products, Biological agents, Blood Borne Viruses and Clinical sharps injuries and Water Borne Bacteria

Although these fall under the regulatory requirements of the Control of Substances Hazardous to Health Regulations 2002 (COSHH) there are more specific policies, procedures and guidelines in place to control risks associated with use/ exposure.

COSHH assessment will usually only be indicated where a significant residual risk of exposure/ ill health is identified.

5.1. Medicines & Pharmaceutical products

Most medicines/pharmaceutical products are supplied in pre-packaged and sealed containers/vials/blister packs etc., as such no issues are identified with the preparation and handling of these medicines. Preparation, Storage, Administration, Spillage and Disposal procedures/ guidelines are detailed within:

- NMC 'The Code: Professional Standards of Practice and Behaviour for Nurses, Midwives and Nursing Associates'

Staff allergies to antibiotics: Staff should avoid antibiotic preparation/handling wherever possible and where unavoidable take extra precautions stipulated by Pharmacy procedures and follow Occupational Health advice.

5.2. Cytotoxic and Cytostatic Drugs

The toxicity of cytotoxic drugs means that occupational exposure can occur if control measures are inadequate which could result in exposure during drug preparation or administration, handling and disposing of waste or cleaning spills.

NHS Shetland are compliant to SACT CEL 30. Local Procedures developed via NoSCAN (North of Scotland Advisory Network), "Standard Operating Procedure for Safe Handling and Disposal of Spillage" & Clinical Policy for Safe Handling, Disposal and Management and spillage of Systemic Anti-cancer Therapy (SACT)".

HSE publication 'Handling *cytotoxic drugs in isolators in NHS pharmacies*' is available from http://www.hse.gov.uk/pubns/ms37.htm

5.3. Biological agents, Blood Borne Viruses & Clinical sharps injuries

National and Organisational procedures and guidelines are documented within

- National Infection Control and Prevention Manual

5.4. Water Borne Bacteria

Procedures and guidelines are documented within

- NHS Shetland Water Safety Policy

Where little used water outlet(s) has been identified, that are not currently on the water management plan, and it is the responsibility of departmental managers / Control Book Holders to:

i) inform the Estates Department
ii) Maintain evidence of this communication using the 'Little Used Water Outlet' record sheet.

The Water Safety Policy, managed by the Estates Department will produce the management check sheets for weekly, monthly, six monthly or annual checks. It is the responsibility of the department managers or Control Book Holders to ensure the checks take place.

6. COSHH Assessments

COSHH assessments must be available within the department/ work area as long as the substance is in use.

Obsolete COSHH assessments (for substances no longer in use) should be archived for five years from the date the substances was removed from use.

Where contractor work activity is identified as generating hazardous substances, ensure that contractors have provided copies of all relevant COSHH assessments and agreed safe working procedures prior to the start of contractor work activity.

6.1. COSHH Assessment Review

Significant risk (Medium/ High assessments should be reviewed at least annually

Low risk assessments should be reviewed at least every 2 years.

COSHH assessments must be reviewed immediately if there is reason to believe that it is no longer valid, for example:

- after an incident;
- if there is a significant change in the use of hazardous substances or the process that generates them, e.g. change in the work activity or work environment; change in material or source of supply; modification to equipment or engineering controls; change in process or method of work; change in volume or rate of use;
- a new substance is introduced or replaced;
- the process in which the substance is used changes;
- the assessment is reviewed annually;
- there is a change in legislation.

7. Roles and Responsibilities

The Board is ultimately responsible for managing risk and discharges this duty through the governance framework. Further detail on how this works in practice is available in the latest Risk Management Strategy.

Specific responsibilities of officers and staff are as described below:

Chief Executive Responsibilities:

- Taking overall responsibility for ensuring compliance with Health and Safety legislation
- Ensuring that these procedures are reviewed at least every 3 years or sooner in light of any significant changes in working practices and/or changes in statutory legislation and/or if an incident occurs that requires improvement and/or fire risk assessments identify significant risks that are not already addressed
- Ensuring that adequate resources are made available to implement the procedures

Line Manager Responsibilities:

- Ensuring a safe working environment and that safe systems of work are in place
- Ensuring all staff receive relevant information, instruction and training
- Ensuring that all Staff Bank, Students and other ‘contractors/ temporary workers’ receive relevant information, instruction and training
- Identifying hazards, unsafe acts and unsafe conditions

- Ensuring relevant risk assessments are carried out, e.g. Manual Handling, Violence & Aggression, Display Screen Equipment, COSHH etc, seeking competent advice where required
- Implementing appropriate risk 'control measures' to manage residual risk of harm to an acceptable level or, escalating issues to senior management for progression where introduction of control measures exceeds the line manager's authority
- Reporting all accidents incidents and near misses occurring in the department and investigating to determine the cause and put in place any corrective action required.
- Ensuring all work equipment is fit for purpose, safe, subject to regular visual inspections and planned and preventative maintenance with inspection/ servicing records maintained
- Ensuring all chemicals and other hazardous substances are controlled and used, in accordance with risk assessments and/or local rules
- Ensuring that written work instructions, warning notices and signs are provided where necessary and subject to regular review
- Ensuring protective equipment is available and used where necessary and that staff are made aware of how to obtain replacements
- Including health and safety topics on the agenda of departmental meetings at least quarterly

In keeping with the Control of Substances Hazardous to Health [COSHH] Regulations 2002 (as amended) and other relevant legislation, line managers will:

- Ensure that a department 'Hazardous Substances Inventory' has been completed with details of all hazardous substances used or generated during work activities and processes under their control;
- Where applicable, ensure current safety data sheets are available;
- Arrange for the COSHH assessment of substances identified as hazardous to health;
- Ensure that staff who use/ are exposed to hazardous substances are provided with suitable information, instruction and training to know the risks to their health created by such exposure and the precautions to be taken by complying with control measures documented within the COSHH assessment, this should include environmental monitoring results;
- Schedule a regular review of COSHH assessment content;
- Record all adverse incidents associated with exposure to hazardous substances on Datix system

Certain working practices and use of certain substances, e.g. latex, formaldehyde, cytotoxic drugs and chemicals carry a strict requirement to conduct health surveillance, as such line managers must:

- Respond to all Occupational Health information requests to identify employees who require health surveillance and liaise with Occupational Health to arrange indicated health surveillance;

- Notify Occupational Health of any identified health concerns associated with use of hazardous substances and undertake a local investigation of hazardous substance exposure.

Employee Responsibilities:

- Follow the training received when using any work items or equipment provided by NHS Shetland.
- Take reasonable care of your own and other people's health and safety.
- Co-operate with your employer (NHS Shetland) on health and safety.
- Tell someone (your employer, supervisor, or health and safety representative) if you think the work or inadequate precautions are putting anyone's health and safety at serious risk.

All members of staff should report incidents / near misses, and report using the DATIX adverse event reporting system.

