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

Printed By: Wendy Armstrong

**Intracampus transport of unfixed (pathogen free) plant material** (insert plant details here) **to CMM labs**

**Name:**

**Task/Process ID:**

**Task/Process Details**

Based on **14391**

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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:**

--/--/201-

Centre for Microscopy and Microanalysis (CMM)

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Unfixed plant material is transferred to CMM laboratories in buffers. Plant material must be reasonably expected to be pathogen free (i.e. grown in controlled conditions ‑ disease free, insect free and monitored) unless transported to a CMM PC2 facility ‑ separate risk assessment required for PC2 material. All material is to be chemically sterilized on completion of work by ethanol, glutaraldehye or bleach or returned to a PC2 laboratory.

**Process\Job Desc:**

**Transport of plant material ‑ exposure to pathogen**

**Risk Situation:**

**Current Controls:**

It must be reasonably expected that the plant material is pathogen free (i.e. grown in controlled conditions ‑ disease free, insect free and monitored) unless transported to a CMM PC2 facility. All material is to be chemically sterilized on completion of work by ethanol, glutaraldehye or bleach (see separate risk assessment) or returned to a PC2 laboratory.

Microbiological

**Energy Source:**

Exposure to pathogen from contaminated sample.

**Hazard Event:**

Single contact with chemical or substance

**Incident Category:**

**Prepared By:**

**Assessment Date:**

04/07/2012

***Risk Analysis***

**Consequence:**

Minor

**Rationale:**

Most plant 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

Plant pathogens are highly unlikely to be present and are unlikely to contact people.

**Risk Level:**

**Low**

**Action:**

**Risk is normally acceptable**

No Additional Controls

Plant material is transferred to CMM laboratories in buffers.

**Process\Job Desc:**

**Transport of plant sample in standard buffers or water ‑ 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:**

04/07/2012

***Risk Analysis***

**Consequence:**

Minor

**Rationale:**

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

**Exposure:**

**Rationale:**

Occasional

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

**Probability:**

**Rationale:**

Conceivable

No exposure to samples in buffer has resulted in injuries 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

**Sodium Cacodylate 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:

**No**

**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:

**Yes**

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**

Solid

Not classified as a Dangerous Good

**Plant material (unfixed)** (insert plant details here)

concentrated

Material is to be pathogen free and chemically sterilized after use.

**Storage Location:**

**Health Effects**

**Hazardous Reactions**

**Route of Exposure**

**Evidence of Exposure**

NIL:

NIL:

NIL:

NIL:

**No**

**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:

**Yes**

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

**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:

**No**

**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:

**Yes**

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**

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:

**No**

**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:

**Yes**

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

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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 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 after use. Good personal hygiene practices: Wash hands thoroughly before leaving lab. Supervision: Assistance provided for use of procedure until competent. Staff to provide supervision.

**Administrative Controls:**

Effective and maintained well

**Effectiveness:**

UQ on‑line OHS induction required. Lab specific OHS induction required. One on one training in use of chemicals required before allowed to use facilities.

**Training Controls:**

Effective and maintained well

**Effectiveness:**

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

**PPE Controls:**

Effective and maintained well

**Effectiveness:**

**Waste Disposal:**

Sample waste is to be transported to lab of origin or sterilized (70% ethanol / standard aldehyde fixatives / bleach) before disposal in clinical waste stream. All benches and contaminated instrumentation to be sterilized with 70% ethanol. All chemicals are to be placed in substance specific waste containers in fumehoods. 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. Buffer: Water or phosphate ‑ 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:**

Plant material: No special safety instructions. Buffers: Avoid wearing of contact lenses if using these chemical. 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

**Not Significant**

Unusual

No

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