***Task Risk Assessment‑Word Document***

Printed By: Wendy Armstrong

**Intracampus transport of unfixed biological material (Risk Group 1)** (insert name of sample here) **to CMM labs**

**Name:**

**Task/Process ID:**

**Task/Process Details**

Based on **29217**

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**Author:**

**Supervisor:**

**Last Updated By:**

---------------------------------- On --/--/201-

**Effective Risk Level:**

**Low**

**Action:**

Risk is normally acceptable

**Campus:**

**Faculty/Division:**

**School/Centre:**

**Workplace:**

St Lucia

Fac ‑ Science

CMM St Lucia Labs

Approval Date:

**Workplace Location of the Task/Process**

**Status: Approved**

**Risks Associated with this Task/Process or Situation**

**Audited By:**

**Audit Date:**

--2/--/201-

Centre for Microscopy and Microanalysis (CMM)

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Unfixed biological samples are occasionally transported to CMM labs for processing.

These samples must be of Risk Group 1 as defined by AS/NZS 2243.3:2002 i.e. "unlikely to cause human, plant or animal disease". Laboratory bred, disease free animals (non‑GM) are generally considered Risk Group 1. If the samples are plant material, it must be reasonably expected that they are pathogen free (i.e. grown in controlled conditions ‑‑ disease free, insect free and monitored). Therefore, the pathological history of samples must be known before use.

Samples may be transported either in an unprocessed state or in buffer. They must be labelled and are transported in double, sealed containers (outer container impact resistant plastic). This is in addition to any esky.

All material is to be chemically sterilized on completion of work by ethanol, glutaraldehye or bleach or returned to a PC1 or PC2 laboratory.

**Process\Job Desc:**

**Exposure to sample**

**Risk Situation:**

**Current Controls:**

Elimination should be the first control measure considered. Samples should be fixed where possible with conventional EM fixatives or other sterilization techniques. Unfixed processing should only be considered for samples that cannot be processed by conventional means.

All material is to be chemically sterilized on completion of work by ethanol, glutaraldehye or bleach (see separate risk assessment).

Microbiological

**Energy Source:**

Person is exposed to pathogen from contaminated biological sample.

**Hazard Event:**

Contact with, or exposure to, biological factors

**Incident Category:**

**Prepared By:**

**Assessment Date:**

02/07/2012

***Risk Analysis***

**Consequence:**

Minor

**Rationale:**

Group 1 pathogens are not harmful to humans or cause minor infections.

**Exposure:**

**Rationale:**

Occasional

Individuals may transport material to CMM labs up to once per week.

**Probability:**

**Rationale:**

Practically impossible

No exposure to biological samples (Risk Group ) has resulted in injury and it is practically impossible.

**Risk Level:**

**Low**

**Action:**

**Risk is normally acceptable**

No Additional Controls

Unfixed biological samples (Risk Group 1) are sometimes transferred to CMM in buffers.

**Process\Job Desc:**

**Exposure to chemicals**

**Risk Situation:**

**Current Controls:**

See chemical risk assessment.

Chemical

**Energy Source:**

Person contacts sample in buffer.

**Hazard Event:**

Single contact with chemical or substance

**Incident Category:**

**Prepared By:**

**Assessment Date:**

27/06/2012

***Risk Analysis***

**Consequence:**

Minor

**Rationale:**

No injury is likely from short term contact with sample in buffer but some buffers contain low levels of toxic substances.

**Exposure:**

**Rationale:**

Occasional

Individuals transport samples to CMM labs approximately once per week.

**Probability:**

**Rationale:**

Conceivable

No injuries have resulted from exposure to samples in buffer but it is conceivable.

**Risk Level:**

**Low**

**Action:**

**Risk is normally acceptable**

No Additional Controls

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**Chemical Risk Assessment Details**

**Substances: (4)**

**Substance Name:**

**Form:**

**Concentration:**

**Hazardous Substance:**

**UN Number:**

**DG Class:**

**Yes**

Liquid

Not classified as a Dangerous Good

**SodiumCacodylate 0.1M CW#5078‑87**

Dilute

Transported in double sealed container ‑ no route of exposure likely.