8. Forms and Assessments

The following forms are included as appendices:

Appendix A- COSHH Risk Assessment Form

Appendix B- Record Sheet for COSHH Manual

Appendix C- Liquid Nitrogen COSHH Assessment

Appendix D- Tristel COSHH Assessment

Appendix E- Softiland COSHH Assessment

Appendix F- Medicinal Waste COSHH Assessment

Appendix G- Infectious Clinical Waste COSHH Assessment

Appendix H- Cytotoxic Waste COSHH Assessment

APPENDIX A- COSHH RISK ASSESSMENT FORM

COSHH Risk Assessment

Double click on check boxes to complete the form electronically

Department		Site/ Location	

Description of the work activity being assessed

Product Details	**Supplier/ Manufacturer Details**

Who is potentially exposed to hazardous substance being assessed? (check all that apply)

Nursing Staff ☐ Medical Staff ☐ Dental Staff ☐ AHP's ☐

Laboratory Staff ☐ Pharmacy Staff ☐ Support Services Staff ☐ Contractors (ISS/Serco) ☐ Staff Bank/ Locums ☐ Trainees/Students ☐ Volunteers ☐ Contractors (Other) ☐

New/Expectant Mothers ☐ Young Workers (<18years) ☐ Patients ☐ Other ☐ *Specify:*

Total Numbers of people potentially exposed to Hazardous Substance:

Frequency of use/ exposure to hazardous substance

Infrequently ☐ Once a year ☐ Every few months ☐ Monthly ☐ Several times a month ☐

Weekly ☐ Several times a week ☐ Daily ☐ Hourly ☐ Constantly ☐

Associated Health Hazard - see packaging/ safety data sheet *(check all that apply)*

 ☐  ☐  ☐  ☐ Other *(specify)*:

Composition/ Ingredients Detail composition/ ingrediants		**Quantity** *State approximate amount of substance being used/ generated*	Nature of health hazard *as 'Hazard Statements' within Safety Data Sheet*	Workplace Exposure Limit (WEL)	**Safety data sheet available ?**
Chemical name insert additional rows if required	**%**				

APPENDIX A- COSHH RISK ASSESSMENT FORM

Potential Health Effects	
Eye Contact	
Inhalation	
Skin contact	
Ingestion	
Chronic Exposure	
PPE Required	
Eye protection:	
Respiratory protection:	
Hand protection:	
Skin & Body protection:	

Control Measures
Storage, Handling and Disposal
Storage
Precautions for safe handling
Disposal
Spillage procedures
Emergency/ First Aid procedures
Monitoring and health surveillance

APPENDIX A- COSHH RISK ASSESSMENT FORM

Risk Rating with current control measures in place

Taking into account control measures that are in place, the estimated residual risk to Health, Safety & Welfare is*: 'check' the relevant box*

Likelihood	**Severity**				
	(1) No Harm	(2) Minor	(3) Moderate	(4) Major	5) Extreme
(5) Almost certain	☐ **Medium**	☐ **High**	☐ **High**	☐ **Very High**	☐ **Very High**
(4) Likely	☐ **Medium**	☐ **Medium**	☐ **High**	☐ **High**	☐ **Very High**
(3) Possible	☐ **Low**	☐ **Medium**	☐ **Medium**	☐ **High**	☐ **High**
(2) Unlikely	☐ **Low**	☐ **Medium**	☐ **Medium**	☐ **Medium**	☐ **High**
(1) Rare	☐ **Low**	☐ **Low**	☐ **Low**	☐ **Medium**	☐ **Medium**

Have 'current controls' reduced the level of risk to satisfactory (green) or acceptable (yellow) levels?

☐ **Yes** If 'Yes', date and sign the assessment and review at regular intervals

☐ **No** If 'No', complete the 'further control measures required' section of the assessment

Further Control Measures Required

Where a significant residual risk has been identified, detail further control measures required to adequately reduce this risk to levels that are *as low as is reasonably practicable*

Further Action/ Control	**Responsible Person**	**Target Date**

Assessment Completed By		**Designation**		**Date**	
COSHH Assessment should be reviewed: *Immediately after adverse incident/injury or following change to working practice or hazardous substance being generated.* *At least annually: Medium risk COSHH assessments* *At least every two years: Low risk COSHH assessments*					
1st Review Completed By		**Designation**		**Date**	
2nd Review Completed By		**Designation**		**Date**	

Record Sheet

Record Sheet for COSHH Manual

Staff should read all relevant sections of this manual.

This form is for example purposes only – other sign as read and understood' formats are also acceptable

I have read the COSHH assessments for substances relevant to this area and I understand the precautions I have to take				
Name / Signature	*Date*		*Name / Signature*	*Date*

APPENDIX C- LIQUID NITROGEN COSHH RISK ASSESSMENT

LIQUID NITROGEN COSHH RISK ASSESSMENT

Department		Site/ Location	

Description of the work activity being assessed

- Decanting liquid Nitrogen from* _____litre storage dewar into a 500ml cryal flask
- Clinical Use of liquid nitrogen from Dewar
- Disposal of unused product

* *Site specific information relevant to size of storage dewar must be detailed to validate this assessment*

Product Details	**Supplier/ Manufacturer Details**
Refrigerated Liquefied Nitrogen gas N_2(l) also known as Liquid Nitrogen, Cryogenic Nitrogen. Residual temperature minus 196 ^{0}C. Identified hazards are: 1. **Low temperature burns** (cold burns) caused by direct contact with the liquid Nitrogen or a vessel carrying or storing liquid nitrogen. 2. **Asphyxiation** (inhalation): caused by a decrease in oxygen because gas has vented and displaced oxygen in the room.	Select appropriate supplier details ☐ BOC Priestley Road, Worsley, Manchester Emergency N^o: 0800 111 333 ☐ Air Products plc Cryoease Services 2 Millennium Gate, Crewe, Cheshire Emergency N^o: 0500 020202 +44 1270218050

Who is potentially exposed to hazardous substance being assessed? (check all that apply)

Clinical Staff ☐ Staff Bank/ Locums ☐ Students ☐ Volunteers ☐ Support Services Staff ☐

Pharmacy staff ☐ Patients ☐ Visitors to NHS Shetland premises ☐ Contractors (ISS/Serco) ☐

Contractors (Other) ☐ Other ☐ *(please specify):*

Total Numbers of people potentially exposed to Hazardous Substance:

Detail total staff numbers in each task *Department/ site specific informationmust be detailed to validate this assessment*_____staff member will fill 500ml cryal flask/canister by decanting liquid Nitrogen from storage dewar

Liquid Nitrogen used 'as and when' required by _____ staff member(s)

_____ staff member(s) will dispose of unused product

Frequency of use/ exposure to hazardous substance

APPENDIX C- LIQUID NITROGEN COSHH RISK ASSESSMENT

Infrequently ☐ Once a year ☐ Every few months ☐ Monthly ☐ Several times a month ☐

Weekly ☐ Several times a week ☐ Daily ☐ Hourly ☐ Constantly ☐

Associated Health Hazard - see packaging/ safety data sheet *(check all that apply)*

 ☐  ☐  ☐  ☐ Other: ☒  

Composition/ Ingredients Detail composition/ ingredients		**Quantity** *State approximate amount of substance being used/ generated*	Nature of health hazard *as 'Hazard Statements' within Safety Data Sheet*	Workplace Exposure Limit (WEL)	**Safety data sheet available ?**
Chemical name	**%**				
Liquid Nitrogen	100	_____ **mls** ☐ daily ☐ weekly ☐ monthly	Refrigerated gas may cause cryogenic burns or injury Asphyxiant	Contains no substances with occupational exposure limit values	Air Product N2 SDS.pdf BOC N2 SDS.pdf

Potential Health Effects	
Eye Contact	Contact with liquid may cause cold burns/frostbite
Inhalation:	May cause oxygen deficient atmospheres/ asphyxiation in high concentrations. Symptoms include: dizziness, salivation, nausea, vomiting, loss of mobility, loss of consciousness
Skin contact:	Contact with liquid may cause cold burns/frostbite. May cause severe frostbite
Ingestion:	Health injuries are not known or expected under normal use
Chronic Exposure:	Health injuries are not known or expected under normal use, using PPE and adhering to NHS Lanarkshire control measures
PPE Required	
Eye protection:	Wear eye protection – face shield (EN 166 standard)
Respiratory protection:	No special equipment required but ensure adequate ventilation, especially in confined areas

