

Name	Outreach activities	Managed (Current) Rating	Target (Residual) Rating
		Low	Low
Location	St Lucia (01)		
Location Category	Facility - Laboratory		
Business Unit		Last Review Date	Risk Owner
	Environment	23/08/2024	Daniel Chew
Risk Assessment Team		Risk Approver	
		Chiam Ang	
Additional Notes			
Describe task / use			
	General risk assessment for outreach activities conducted by Dr Gurion Ang and team.		

Risk Factors

Risk Factor	Chemical/Toxins/Poisons/Gases
Description	
Students will learn how to use micropipettes with food dye in 1% glycerol.	<ul style="list-style-type: none"> • Absorption/skin mucosa -- No • Accumulative effects -- No • Carcinogen -- No • Chemical splash/spill -- No • 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 -- No • Incompatible with other chemicals -- No • Ingestion -- No • Inhalation -- No • Needle stick or sharps injury -- Yes • Oxidiser -- No • Poison -- No • Sensitising agent -- No • Serious irreversible affects -- No • Spontaneously combustible -- No • Storage hazard -- No • Toxic substance/toxin -- No

Low	Low
Existing Controls	Proposed Controls
<ul style="list-style-type: none"> • 5 - Administration: Used tips are to be disposed in a sharps bin. • 6 - PPE: Gloves must be worn. 	

Risk Factor	Chemical/Toxins/Poisons/Gases
Description	
<p>70% ethanol is used a disinfecting agent during microbiological teaching. It is also used a precipitating agent for DNA extraction.</p>	<ul style="list-style-type: none"> ● Absorption/skin mucosa -- No ● Accumulative effects -- No ● Carcinogen -- No ● Chemical splash/spill -- No ● Corrosive substance -- No ● Compressed gas -- No ● Cryogenic substance -- No ● Dangerous when wet -- No ● Explosives/explosive atmosphere -- No ● Flammable liquid -- Yes ● Flammable solid -- No ● Harmful irritant -- No ● Incompatible with other chemicals -- No ● Ingestion -- Yes ● 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 -- Yes

Low	Low
Existing Controls	Proposed Controls
<ul style="list-style-type: none"> • 5 - Administration: Ethanol must not be handled by students until required. • 6 - PPE: Gloves must be worn. 	

Risk Factor	Chemical/Toxins/Poisons/Gases
Description	
<p>DNA extraction buffer is made up of table salt (sodium chloride), water and consumer-grade dishwashing detergent.</p>	<ul style="list-style-type: none"> ● Absorption/skin mucosa -- No ● Accumulative effects -- No ● Carcinogen -- No ● Chemical splash/spill -- No ● 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 -- Yes ● Inhalation -- Yes ● Needle stick or sharps injury -- No ● Oxidiser -- No ● Poison -- No ● Sensitising agent -- Yes ● Serious irreversible affects -- No ● Spontaneously combustible -- No ● Storage hazard -- No ● Toxic substance/toxin -- Yes

Low	Low
Existing Controls	Proposed Controls
<ul style="list-style-type: none"> 6 - PPE: Gloves must be worn. 	

Risk Factor	Biological
Description	
<p>E. coli is used to teach techniques in microbiology, namely collecting bacteria from a bacterial lawn and spreading bacterial cultures on a plate to create distinct colonies. Students will also use micropipettes to learn how to extract bacterial and plasmid DNA.</p>	<ul style="list-style-type: none"> • Allergic reaction to plant, animal or insect -- Yes • Anaphylaxis -- No • Animal - attack, scratch or bite -- No • Biological particulates (e.g. mould, spores) -- No • Biological waste -- Yes • Food poisoning/contamination, poor food handling practices -- No • Genetically Modified (GM) organism or microorganism -- Yes • Human blood/body fluids/tissues -- No • Infectious animal diseases (zoonose) -- No • Infectious microorganisms/diseases -- Yes • Lab animal allergy -- No • Needle stick or sharps injury -- Yes • Poison, toxin or venom from animal, insect or plant -- No • Spill/splash -- No • Transporting biological material -- No • Unintentional release -- No

Low	Low
Existing Controls	Proposed Controls
<ul style="list-style-type: none"> • 2 - Substitution: The E. coli used here is of the DH5a strain, which has been genetically modified to minimise infectivity and pathogenicity. • 5 - Administration: Used tips are to be disposed in a sharps bin. Used loops and spreaders are disinfected with 70% ethanol and disposed in a sharps bin. • 6 - PPE: Gloves must be worn. 	

Risk Factor	Environment/Hazardous Area
Description	
Experience Ecology and IA2 data collection days. Students will participate in data collection at specified sites around UQ St Lucia.	<ul style="list-style-type: none"> ● Construction site -- No ● Damage to environment -- No ● Diving -- No ● Electrical -- No ● Extreme cold -- No ● Extreme heat -- No ● Falling object -- No ● Fire -- No ● Hazards associated with working in confined spaces -- No ● Inclement weather -- Yes ● Low oxygen atmosphere/asphyxiant/suffocation -- No ● Natural disaster -- No ● Noise - prolonged exposure -- No ● Noise - short sudden exposure -- No ● Particulate/fume -- No ● Risk of fire from ignition sources including laser use -- No ● Roof spaces -- No ● Sharp objects -- No ● Slip/trip/fall -- Yes ● Sunburn -- Yes ● Travel by vehicle -- No ● Trenches/excavations -- No ● Tunnels -- No ● Vacuum/implosion -- No ● Vibration generated from plant/equipment -- No ● Water - flood, tides, ingress -- No

- Working alone and/or in isolation -- No
- Working/falling from heights -- No

Low	Low
Existing Controls	Proposed Controls
<ul style="list-style-type: none"> • 5 - Administration: Plan for alternative activity in the event of inclement weather. • 5 - Administration: At least one certified first-aider must be on site at all times. In the event of an emergency, UQ security must be notified. • 6 - PPE: Covered shoes must be worn throughout the day. Appropriate sun protection (sunscreen, sunglasses and hat) must be worn. 	

Appendix

Risk Matrix Level

Low	Task can proceed upon approval of the risk assessment by relevant Line Manager or supervisor is received.
Medium	<p>Task can proceed upon approval of the risk assessment by relevant Line Manager or Supervisor is received.</p> <p>It is recommended that a plan is developed to reduce the risk within a reasonable timeframe.</p>
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.