**Storage Location:**

**Health Effects**

**Hazardous Reactions**

**Route of Exposure**

**Evidence of Exposure**

NIL:

NIL:

NIL:

NIL:

**Yes**

**No**

**No**

**Yes**

Irritant:

**No**

Explosive:

**No**

Inhalation:

**No**

Presence of dusts/fumes/odours:

**No**

Corrosive:

**No**

Flammable:

**No**

Skin absorption:

**Yes**

Leaks/spills/residues:

**No**

Sensitiser:

**Yes**

Peroxide forming chemicals:

**No**

Eye contact:

**No**

Worker symptoms and complaints:

**No**

Asphyxiant:

**No**

Water reactive:

**No**

Ingestion:

**No**

Previous incidents and exposures:

**No**

Toxic:

**Yes**

Oxidising agents:

**No**

Needlestick:

**No**

Neighbouring activities impact:

**No**

Carcinogenic:

**Yes**

Cryogenic:

**No**

Mutagenic:

**No**

Pyrophoric:

**No**

Teratogenic:

**No**

Cytotoxic:

**No**

Neurotoxic:

**No**

Reproductive:

**No**

**Substance Name:**

**Form:**

**Concentration:**

**Hazardous Substance:**

**UN Number:**

**DG Class:**

**No**

Liquid

Not classified as a Dangerous Good

**Phosphate buffer CW# 5064‑54**

dilute

Transported in double sealed container ‑ no route of exposure likely.

**Storage Location:**

**Health Effects**

**Hazardous Reactions**

**Route of Exposure**

**Evidence of Exposure**

NIL:

NIL:

NIL:

NIL:

**Yes**

**Yes**

**No**

**Yes**

Irritant:

**No**

Explosive:

**No**

Inhalation:

**No**

Presence of dusts/fumes/odours:

**No**

Corrosive:

**No**

Flammable:

**No**

Skin absorption:

**Yes**

Leaks/spills/residues:

**No**

Sensitiser:

**No**

Peroxide forming chemicals:

**No**

Eye contact:

**No**

Worker symptoms and complaints:

**No**

Asphyxiant:

**No**

Water reactive:

**No**

Ingestion:

**No**

Previous incidents and exposures:

**No**

Toxic:

**No**

Oxidising agents:

**No**

Needlestick:

**No**

Neighbouring activities impact:

**No**

Carcinogenic:

**No**

Cryogenic:

**No**

Mutagenic:

**No**

Pyrophoric:

**No**

Teratogenic:

**No**

Cytotoxic:

**No**

Neurotoxic:

**No**

Reproductive:

**No**

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**Substance Name:**

**Form:**

**Concentration:**

**Hazardous Substance:**

**UN Number:**

**DG Class:**

**No**

Liquid

Not classified as a Dangerous Good

**Water**

concentrated

**Storage Location:**

**Health Effects**

**Hazardous Reactions**

**Route of Exposure**

**Evidence of Exposure**

NIL:

NIL:

NIL:

NIL:

**Yes**

**Yes**

**No**

**Yes**

Irritant:

**No**

Explosive:

**No**

Inhalation:

**No**

Presence of dusts/fumes/odours:

**No**

Corrosive:

**No**

Flammable:

**No**

Skin absorption:

**Yes**

Leaks/spills/residues:

**No**

Sensitiser:

**No**

Peroxide forming chemicals:

**No**

Eye contact:

**No**

Worker symptoms and complaints:

**No**

Asphyxiant:

**No**

Water reactive:

**No**

Ingestion:

**No**

Previous incidents and exposures:

**No**

Toxic:

**No**

Oxidising agents:

**No**

Needlestick:

**No**

Neighbouring activities impact:

**No**

Carcinogenic:

**No**

Cryogenic:

**No**

Mutagenic:

**No**

Pyrophoric:

**No**

Teratogenic:

**No**

Cytotoxic:

**No**

Neurotoxic:

**No**

Reproductive:

**No**

**Substance Name:**

**Form:**

**Concentration:**

**Hazardous Substance:**

**UN Number:**

**DG Class:**

**No**

Solid

Not classified as a Dangerous Good

**Unfixed biological material (Risk Group 1) ----------------------------------------------**

concentrated

Very small volume. Routes of exposure unlikely.