APPENDIX C- LIQUID NITROGEN COSHH RISK ASSESSMENT

Hand protection:	Wear cryogenic gloves when decanting from storage dewar (EN 511 standard)
Skin & Body protection:	Wear cryogenic apron when decanting from storage dewar (EN 340,341,388, 511 standard)

Control Measures: Handling and Decanting from Storage dewar

- Staff must know and understand the properties and hazards of liquid nitrogen before use and follow all departmental/ speciality procedures for decanting Liquid Nitrogen
- Wherever possible two members of staff must be present at all times during the decanting process.
- Where applicable, access door to storage area must be open throughout the decanting process
- Wherever possible, storage dewar is fitted with liquid withdraw device and Liquid Nitrogen will only be decanted from the dewar using the liquid withdrawal device
- Staff must don the necessary Personal Protective Equipment (PPE): cryogenic protective gloves and apron, goggles and/ or face shield/visor before decanting
- Liquid Nitrogen will only be decanted into suitable cryogenic containers

Storage Arrangements ***Department/ site specific informationmust be detailed to validate this assessment***

- Liquid nitrogen is stored within a _____ litre (*detail dewar capacity*) cryogenic storage dewar which is located to optimise general ventilation to avoid creating an oxygen-deficient atmosphere
- Storage dewar is stored at _____(*detail storage location*)
- Storage dewar should be fitted onto a 4 wheel dolley to facilitate movement and minimise associated manual handling of the dewar
- Dewar is filled out-with the department by external contractor on a regular contracted basis
- Storage dewar is subject to daily visual checks for damage and signs of 'frosting'
- Storage dewar is fitted with an atmopspheric air monitoring alarm system and oxygen levels are recorded after every 'decant' – levels must not fall below 18% oxygen content (*internal storage only)*
- Storage dewar and any associated alarm system/ lock off systems are subject to contracted maintainance and testing

Disposal Routes

Un-used product is left to evaporate from the open Cryal flasks within an agreed specified area

Spillage procedures

If possible and only if safe to do so, stop flow of product, close supply valve (where applicable) and increase ventilation within the spillage area. Evacuate all persons to safe well ventilated area and monitor oxygen levels until atmospehers is proved to be safe.

If leak is from the storage dewar call the external contractor's emergency telephone number

Air Monitoring Alarm Activation *(internal storage only*)

Follow departmental/ speciality Liquid Nitrogen Alarm Sounding procedure

APPENDIX C- LIQUID NITROGEN COSHH RISK ASSESSMENT

Emergency/ First Aid procedures
Asphyxiation: remove affected person(s)to fresh air, if breathing has stopped or is laboured assist with Basic Life support. Cold Burns: as soon as practicable thaw frosted parts with lukewarm water (not exceeding 40ºC). Do not rub affected areas as tissue damage may result; then seek medical advice/ attention immediately. If Eye(s) involved seek medical advice/ attention immediately. Cover with a sterile dressing.
Monitoring and health surveillance
Staff would be referred to Occupational Health if any health issues arise

Risk Rating with current control measures in place

Taking into account control measures that are in place, the estimated residual risk to employee's Health, Safety & Welfare is*: 'check' the relevant box*

Likelihood	**Severity**				
	(1) No Harm	(2) Minor	(3) Moderate	(4) Major	5) Extreme
(5) Almost certain	☐ **Medium**	☐ **High**	☐ **High**	☐ **Very High**	☐ **Very High**
(4) Likely	☐ **Medium**	☐ **Medium**	☐ **High**	☐ **High**	☐ **Very High**
(3) Possible	☐ **Low**	☐ **Medium**	☐ **Medium**	☐ **High**	☐ **High**
(2) Unlikely	☐ **Low**	☐ **Medium**	☐ **Medium**	☐ **Medium**	☐ **High**
(1) Rare	☐ **Low**	☐ **Low**	☒ **Low**	☐ **Medium**	☐ **Medium**

Have 'current controls' reduced the level of risk to satisfactory (green) or acceptable (yellow) levels?

☐ **Yes** If 'Yes', date and sign the assessment and review at regular intervals

☐ **No** If 'No', complete the 'further control measures required' section of the assessment

Further Control Measures Required

Where a significant residual risk has been identified, detail further control measures required to adequately reduce this risk to levels that are *as low as is reasonably practicable*

Further Action/ Control	**Responsible Person**	**Target Date**

Assessment Completed By		**Designation**		**Date**	

COSHH Assessment should be reviewed:
Immediately after adverse incident/injury or following change to working practice or hazardous substance being generated.
At least annually: Medium risk COSHH assessments
At least every two years: Low risk COSHH assessments

APPENDIX C- LIQUID NITROGEN COSHH RISK ASSESSMENT

1st Review Completed By		**Designation**		**Date**	
2nd Review Completed By		**Designation**		**Date**	

APPENDIX D- TRISTOL COSHH RISK ASSESSMENT

COSHH Risk Assessment

Double click on check boxes to complete the form electronically

Department		**Site/ Location**	

Description of the work activity being assessed

- Tristel Fuse base and activator solution mixed in sachet
- Concentrated solution then added into 5 litres of cold water
- Working solution applied by cloth to equipment or floor

Product Details	**Supplier/ Manufacturer Details**
Tristel Fuse Base Solution Tristel Fuse Activator Tristel Fuse Working Solution Blood/body fluids microbiological agent	**Company name:** Tristel Solutions Limited Lynx Business Park Fordham Road Newmarket Cambridgeshire CB8 7NY United Kingdom **Tel:** +44 (0) 1638 721 500 **Fax:** +44 (0) 1638 721 911 **Email:** healthandsafety@tristel.com

Who is potentially exposed to hazardous substance being assessed? (check all that apply)

Nursing Staff ☒ Medical Staff ☐ Dental Staff ☐
AHP's ☒

Laboratory Staff ☐ Pharmacy Staff ☐ Support Services Staff ☐
Contractors (ISS/Serco) ☐ Staff Bank/ Locums ☒ Trainees/Students ☒
Volunteers ☐ Contractors (Other) ☐

New/Expectant Mothers ☐ Young Workers (<18years) ☐ Patients ☒ Other ☐ *Specify:*

Total Numbers of people potentially exposed to Hazardous Substance:

Frequency of use/ exposure to hazardous substance

Infrequently ☐ Once a year ☐ Every few months ☐ Monthly ☐
Several times a month ☐

Weekly ☐ Several times a week ☐ Daily ☒ Hourly ☐ Constantly ☐

APPENDIX D- TRISTOL COSHH RISK ASSESSMENT

Associated Health Hazard - see packaging/ safety data sheet *(check all that apply)*

 ☒  ☐  ☐  ☐ Other *(specify)*: BASE SOLUTION AND ACTIVATOR CLASSED AS IRRITANT, WORKING SOLUTION (Dilute) NOT CLASSIFIED AS A HEALTH HAZARD

Composition/ Ingredients *Detail composition/ ingrediants*		**Quantity** *State approximate amount of substance being used/ generated*	**Nature of health hazard** *as 'Hazard Statements' within Safety Data Sheet*	**Workplace Exposure Limit (WEL)**	**Safety data sheet availa ble?**
Chemical name insert additional rows if required	**%**				
Base Solution ECANAMINE,N,N-DIMETHYL-N-OXIDE	1-10	Sachet	H315: Causes skin irritation. H319: Causes serious eye irritation. H412: Harmful to aquatic life with long lasting effects.	n/a	n/a
Base Solution CITRIC ACID MONOHYDRATE	1-10	Sachet	H319: Causes serious eye irritation.	n/a	n/a
Activator SODIUM CHLORITE	1-10	Sachet	EUH032: Contact with acids liberates very toxic gas. H315: Causes skin irritation. H319: Causes serious eye irritation.	15 min 0.41mg/m3	

