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



Printed By: Wendy Armstrong

**Intracampus transport of biological samples** (insert name of sample here) **(in aldehyde fixatives) to CMM**

**Name:**

**Task/Process ID:**

**Task/Process Details**

Based on **3994**

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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 AIBN and Hawken labs

Approval Date:

**Workplace Location of the Task/Process**

**Status: Approved**

Biological samples are usually transferred to CMM laboratories in buffers and occasionally in fixatives.

**Process\Job Desc:**

**Exposure to chemical fixative.**

**Risk Situation:**

**Current Controls:**

See chemical risk assessment for all details.

Substitution: CMM staff advise that samples be transferred from fixative to non‑hazardous buffer before transport.

Engineering: All samples to be transported in a double‑sealed container.

Administrative: Small volumes of diluted solutions supplied for use. Spill kit carried with samples.

PPE: Nitrile gloves to handle samples when not in double sealed container. Enclosed shoes.

Training: Users trained in use of EM chemicals (including spill procedures).

Chemical

**Energy Source:**

Person comes in contact the sample in fixative or with the fixative, either liquid or vapour.

**Hazard Event:**

Single contact with chemical or substance

**Incident Category:**

**Prepared By:**

**Assessment Date:**

29/03/2011

***Risk Analysis***

**Consequence:**

Minor

**Rationale:**

Only small volumes of fixative are used so the most likely injury from short term contact with samples in fixative is minor chemical burn.

**Exposure:**

**Rationale:**

Occasional

Individuals transport sample to CMM labs approximately once per week on average.

**Probability:**

**Rationale:**

Remotely possible

It is remotely possible that exposure to samples in fixative may occur and result in minor injuries.

**Risk Level:**

**Low**

**Action:**

**Risk is normally acceptable**

No Additional Controls

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

**Audited By:**

**Audit Date:**

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V110712

Page 1 of 4

Printed: 9/07/2012

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**Chemical Risk Assessment Details**

**Substances: (5)**

**Substance Name:**

**Form:**

**Concentration:**

**Hazardous Substance:**

**UN Number:**

**DG Class:**

**Yes**

Liquid

Not classified as a Dangerous Good

**Sodium cacodylate 0.1M (cw# 5078‑88)**

dilute

Small volumes. Transported in double sealed container.

**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:

**No**

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

**Non‑viable biological ---------------------- (chemically fixed)**

dilute

Cells are chemically sterilized before transport in cacodylate or phosphate buffer.

**Storage Location:**

**Health Effects**

**Hazardous Reactions**

**Route of Exposure**

**Evidence of Exposure**

NIL:

NIL:

NIL:

NIL:

**Yes**

**Yes**

**Yes**

**Yes**

Irritant:

**No**

Explosive:

**No**

Inhalation:

**No**

Presence of dusts/fumes/odours:

**No**

Corrosive:

**No**

Flammable:

**No**

Skin absorption:

**No**

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**

V110712

Page 2 of 4

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**Substance Name:**

**Form:**

**Concentration:**

**Hazardous Substance:**

**UN Number:**

**DG Class:**

**No**

Liquid

Not classified as a Dangerous Good

**Phosphate buffer 0.1M (cw# 5064‑54)**

dilute

Small volumes. Transported in double sealed container

**Storage Location:**

**Health Effects**

**Hazardous Reactions**

**Route of Exposure**

**Evidence of Exposure**

NIL:

NIL:

NIL:

NIL:

**Yes**

**Yes**

**Yes**

**Yes**

Irritant:

**No**

Explosive:

**No**

Inhalation:

**No**

Presence of dusts/fumes/odours:

**No**

Corrosive:

**No**

Flammable:

**No**

Skin absorption:

**No**

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:**

**Yes**

Liquid

6 ‑ Toxic or infectious

**Glutaraldehye <5% (cw# 45628)**

dilute

Small volumes. Transported in double sealed container. Open only in fumehood

**Storage Location:**

**Health Effects**

**Hazardous Reactions**

**Route of Exposure**

**Evidence of Exposure**

NIL:

NIL:

NIL:

NIL:

**Yes**

**No**

**No**

**Yes**

Irritant:

**Yes**

Explosive:

**No**

Inhalation:

**Yes**

Presence of dusts/fumes/odours:

**No**

Corrosive:

**Yes**

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:

**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:**

**Yes**

Liquid

Not classified as a Dangerous Good

**Formaldehyde soln <10% (cw# 62472)**

dilute

Small volumes. Transported in double sealed container. Open only in fumehood

**Storage Location:**

**Health Effects**

**Hazardous Reactions**

**Route of Exposure**

**Evidence of Exposure**

NIL:

NIL:

NIL:

NIL:

**Yes**

**No**

**No**

**Yes**

V110712

Page 3 of 4

Printed: 9/07/2012

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



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Irritant:

**Yes**

Explosive:

**No**

Inhalation:

**Yes**

Presence of dusts/fumes/odours:

**No**

Corrosive:

**Yes**

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**

**Risk Control**

**Elimination/Substitution:**

Substitution: After required fixation time, replace aldehyde fixative with phosphate or sodium cacodylate buffer before transport if possible.

Isolation/containment: Samples transported in double sealed container. Second container should be impact resistant plastic. This is in addition to any "esky" or cooler. Samples must be accompanied by mini spill kit.

**Engineering Controls:**

Effective and maintained well

**Effectiveness:**

Training (job specific / general OHS induction): UQ on‑line OH&S induction required. Lab specific OH&S induction required.1 on 1 training in use of chemicals required before allowed to use facilities. Supervision: Assistance provided for first use of procedure and continued until competent. Good housekeeping practices: Small volumes of dilute fixatives supplied for use. Spill kit available. Spills cleaned up immediately. Written emergency procedures: Available in this risk assessment.

**Administrative Controls:**

Effective and maintained well

**Effectiveness:**

 See Administration controls .

**Training Controls:**

Effective and maintained well

**Effectiveness:**

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

**PPE Controls:**

Effective and maintained well

**Effectiveness:**

**Waste Disposal:**

All chemicals to be placed in substance specific waste container in each fumehood. Waste to be collected by Chemwaste. Minor Spills: Clean up only if safe to do so (be aware of vapours and ensure adequate airflow). Wear nitrile gloves and protective eyewear. Absorb remaining solution with vermiculite or similar absorbent material. Seal in labelled plastic bag for disposal.

**Storage Incompatibilities:**

All chemicals to be kept away from large volumes of flammable substances.

**Safety Instructions:**

Avoid wearing of contact lenses if using these chemicals. Skin contact: Wash with large amounts of water immediately. 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

V110712

Page 4 of 4

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