**Storage Location:**

**Health Effects**

**Hazardous Reactions**

**Route of Exposure**

**Evidence of Exposure**

NIL:

NIL:

NIL:

NIL:

**Yes**

**Yes**

**No**

**Yes**

Irritant:

**No**

Explosive:

**No**

Inhalation:

**Yes**

Presence of dusts/fumes/odours:

**No**

Corrosive:

**No**

Flammable:

**No**

Skin absorption:

**Yes**

Leaks/spills/residues:

**No**

Sensitiser:

**No**

Peroxide forming chemicals:

**No**

Eye contact:

**No**

Worker symptoms and complaints:

**No**

Asphyxiant:

**No**

Water reactive:

**No**

Ingestion:

**No**

Previous incidents and exposures:

**No**

Toxic:

**No**

Oxidising agents:

**No**

Needlestick:

**No**

Neighbouring activities impact:

**No**

Carcinogenic:

**No**

Cryogenic:

**No**

Mutagenic:

**No**

Pyrophoric:

**No**

Teratogenic:

**No**

Cytotoxic:

**No**

Neurotoxic:

**No**

Reproductive:

**No**

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**Risk Control**

**Elimination/Substitution:**

Substitution: Chemically fix material before transport. Ideally replace fixative with phosphate buffer or water or sodium cacodylate before transport if possible.

Other engineering controls: Samples transported in double sealed container. Second container should be impact resistant plastic. This is in addition to any "esky" or cooler.

**Engineering Controls:**

Effective and maintained well

**Effectiveness:**

Written emergency procedures: Risk assessment containing spill procedures available in lab. Good housekeeping practices: All work areas to be cleaned prior to and after use. All spills to be cleaned up immediately. Supervision: Supervised by staff until competent. Good personal hygiene practices: Thorough washing of hands before leaving lab.

**Administrative Controls:**

Effective and maintained well

**Effectiveness:**

Training (job specific / general OHS induction): UQ on‑line OHS induction required. Lab specific OHS induction required. 1 on 1 training in use of chemicals required before allowed to use facilities.

**Training Controls:**

Effective and maintained well

**Effectiveness:**

Gloves: Nitrile (splash protection only) ‑ for spills and general use at CMM. Coat/apron: Lab coat (at CMM). Footwear: Enclosed shoes.  Eye protection: Safety glasses (at CMM). Other: Eyewash/ safety shower (at CMM).

**PPE Controls:**

Effective and maintained well

**Effectiveness:**

**Waste Disposal:**

Sample waste is to be transported to lab of origin or sterilized (70% w/w ethanol / standard aldehyde fixatives / bleach) before disposal in clinical waste stream. All benches and contaminated instrumentation to be sterilized with 70% w/w ethanol. All chemicals are to be placed in substance specific waste containers in fumehood. Waste to be collected by Chemwaste. Minor Spills: All material ‑ Wear nitrile gloves. Sample: Place in sealed, labelled plastic container and place in clinical waste stream. Decontaminate area with 70% ethanol. Phosphate buffer or water ‑ absorb with paper towelling and dispose in clinical waste stream. Wash area with water and dispose down sink. Cacodylate ‑ absorb with paper towelling. Seal in labelled plastic bag for disposal in clinical waste stream. Wash area with water and dispose down sink.

**Storage Incompatibilities:**

None

**Safety Instructions:**

Biological material: If unfixed samples come in contact with skin, wash area well. Buffers: Avoid wearing of contact lenses if using these chemicals. Skin contact: Wash with water. Eye contact: Wash with water for 15 minutes. Seek medical attention if irritation occurs. Swallowed: Seek medical advice.

**Risk Determination**

**Health Surveillance Req:**

**Air Monitoring:**

**Exposure Frequency:**

**Risk Level:**

No

**Significant but controlled**

Unusual

No

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