APPENDIX D- TRISTOL COSHH RISK ASSESSMENT

Working Solution CHLORINE DIOXIDE (Non classified)	<1.0	8 hour 0.1ppm 15 min 0.3 ppm	This product has no classification		
Cleaning of blood and body fluid contamination			Potential Exposure to blood borne viruses		

Potential Health Effects	
Eye Contact	BASE / ACTIVATOR – Causes serious eye irritation;. There may be pain and redness. The eyes may water profusely WORKING SOLUTION - There may be irritation and redness.
Inhalation	BASE / ACTIVATOR - There may be irritation of the throat with a feeling of tightness in the chest. WORKING SOLUTION - There may be irritation of the throat with a feeling of tightness in the chest.
Skin contact	BASE / ACTIVATOR - There may be irritation and redness at the site of contact. WORKING SOLUTION - There may be mild irritation at the site of contact..
Ingestion	BASE / ACTIVATOR - There may be soreness and redness of the mouth and throat. WORKING SOLUTION - There may be irritation of the throat.
Chronic Exposure	BASE / ACTIVATOR – n/a WORKING SOLUTION n/a
PPE Required	
Eye protection:	Safety glasses. Ensure eye wash is at hand.
Respiratory protection:	Not required
Hand protection:	Wear protective gloves
Skin & Body protection:	Wear protective clothing

APPENDIX D- TRISTOL COSHH RISK ASSESSMENT

Control Measures
Engineering measures: Ensure there is sufficient ventilation of the area. **Respiratory protection:** Respiratory protection not required. **Hand protection:** Protective gloves. **Eye protection:** Safety glasses. Ensure eye bath is to hand. **Skin protection:** Protective clothing.
Storage, Handling and Disposal
Storage Store in cool, well ventilated area. Keep container tightly closed.
Precautions for safe handling Ensure there is sufficient ventilation of the area.
Disposal
Spillage procedures
Turn leaking containers leakside up to prevent the escape of liquid. Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method. Flush to drain with copious amounts of water.
Emergency/ First Aid procedures

APPENDIX D- TRISTOL COSHH RISK ASSESSMENT

Base / Activator Solution

Skin contact: Wash immediately with plenty of soap and water.

Eye contact: Bathe the eye with running water for 15 minutes. Seek medical attention if eye irritation persists.

Ingestion: Wash out mouth with water.

Inhalation: Move to fresh air in case of accidental inhalation of vapours.

Working Solution

Skin contact: Wash immediately with plenty of soap and water.

Eye contact: Rinse eyes with water and seek medical advice if irritation persists.

Ingestion: Wash out mouth with water.

Inhalation: Move to fresh air in case of accidental inhalation of vapours.

Body Fluid contact – follow NHS Shetland procedures (neddlestick, SHARP's or contamination adverse event. Report ot your line manager and enter a DATIX)

Emergency
In combustion emits toxic fumes.
Wear self contained breathing apparatus.
Wear protective clothing to prevent contact with skin and eyes.

Monitoring and health surveillance

Not required unless an adverse reaction to the chemicals

Risk Rating with current control measures in place

Taking into account control measures that are in place, the estimated residual risk to Health, Safety & Welfare is*: 'check' the relevant box*

APPENDIX D- TRISTOL COSHH RISK ASSESSMENT

Likelihood	Severity				
	(1) No Harm	(2) Minor	(3) Moderate	(4) Major	5) Extreme
(5) Almost certain	□ **Medium**	□ **High**	□ **High**	□ **Very High**	□ **Very High**
(4) Likely	□ **Medium**	□ **Medium**	□ **High**	□ **High**	□ **Very High**
(3) Possible	□ **Low**	□ **Medium**	□ **Medium**	□ **High**	□ **High**
(2) Unlikely	□ **Low**	□ **Medium**	□ **Medium**	□ **Medium**	□ **High**
(1) Rare	□ **Low**	☒ **Low**	□ **Low**	□ **Medium**	□ **Medium**

Have 'current controls' reduced the level of risk to satisfactory (green) or acceptable (yellow) levels?

☐ **Yes** If 'Yes', date and sign the assessment and review at regular intervals

☐ **No** If 'No', complete the 'further control measures required' section of the assessment

Further Control Measures Required Where a significant residual risk has been identified, detail further control measures required to adequately reduce this risk to levels that are *as low as is reasonably practicable*		
Further Action/ Control	**Responsible Person**	**Target Date**
Ensure staff are competent (ie trained, including SSOW cleaning Clinical Staff TRISTEL, and TRISTEL Assessment Tool)	Managers	Prior to task commencing

Assessment Completed By		**Designation**		**Date**	
COSHH Assessment should be reviewed: *Immediately after adverse incident/injury or following change to working practice or hazardous substance being generated.* *At least annually: Medium risk COSHH assessments* *At least every two years: Low risk COSHH assessments*					
1st Review Completed By		**Designation**		**Date**	
2nd Review Completed By		**Designation**		**Date**	

APPENDIX E SOFTILAND COSHH ASSESSMENT

COSHH Risk Assessment

Double click on check boxes to complete the form electronically

Department	**AI**	**Site/ Location**	**All**

Description of the work activity being assessed

Using Softiland hand cleanser as part of NHS Shetland infection control measures

Product Details	**Supplier/ Manufacturer Details**
SOFTILAND PURE Alcoholic Hand Rub	B. Braun Melsungen AG Carl-Braun-Straße 1 D-34212 Melsungen Zentralbereich Zentrale Logistik, Tel.: ++49 (0) 5661-714523 Emergency telephone :++49 (0) 6132 / 84463 GBK Gefahrgut Buero GmbH, Ingelheim

Who is potentially exposed to hazardous substance being assessed? (check all that apply)

Nursing Staff ☒ Medical Staff ☒ Dental Staff ☒
AHP's ☒

Laboratory Staff ☐ Pharmacy Staff ☐ Support Services Staff ☒
Contractors (ISS/Serco) ☒ Staff Bank/ Locums ☒ Trainees/Students ☒
Volunteers ☒ Contractors (Other) ☒

New/Expectant Mothers ☒ Young Workers (<18years) ☒ Patients ☒ Other ☐ *Specify:*

Total Numbers of people potentially exposed to Hazardous Substance:

Frequency of use/ exposure to hazardous substance

Infrequently ☐ Once a year ☐ Every few months ☐ Monthly ☐
Several times a month ☐

Weekly ☐ Several times a week ☐ Daily ☐ Hourly ☐ Constantly ☒

Associated Health Hazard - see packaging/ safety data sheet *(check all that apply)*

APPENDIX E SOFTILAND COSHH ASSESSMENT

 ☒  ☐  ☐  ☐ Other *(specify)*:

Composition/ Ingredients *Detail composition/ ingrediants*		**Quantity** *State approximate amount of substance being used/ generated*	**Nature of health hazard** *as 'Hazard Statements' within Safety Data Sheet*	**Workplace Exposure Limit (WEL)**	**Safety data sheet availa ble?**
Chemical name insert additional rows if required	**%**				
Ethanol		Appx 25ml	Irritant Highly Flammable	Long Term WEL 1920 mg.m-3	Y
Propan-1-ol		Appx 25ml	Irritant Highly Flammable RISK OF SERIOUS DAMAGE TO EYES Vapours may cause drowsiness and dizziness	Short Term 250ppm, 625mg.m-3 Long Term 200 ppm, 500 mg/m-3	Y

Potential Health Effects	
Eye Contact	Risk of serious damage to eyes
Inhalation	Vapours may cause drowsiness and dizziness
Skin contact	none
Ingestion	Ingestion causes irritation of upper respiratory system and gastrointestinal disturbance.
Chronic Exposure	n/a
PPE Required	
Eye protection:	None unless possibility of contact with eyes
Respiratory protection:	None normally required
Hand protection:	None

APPENDIX E SOFTILAND COSHH ASSESSMENT

Skin & Body protection:	None

Control Measures
Ensure adequate ventilation. When using, do not eat, drink or smoke. Avoid contact with eyes. Ensure access to eye wash is available
Storage, Handling and Disposal
Advice on protection against fire and explosion Keep product and empty container away from heat and sources of ignition. Do not smoke - volatile. Take precautionary measures against static discharges. **Storage** Keep container tightly closed in a dry, cool and well-ventilated place. Pay attention to anti-explosion rules.
Precautions for safe handling In case of vapour formation use respirator. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Keep away sources of ignition.
Disposal Can be disposed of as a solid waste or burned in a suitable installation subject to local regulations. Where possible recycling is preferred to disposal.

