Risk Assessment [Ref Number: 32542] - Live

Date Printed: Monday, 26 February 2024

Name	Transport the non-hazardous fine powder or film samples to cmm	Managed (Current) Rating	Target (Residual) Rating
		Low	Low
Location	Hawken Engineering Building (01.0050), Australian Institute for Bioengineering and Nanotechnology (01.0075)		
Location Category	Facility - Laboratory		

Business Unit	Last Review Date	Risk Owner
Australian Institute for Bioengineering and Nanotechnology	15/02/2024	Shengchun Ma

Risk Assessment Team	Risk Approver
	Yusuke Yamauchi

Additional Notes

Describe task / use

This assessment applies to non-hazardous fine powder or film for SEM/TEM/EBL/FIB/XPS/XRD samples -

MOF and COF samples (particles/film on membrane) are prepared in lab of origin and mounted on standard instrument mounts (e.g. stubs) before transport (in labeled, impact resistant containers) to CMM laboratories for further analysis.

SPILLS: Return material to original container and return to lab of origin. Use forceps or wear PPE (latex or nitrile gloves) if direct contact with sample is possible. This is to minimize contamination of sample. Samples that are no longer required can be disposed of in the clinical waste stream. Large volume samples should be returned to lab of origin for disposal.

First Aid: Generally not required. Treat symptomatically.

Risk Factors

Risk Factor	Chemical/Toxins/Poisons/Gases

Description

Sample may be dropped during transport and preparation for analysis.

Sample: Metal Organic Framework (MOF) or Covalent Organic Framework (COF)

MOF containing at least 2 of the following as precursors:
Zirconium chloride
Cobalt nitrate hexahydrate
Zinc Nitrate Hexahydrate
Sodium squarate
2-methylimidazole
Imidazole
Benzimidazole
2-aminoterepthalic acid
p-phthalic acid

COF containing at least 2 of the following as precursors:
1,3,5-triformylphloroglucinol
2,5-diaminobenzenesulfonic acid
P-PHENYLENEDIAMINE
p-Phenylenediamine (Pa)
BENZIDINE
4,4'-Diamino[1,1'-Biphenyl]-2,2'-Disulfonic Acid

- Absorption/skin mucosa -- Yes
- Accumulative effects -- No
- Carcinogen -- No
- Chemical splash/spill -- Yes
- Corrosive substance -- No
- Compressed gas -- No
- Cryogenic substance -- No
- Dangerous when wet -- No
- Explosives/explosive atmosphere -- No
- Flammable liquid -- No
- Flammable solid -- No
- Harmful irritant -- Yes
- Incompatible with other chemicals -- No
- Ingestion -- No
- Inhalation -- Yes
- Needle stick or sharps injury -- No
- Oxidiser -- No
- Poison -- No
- Sensitising agent -- No
- Serious irreversible affects -- No
- Spontaneously combustible -- No
- Storage hazard -- No
- Toxic substance/toxin -- No

Reports identifying people are confidential documents.
Statistical information shall only be used for internal reporting purposes.

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Low	Low
Existing Controls	**Proposed Controls**
• 4 - Engineering: No reasonably practicable additional controls will improve the already low risk level. • 4 - Engineering: Samples transported in sealed plastic containers • 5 - Administration: Waste samples need to be returned to the lab of origin and contain in suitable waste container. Spills: Collect and return to original or similar container. Dispose of unwanted material in clinical waste stream. Sweep up debris and dispose in clinical waste steam. Wear PPE if direct contact possible. Recycle stubs. • 6 - PPE: Latex or nitrile gloves used to prevent sample contamination if direct contact with sample is possible.	

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Appendix

Risk Matrix Level	
Low	Task can proceed upon approval of the risk assessment by relevant Line Manager or supervisor is received.
Medium	Task can proceed upon approval of the risk assessment by relevant Line Manager or Supervisor is received. It is recommended that a plan is developed to reduce the risk within a reasonable timeframe.
High	Task can only proceed in extraordinary circumstances and provided there is authorisation by relevant Head of Function and a plan is in place to promptly reduce the risk to an acceptable level.
Extreme	Task must not proceed. Appropriate and prompt action must be taken to reduce the risk to an acceptable level.

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