Location:	**Building Number:**	**Date:**	**Assessed By:**	**Health & Safety Representative:**
Room W301, Medical Building	**181**	February 2016	**Amber Willems Jones**	**Vincé Kalangi**

Description of Activity: **4.6 Ethanol purification of DNA** **SWP 4.6:**	
Is there past experience with the Activity that may assist in the risk assessment? Incidents & Near-hits, Incident Investigations, Workplace Inspections, Training, Standards, Legislation & Codes, Uni Guidance Material, Existing Controls, Industry Standards.	**NO**

1. TASK	**2. HAZARD**	**3. Estimated RAW RISK SCORE C x E x L**	**4. CONTROLS**	**5. Residual Risk Score RISK SCORE**				**6. Residual Risk**
				C	**E**	**L**	**C x E x L**	
Ethanol purification of DNA	Highly flammable, Irritating to eyes.	15x3x1	Personal Protective Equipment ; training ; good ventilation	15	3	0.1	4.5	low
	TOTAL	45		TOTAL			4.5	

Name & Signature of Laboratory Head/Supervisor or Delegate	Amber Willems Jones	Date	
Name & Signature of Person Performing Activity or Task		Date	

Number and Title	PRG 4.6 Ethanol purification of DNA
Name of Laboratory/Department	The University of Melbourne IGEM Team Laboratory, Department of Biochemistry
Author, Date Prepared & Date of Review	Author: Ella Bocquet-Gaylard Date: 1/2/2016 Updated : February 2016, Review by: February 2018
Introduction	The methods outlined in the following describe how to purify DNA using ethanol
Principles / Scope	Purification of DNA with ethanol
Risk Management	***Risk assessments have been prepared and are available in the Risk Register (or attached to the SWP)*. Raw Risk: low Residual Risk:low**
Safety Management	**Hazards:** Always wear appropriate personal protective equipment **Risk Controls:** A, P
Licences / Permits	N/A
Training / Competency	All team members must be inducted into the use of any equipment used.
Equipment	
Step 1	Make sample up to 200 uL using sterile Milli Q water
Step 2	Add 500 µl ice cold ethanol
Step 3	Add 0.5 µl of glycogen
Step 4	Vortex briefly
Step 5	Incubate at -80C for 20min – 1hr, or on ice for 2 hours
Step 6	Spin at max speed in the micro-centrifuge for 10 min
Step 7	Discard supernatant, wash pellet with 70% ethanol
Step 8	Spin at max speed for 2 min
Step 9	Discard supernatant
Step 10	Air dry pellet until all ethanol has evaporated
Step 11	Dissolve DNA in appropriate volume of sterile MQ or buffer.
Controls / Calibration	N/A
Waste Disposal	***Disposal requirements:***

	Follow PC I guidelines for handling, cleaning and when necessary, disposal of bacterial culture and solid wastes.
Emergency Procedures	First aid measures Eye contact: Immediately flush eyes with plenty of water for at least 20 minutes and get medical attention. Skin contact: In case of contact, immediately flush skin with plenty of water for at least 20 minutes. Inhalation: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention. Ingestion: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Call medical doctor or poison control centre immediately.
References	
Authorised By	Amber Willems Jones