APPENDIX E SOFTILAND COSHH ASSESSMENT

Spillage procedures
Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Shovel into suitable container for disposal. **Additional Information** Use only explosion-proof equipment.
Emergency/ First Aid procedures

APPENDIX E SOFTILAND COSHH ASSESSMENT

General Information

Remove contaminated soaked clothing immediately.

If you feel unwell, seek medical advice.

After Inhalation

Move to fresh air in case of accidental inhalation of vapours.

In the event of symptoms refer for medical treatment.

After contact with eyes

Rinse thoroughly with plenty of water, also under the eyelids.

If eye irritation persists, consult a specialist.

After Ingestion

Drink plenty of water.

Summon a doctor immediately.

Induce vomiting only upon the advice of a physician.

Attention. Beware, danger of aspiration.

Suitable Extiguishing media

Alcohol-resistant foam, dry chemical, carbon dioxide (CO2), water-spray.

Special exposure hazards arriving from substance or preparation itself, combustion products,resulting gases

Fire may produce:

Carbon monoxide and carbon dioxide.

Use breathing apparatus with independent air supply.

Special protective equipment for fire-fighters

Vapours are heavier than air and spread along ground.

The vapour/air mixture is explosive, even in empty, uncleaned receptacles.

Cool containers at risk with water spray jet.

APPENDIX E SOFTILAND COSHH ASSESSMENT

Monitoring and health surveillance
If appropriately handled and if in accordance with the general hygienic rules, no damages to health have become known.

Risk Rating with current control measures in place

Taking into account control measures that are in place, the estimated residual risk to Health, Safety & Welfare is*: 'check' the relevant box*

Likelihood	**Severity**				
	(1) No Harm	(2) Minor	(3) Moderate	(4) Major	(5) Extreme
(5) Almost certain	□ **Medium**	□ **High**	□ **High**	□ **Very High**	□ **Very High**
(4) Likely	□ **Medium**	□ **Medium**	□ **High**	□ **High**	□ **Very High**
(3) Possible	□ **Low**	□ **Medium**	□ **Medium**	□ **High**	□ **High**
(2) Unlikely	□ **Low**	□ **Medium**	□ **Medium**	□ **Medium**	□ **High**
(1) Rare	□ **Low**	☒ **Low**	□ **Low**	□ **Medium**	□ **Medium**

Have 'current controls' reduced the level of risk to satisfactory (green) or acceptable (yellow) levels?

☒ **Yes** If 'Yes', date and sign the assessment and review at regular intervals

☐ **No** If 'No', complete the 'further control measures required' section of the assessment

Further Control Measures Required

Where a significant residual risk has been identified, detail further control measures required to adequately reduce this risk to levels that are *as low as is reasonably practicable*

Further Action/ Control	**Responsible Person**	**Target Date**

Assessment Completed By	J.Westmoreland	**Designation**	H&S LEad	**Date**	14/08/18
COSHH Assessment should be reviewed: *Immediately after adverse incident/injury or following change to working practice or hazardous substance being generated.* *At least annually: Medium risk COSHH assessments* *At least every two years: Low risk COSHH assessments*					
1st Review Completed By	L. Green	**Designation**	H&S Lead	**Date**	10/02/22
2nd Review Completed By		**Designation**		**Date**	

APPENDIX F MEDICINAL WASTE COSHH ASSESSMENT

MEDICINAL WASTE COSHH Risk Assessment

Ward/ Department		Location	

Description of the work activity being assessed

Handling, Segregation & Disposal, Transport and Storage of Medicinal Waste within

Clinical setting ☐ Community setting ☐ Non clinical setting ☐ *(please specify)*

Product Details

Medicinal Waste: Wastes contaminated with a nonchemotherapy medicine containing either a pharmaceutically active substance or a dangerous substance at sufficient concentration to generate a hazardous property, includes expired, unused, spilt and contaminated pharmaceutical products as well as the discarded items if contaminated from use/ handling of pharmaceuticals eg bottles, boxes, syringe bodies, drug vials.

Who is potentially exposed to hazardous substance being assessed? (check all that apply)

Nursing Staff ☐ Medical Staff ☐ Pharmacy Staff ☐ Dental Staff ☐
AHP's ☐ Staff Bank/Locums ☐ Trainees/Students ☐ Support Services Staff ☐
Contractors (ISS/Serco) ☐

New/Expectant Mothers ☐ Young Workers (<18years) ☐ Patients ☐ Other ☐ *Specify:*

Total Numbers of people potentially exposed to medicinal waste:

Frequency of exposure to infectious clinical waste

Infrequently ☐ Once a year ☐ Every few months ☐ Monthly ☐ Several times a month ☐

Weekly ☐ Several times a week ☐ Daily ☐ Hourly ☐ Constantly ☐

Associated Health Hazard

 ☐  ☐  ☐  ☐ Other: ***Medicinal waste*** 

Composition	**Quantity**	Nature of health hazard	Workplace Exposure Limit (WEL)	**Safety data sheet available?**

APPENDIX F MEDICINAL WASTE COSHH ASSESSMENT

Waste Medicines / pharmaceutical products **excluding** cytotoxic and cytostatic wastes and flammable liquids	**State how many blue rigid containers / blue wheeled bins are filled/ disposed of on either daily, weekly or monthly basis** ..... ☐ daily ☐ weekly ☐ monthly	☐ Whole Pharmaceuticals Returned/ Expired or Damaged Stock ☐ Residue Pharmaceuticals eg Medicinally contaminated bottles/ boxes/ Drug vials, discharged syringe bodies	Contact Supplier or Pharmacy	Contact Supplier or Pharmacy

Potential Exposure Routes (Check all that apply)

Inhalation ☐ Ingestion ☐ Absorption ☐ Eye Contact ☐ Injection ☐

PPE Requirements

PPE requirements for Administration, Spillage and Disposal of medicines/ pharmaceutical products are detailed within National Infection Prevention & Control Manual

PPE requirements for Healthcare clinical settings are detailed within National Infection Prevention and Control manual, Chapter 1, Standard Infection Control Precautions (SICPs) http://www.nipcm.hps.scot.nhs.uk/

Handling and Disposal

The person who produces the waste is responsible for ensuring it is appropriately segregated by disposal into the correct colour coded waste bag or container

- All staff involved in the handling and disposal of medicinal waste should receive appropriate training / instruction and be aware of the correct working procedures
- For segregation to be effective, an appropriate number of blue lidded waste receptacles should be available and positioned in locations as close to the point of production as possible

Handling and Disposal

- When handling and disposing of medicinal waste, minimise contact with the waste receptacle, eg dropping waste items through open aperture of rigid containers
- If spillage/ contamination occurs whilst disposing of waste, follow direction noted in '*spillage/ emergency procedures'*
- Seal and replace blue lidded waste receptacles when ¾ full, secure and clearly label to identify the source department and date of production, as per National Infection Prevention and Control manual., Chapter 1, Standard Infection Control Precautions (SICPs) and the Organisation's Waste Segregation guidelines: http://firstport2/staff-support/pssd/waste-management-service/Rubbish%20%20Recycling/SHTN%2003%20-%20Waste%20Management%20Document/SHTN%2003-Segregation-Chart%20-DRAFT.pdf
- Perform hand hygiene following any waste handling/disposal
- Community staff should follow local procedures

APPENDIX F MEDICINAL WASTE COSHH ASSESSMENT

Storage and Transport
Arrangements for storage and transfer of medicinal waste will differ depending upon where waste is generated however the following principles will always apply: • All staff involved in the transport of medicinal waste should receive appropriate training / instruction and be aware of the correct working procedures • Remove medicinal waste to the designated waste storage point/ disposal hold and then place in the designated blue lidded waste container • Waste should not be allowed to accumulate in corridors or other places accessible to members of the public • Healthcare waste storage containers/ disposal hold rooms must be locked at all times • All rooms, trolleys, bins utilised for the transfer and storage of waste must ONLY be used for this purpose. They should be clearly labelled and be subject to regular cleaning regimes • Community staff should follow local procedures
End Disposal Routes
Blue waste streams require end disposal by incineration
Spillage/Emergency procedures
Refer to supplier/ local instructions and/or contact supplier or Pharmacy for advice.
Control Measures
All staff involved in the handling/ disposal/ transport/ storage of medicinal waste should receive appropriate training / instruction and be aware of the correct working procedures • Avoid direct contact with medicines/ pharmaceutical products or products contaminated with medicines/ pharmaceutical products. Where contact is unavoidable, wear indicated Personal Protective Equipment (PPE) and take all necessary precautions to prevent puncture wounds, cuts and abrasions. Protect all breaks in exposed skin by means of waterproof dressings and/or gloves • Where risk of splashing is identified, protect the eyes by means of eye shield/ eye goggles or visor and the mouth by wearing a suitable face-mask • Where unavoidable, take particular care when handling and dispose of sharps directly into the blue lidded waste receptacle immediately after use as close to the point of production as possible • Segregate and dispose of all medicinal waste safely into the blue waste stream • An appropriate number of waste receptacles should be available and positioned in locations as close to the point of production as possible • Avoid hand-to-mouth/hand–to-eye contact • Apply good, basic hygiene practices including hand-washing before and after removing gloves, before and after eating, smoking, applying cosmetics, or preparing food • Immediately report any adverse incidents and/or near misses relating to medicinal waste to line/ department manager, and contact Occupational Health. • Datix reporting system is available for accident/ incident reporting
Additional Department/ Speciality Control Measures *(where applicable)*

APPENDIX F MEDICINAL WASTE COSHH ASSESSMENT

Monitoring and health surveillance

Working practice (including wearing of PPE) is monitored by line managers.

Occupational Health Department referral where indicated

Risk Rating with current control measures in place

The level of risk associated with *medicinal waste* will depend on the potential entry route and the nature of medicines/ pharmaceutical products or products contaminated with medicines/ pharmaceutical products. Taking into account control measures that are in place, the estimated residual risk to Health, Safety & Welfare is*: 'check' the relevant box*

Likelihood	**Severity**				
	(1) No Harm	(2) Minor	(3) Moderate	(4) Major	5) Extreme
(5) Almost certain	☐ **Medium**	☐ **High**	☐ **High**	☐ **Very High**	☐ **Very High**
(4) Likely	☐ **Medium**	☐ **Medium**	☐ **High**	☐ **High**	☐ **Very High**
(3) Possible	☐ **Low**	☐ **Medium**	☐ **Medium**	☐ **High**	☐ **High**
(2) Unlikely	☐ **Low**	☐ **Medium**	☐ **Medium**	☐ **Medium**	☐ **High**
(1) Rare	☐ **Low**	☐ **Low**	☐ **Low**	☐ **Medium**	☐ **Medium**

Have 'current controls' reduced the level of risk to satisfactory (green) or acceptable (yellow) levels?

☐ **Yes** If 'Yes', date and sign the assessment and review at regular intervals

☐ **No** If 'No', complete the 'further control measures required' section of the assessment

Further Control Measures Required

Where a significant residual risk has been identified, detail further control measures required to adequately reduce this risk to levels that are *as low as is reasonably practicable*

Further Action/ Control	**Responsible Person**	**Target Date**

Assessment Completed By		**Designation**		**Date**	
COSHH Assessment should be reviewed: *Immediately after adverse incident/injury or followingchange to working practice or nature of medicinal waste being generated/ handled/ transported* *At least annually: Medium risk COSHH assessments* *At least every two years: Low risk COSHH assessments*					
1st Review Completed By		**Designation**		**Date**	
2nd Review Completed By		**Designation**		**Date**	

APPENDIX G INFECTIOUS CLINICAL WASTE COSHH ASSESSMENT

INFECTIOUS CLINICAL WASTE COSHH Risk Assessment

Ward/ Department		Location	

Description of the work activity being assessed

Handling, Segregation & Disposal, Transport and Storage of Infectious Clinical Waste within

Clinical setting ☐ Community setting ☐ Non clinical setting ☐ *(please specify)*

Product Details

Waste that poses a risk of infection. All Healthcare waste, whether produced in a hospital or community setting is assumed to be infectious waste pending assessment of infectious properties. Examples include: products contaminated with human blood/ body fluids; pathological wastes of human origin; contaminated sharps, eg needles, scalpels, razor blades.

Who is potentially exposed to hazardous substance being assessed? (check all that apply)

Nursing Staff ☐ Medical Staff ☐ Dental Staff ☐ AHP's ☐ Support Services Staff ☐ Laundry Staff ☐ Laboratory Staff ☐ Contractors (ISS/Serco) ☐ Staff Bank/ Locums ☐ Trainees/Students ☐ Volunteers ☐ New/Expectant Mothers ☐ Young Workers (<18years) ☐ Patients ☐ Other ☐ *Specify:*

Total Numbers of people potentially exposed to Infectious Clinical waste:

Frequency of exposure to infectious clinical waste

Infrequently ☐ Once a year ☐ Every few months ☐ Monthly ☐ Several times a month ☐

Weekly ☐ Several times a week ☐ Daily ☐ Hourly ☐ Constantly ☐

Associated Health Hazard

 ☐  ☐  ☐  ☐ Other: ***Biohazard*** 

Composition	**Quantity**	Nature of health hazard *Hazard Grouping information based on The Advisory Committee of Dangerous pathogens (ADCP) publication "Categorisation of biological agents according to hazard and categories of containment*	Workplace Exposure Limit (WEL)	**Safety data sheet available?**

APPENDIX G INFECTIOUS CLINICAL WASTE COSHH ASSESSMENT

Biological Agents	**How many orange/ yellow bags and orange or yellow lidded rigid containers are filled/ disposed either daily, weekly or monthly basis** **Clincal Waste bags:** **Clinical Waste bins:** ☐ daily ☐ weekly ☐ monthly	Check box relevant to Hazard Grouping / Category associated with waste ☐ Hazard Group 1 A biological agent unlikely to cause human disease ☐ Hazard Group 2 A biological agent which can cause human disease and may be a hazard to employees: unlikely to spread to the community, usually effective prophylaxis/ treatment available ☐ Hazard Group 3 A biological agent which can cause human disease and presents a serious hazard to employees: may present a risk of spreading in the community but usually effective prophylaxis/ treatment	Contains no substances with occupational exposure limit values	N/A

Potential Exposure Routes (Check all that apply)

Inhalation ☐ Ingestion ☐ Absorption ☐ Eye Contact ☐ Injection ☐

PPE Requirements

PPE requirements for Healthcare clinical settings are detailed within National Infection Prevention and Control manual, Health Protection Scotland http://www.nipcm.hps.scot.nhs.uk/
Chapter 1, Standard Infection Control Precautions (SICPs) '*Personal Protection Equipment*'

Chapter 2, Transmission Based Precautions '*Personal Protection Equipment (PPE): Respiratory Protective Equipment (RPE)*'

Handling and Disposal

The person who produces the waste is responsible for ensuring it is appropriately segregated by disposal into the correct colour coded waste bag or container

- All staff involved in the handling and disposal of clinical waste should receive appropriate training / instruction and be aware of the correct working procedures

APPENDIX G INFECTIOUS CLINICAL WASTE COSHH ASSESSMENT

Handling and Disposal

- For segregation to be effective, an appropriate number of waste receptacles/ sack holders should be available and positioned in locations as close to the point of production as possible
- When handling and disposing of clinical waste, minimise contact with the waste receptacle, eg use of pedal to open sack holders, dropping waste items through open aperture of rigid containers
- If spillage/ contamination occurs whilst disposing of waste, follow direction noted in '*spillage/ emergency procedures'*
- Seal and replace waste receptacles when ¾ full, secure and clearly label to identify the source department and date of production, as per National Infection Prevention and Control manual. Perform hand hygiene following any waste handling/disposal
- Community staff should follow local procedures

Storage and Transport

Arrangements for storage and transfer of infectious clinical waste will differ depending upon where waste is generated however the following principles will always apply:

- All staff involved in the transport of infectious clinical waste should receive appropriate training / instruction and be aware of the correct working procedures
- Remove healthcare waste to the designated waste storage point/ disposal hold and then place in the designated colour coded waste container
- Healthcare waste storage containers/ disposal hold rooms must be locked at all times
- Waste should not be allowed to accumulate in corridors or other places accessible to members of the public
- All rooms, trolleys, bins utilised for the transfer and storage of waste must ONLY be used for this purpose. They should be clearly labelled and be subject to regular cleaning regimes
- Community staff should follow local procedures

End Disposal Routes

Yellow waste streams requires end disposal by incineration

Orange waste stream material may be heat treated to render it safe prior to disposal to approved landfill or alternatively can be incinerated.

Spillage/Emergency procedures

As per National Infection Prevention and Control manual.

Control Measures

APPENDIX G INFECTIOUS CLINICAL WASTE COSHH ASSESSMENT

- All staff involved in the handling/ disposal/ transport/ storage of clinical waste should receive appropriate training / instruction and be aware of the correct working procedures
- Wear the indicated Personal Protective Equipment (PPE), minimally plastic apron and disposable examination gloves
- Protect all breaks in exposed skin by means of waterproof dressings and/or gloves
- Where risk of splashing is identified, protect the eyes by means of eye shield/ eye goggles or visor and the mouth by wearing a suitable face-mask
- Avoid direct contact with blood or body fluids or products contaminated with blood/ body fluids. Where contact is unavoidable, wear indicated Personal Protective Equipment and take all necessary precautions to prevent puncture wounds, cuts and abrasions.
- Avoid the use of, or exposure to, sharps wherever possible, where unavoidable, take particular care when handling and dispose of sharps directly into the correct colour coded waste receptacle immediately after use as close to the point of production as possible
- Segregate and dispose of all waste safely into the appropriate waste stream
- An appropriate number of waste receptacles/ sack holders should be available and positioned in locations as close to the point of production as possible
- Control surface contamination by blood and body fluids by containment and appropriate decontamination procedures
- Avoid hand-to-mouth/hand–to-eye contact

Control measures

- Apply good, basic hygiene practices including hand-washing before and after removing gloves, before and after eating, smoking, applying cosmetics, or preparing food
- Wear indicated personal protective equipment when cleaning up spills of potentially infectious material
- Immediately report needlestick and other sharps-related injuries to line/ department manager and follow National Infection Prevention and Control manual, and contact Occupational Health.
- Datix reporting system is available for accident/ incident reporting

Additional Department/ Speciality Control Measures *(where applicable)*

Monitoring and health surveillance

Working practice (including wearing of PPE) is monitored by line managers.

Occupational Health Department referral where indicated

Risk Rating with current control measures in place

The level of risk associated with *infectious clinical waste* will depend on the potential entry route and the nature of biological agents from source patient. Taking into account control measures that are in place, the estimated residual risk to Health, Safety & Welfare is*: 'check' the relevant box*

APPENDIX G INFECTIOUS CLINICAL WASTE COSHH ASSESSMENT

Likelihood	Severity				
	(1) No Harm	(2) Minor	(3) Moderate	(4) Major	5) Extreme
(5) Almost certain	☐ **Medium**	☐ **High**	☐ **High**	☐ **Very High**	☐ **Very High**
(4) Likely	☐ **Medium**	☐ **Medium**	☐ **High**	☐ **High**	☐ **Very High**
(3) Possible	☐ **Low**	☐ **Medium**	☐ **Medium**	☐ **High**	☐ **High**
(2) Unlikely	☐ **Low**	☐ **Medium**	☐ **Medium**	☐ **Medium**	☐ **High**
(1) Rare	☐ **Low**	☐ **Low**	☐ **Low**	☐ **Medium**	☐ **Medium**

Have 'current controls' reduced the level of risk to satisfactory (green) or acceptable (yellow) levels?

☐ **Yes** If 'Yes', date and sign the assessment and review at regular intervals

☐ **No** If 'No', complete the 'further control measures required' section of the assessment

Further Control Measures Required

Where a significant residual risk has been identified, detail further control measures required to adequately reduce this risk to levels that are *as low as is reasonably practicable*

Further Action/ Control	**Responsible Person**	**Target Date**

Assessment Completed By		**Designation**		**Date**	
COSHH Assessment should be reviewed: *Immediately after adverse incident/injury or following change to working practice or nature of clinical wate being generated/ handled/ transported* *At least annually: Medium risk COSHH assessments* *At least every two years: Low risk COSHH assessments*					
1st Review Completed By		**Designation**		**Date**	
2nd Review Completed By		**Designation**		**Date**	

APPENDIX H CYTOTOXIC WASTE COSHH RISK ASSESSMENT

CYTOTOXIC / CYTOSTATIC WASTE COSHH Risk Assessment

Ward/ Department		Location	

Description of the work activity being assessed

Handling, Segregation & Disposal, Transport and Storage of Cytotoxic / Cytostatic Waste within:

Clinical setting ☐ Community setting ☐ Non clinical setting ☐ *(please specify)*

Product Details

Cytotoxic/ Cytostatic Waste: Wastes contaminated with medicines that possesses one or more, of the following hazardous properties: toxic, carcinogenic, mutagenic or teratogenic, eg systemic anti-cancer therapies, hormonal preparations, antimicrobial substances and some anti-viral drugs. Waste products include (but are not limited to) residual drug preparations and all drug administrative equipment such as needles, syringes, giving sets and used personal protective equipment.

Who is potentially exposed to hazardous substance being assessed? (check all that apply)

Nursing Staff ☐ Medical Staff ☐ Pharmacy Staff ☐ Dental Staff ☐
AHP's ☐ Staff Bank/Locums ☐ Trainees/Students ☐ Support Services Staff ☐
Contractors (ISS/Serco) ☐

New/Expectant Mothers ☐ Young Workers (<18years) ☐ Patients ☐ Other ☐ *Specify:*

Total Numbers of people potentially exposed to cytotoxic/ cytostatic waste:

Frequency of exposure to cytotoxic/ cytostatic waste

Infrequently ☐ Once a year ☐ Every few months ☐ Monthly ☐ Several times a month ☐

Weekly ☐ Several times a week ☐ Daily ☐ Hourly ☐ Constantly ☐

Associated Health Hazard

 ☐  ☐  ☐  ☐ Other: ***Cytotoxic/ Cytostatic waste*** 

APPENDIX H CYTOTOXIC WASTE COSHH RISK ASSESSMENT

Composition	**Quantity**	Nature of health hazard	Workplace Exposure Limit (WEL)	**Safety data sheet available?**
Waste contaminated with cytotoxic and/or cytostatic medicines, eg medicine bottles, infusion bags or syringe barrels, giving sets, used swabs & dressings, used sharps, used PPE, used spill kits and contaminated/ used equipment	**State how many purple rigid containers are filled/ disposed of on either daily, weekly or monthly basis** ..... ☐ daily ☐ weekly ☐ monthly	Waste products contaminated with medicines known to be potentially toxic, carcinogenic, mutagenic and/ or teratogenic	Contact Pharmacy	Contact Pharmacy

Potential Exposure Routes (Check all that apply)

Inhalation ☐ Ingestion ☐ Absorption ☐ Eye Contact ☐ Injection ☐

PPE Requirements

PPE requirements for Administration, Spillage and Disposal of cytotoxic and cytostatic waste is specified within Local Procedures developed via NoSCAN (North of Scotland Advisory Network), "Standard Operating Procedure for Safe Handling and Disposal of Spillage" & Clinical Policy for Safe Handling, Disposal and Management and spillage of Systemic Anti-cancer Therapy (SACT)"

See the earlier mentioned policies and procedures

Handling and Disposal

Handling and disposal arrangements are detailed within Local Procedures developed via NoSCAN (North of Scotland Advisory Network), "Standard Operating Procedure for Safe Handling and Disposal of Spillage" & Clinical Policy for Safe Handling, Disposal and Management and spillage of Systemic Anti-cancer Therapy (SACT)"

- **The person who produces the waste is responsible for ensuring it is appropriately segregated by disposal into the correct colour coded container**

APPENDIX H CYTOTOXIC WASTE COSHH RISK ASSESSMENT

Handling and Disposal (continued)

- All staff involved in the handling and disposal of cytotoxic/ cytostatic waste should receive appropriate training / instruction and be aware of the correct working procedures
- All cytotoxic and cytostatic waste must be placed in dedicated rigid yellow container identified with a 'Cytotoxic Waste' hazard warning and fitted with a purple lid
- Pharmacy must be contacted directly to arrange return of unused cytotoxic drugs
- Disposal is covered in previously mentioned procedures
- Staff should follow direction noted in '*spillage/ emergency procedures'* where there is significant leakage from punctured infusion bags
- Minimise contact with the waste receptacle when handling and disposing of cytotoxic waste
- Patients will be discharged home with the appropriate supplementary equipment, including purple lidded rigid container(s)
- Patients will receive full information in the form of verbal and written information procedures as per Grampian Protocols.
- Community staff must follow local procedures

Storage and Transport

Arrangements for storage and transfer of cytotoxic waste will differ depending upon where waste is generated however the following principles will always apply:

All staff involved in the transport of cytotoxic waste should receive appropriate training / instruction and be aware of the correct working procedures

- Remove cytotoxic waste to the designated waste storage point/ disposal hold and then place in the designated waste container
- Cytotoxic waste should not be allowed to accumulate in corridors or other places accessible to members of the public
- Healthcare waste storage containers/ disposal hold rooms must be locked at all times
- All rooms, trolleys, bins utilised for the transfer and storage of waste must ONLY be used for this purpose. They should be clearly labelled and be subject to regular cleaning regimes
- Primary Care staff (do this for all mention of community staff should follow local procedures for uplift of cytotoxic waste

End Disposal Routes

Purple rigid containers require end disposal by incineration

Spillage/Emergency procedures

Spillage and emergency procedures are detailed in Local Procedures developed via NoSCAN (North of Scotland Advisory Network), "Standard Operating Procedure for Safe Handling and Disposal of Spillage" & Clinical Policy for Safe Handling, Disposal and Management and spillage of Systemic Anti-cancer Therapy (SACT)".

Cytotoxic spill kits are available in areas where cytotoxic/ cytostatic medicines are stored or handled.

APPENDIX H CYTOTOXIC WASTE COSHH RISK ASSESSMENT

Control Measures
• All staff involved in the handling/ disposal/ transport/ storage of cytotoxic waste should receive appropriate training / instruction and be aware of the correct working procedures

Control Measures
Staff will follow Local Procedures developed via NoSCAN (North of Scotland Advisory Network), "Standard Operating Procedure for Safe Handling and Disposal of Spillage" & Clinical Policy for Safe Handling, Disposal and Management and spillage of Systemic Anti-cancer Therapy (SACT)" • Avoid hand-to-mouth/hand–to-eye contact • Apply good, basic hygiene practices including hand-washing before and after removing PPE, before and after eating, smoking, applying cosmetics, or preparing food • Immediately report any adverse incidents and/or near misses relating to cytotoxic waste to line/ department manager, contacting Occupational Health where appropriate. • Datix reporting system is available for accident/ incident reporting
Additional Department/ Speciality Control Measures *(where applicable)*
Monitoring and health surveillance
Working practice (including wearing of PPE) is monitored by line managers. Occupational Health Department referral where indicated

Risk Rating with current control measures in place The level of risk associated with *cytotoxic/ cytostatic waste* will depend on the potential entry route and the nature of cytotoxic/ cytostatic medicinal products or products contaminated with cytotoxic/ cytostatic products.

Taking into account control measures that are in place, the estimated residual risk to Health, Safety & Welfare is*: 'check' the relevant box*

Likelihood	**Severity**				
	(1) No Harm	(2) Minor	(3) Moderate	(4) Major	5) Extreme
(5) Almost certain	☐ **Medium**	☐ **High**	☐ **High**	☐ **Very High**	☐ **Very High**
(4) Likely	☐ **Medium**	☐ **Medium**	☐ **High**	☐ **High**	☐ **Very High**
(3) Possible	☐ **Low**	☐ **Medium**	☐ **Medium**	☐ **High**	☐ **High**
(2) Unlikely	☐ **Low**	☐ **Medium**	☐ **Medium**	☐ **Medium**	☐ **High**
(1) Rare	☐ **Low**	☐ **Low**	☐ **Low**	☐ **Medium**	☐ **Medium**

Have 'current controls' reduced the level of risk to satisfactory (green) or acceptable (yellow) levels?

☐ **Yes** If 'Yes', date and sign the assessment and review at regular intervals

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APPENDIX H CYTOTOXIC WASTE COSHH RISK ASSESSMENT

Further Control Measures Required Where a significant residual risk has been identified, detail further control measures required to adequately reduce this risk to levels that are *as low as is reasonably practicable*		
Further Action/ Control	**Responsible Person**	**Target Date**

Assessment Completed By		**Designation**		**Date**	
COSHH Assessment should be reviewed: *Immediately after adverse incident/injury or following change to working practice or nature of cytotoxic/ cytostatic waste being generated/ handled/ transported* *At least annually: Medium risk COSHH assessments* *At least every two years: Low risk COSHH assessments*					
1st Review Completed By		**Designation**		**Date**	
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