

<b>Location:</b> Room W301, Medical Building	<b>Building Number:</b> 181	<b>Date:</b> March 2016	<b>Assessed By:</b> Amber Willems-Jones	<b>Health &amp; Safety Representative:</b> Vincé Kalangi
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**Description of Activity:**

Autoclaving

**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. RISK	3. Estimated RAW RISK SCORE C x E x L	4. CONTROLS	5. RESIDUAL RISK SCORE  C   E   L   CxExL				6. RESIDUAL RISK
Stacking and unstacking of the trolley	Manual handling and lifting injuries.	11 x 2 x 3	Safe manual handling techniques. Do not overload the trolley	11	2	0.3	6.6	LOW
Removing the autoclave trolley	Heat\Steam burns.	35 x 2 x 3	Personal protective equipment, thermal gloves, training	35	2	0.3	21	LOW
Moving liquids after autoclave run	Explosion/breakage of container of superheated liquid	20 x 2 x 0.5	Wear thermal gloves, lab coat and eye protection. Loosely close lids.	20	2	0.1	4	LOW
	TOTAL	316		TOTAL			31.6	LOW
Name and Signature of Laboratory Head/Supervisor or Delegate		Amber Willems Jones				Date		
Name and Signature of Persons Performing Activity or Task						Date		

<b>Number and Title</b>	Autoclaving
<b>Name of Laboratory/ Department</b>	The University of Melbourne IGEM Team Laboratory/ Department of Biochemistry
<b>Author, Date Prepared and Date of Review</b>	<b>Author:</b> Ella Bocquet-Gaylard <b>Updated :</b> March 2016, <b>Date:</b> 16/3/2016 <b>Review by:</b> March 2018
<b>Introduction</b>	Autoclaving is used to sterilise material for use in the laboratory.
<b>Principals/ Scope</b>	This SWP describes the steps to follow in order to autoclave materials using the autoclave within the Cheng Laboratory, Level 5 of the Medicine Building.
<b>Risk Management</b>	Risk assessments have been prepared and are available on the Task Based Risk assessment attached to the SWP. <b>Raw Risk:</b> low Residual <b>Risk:</b> low
<b>Safety Management</b>	<b>Hazards:</b> Wear PPE, thermal gloves <b>Risk Controls:</b> Low Risk
<b>License/ Permits</b>	N/A
<b>Training/ Competency</b>	All team members must be inducted to the use of any equipment used.
<b>Equipment</b>	Autoclave
<b>Protocol</b>	
<b>Step 1</b>	Load all material to be autoclaved, a lab coat and gloves onto one of the laboratory trollies and transfer them to the level 5 laboratory. All items should be labelled appropriately and have autoclave tape. Bottles must have loosely tightened lids.
<b>Step 2</b>	Ask in Chengs office for permission to use the autoclave. (If you have never used it before you will need to be shown by one of the staff)
<b>Step 3</b>	Before entering the autoclave room put on gloves and a laboratory coat.
<b>Step 4</b>	Check that the water level for the autoclave is at least 80%. (This should be displayed as a % on the machine nearest the door.)
<b>Step 5</b>	Load the material to be autoclaved onto the autoclave trolley, checking the stability of goods on the trolley.
<b>Step 6</b>	Check the autoclave is on by touching its touch screen display.
<b>Step 7</b>	Open the autoclave door (select the 'door' menu on the touchscreen and then tap on the image of the door).

<b>Step 8</b>	Align the autoclave trolley with the door of the autoclave and switch the locking lever on the trolley to the locked position.
<b>Step 9</b>	Push the tray of the trolley into the autoclave. Unlock the lever and pull the trolley away from the autoclave (minus the tray which, along with all your samples, should be in the autoclave!)
<b>Step 10</b>	Close the door.
<b>Step 11</b>	Choose the autoclave program (select 'favourites' and then 'Liquid'/'Wet').
<b>Step 12</b>	Start the autoclave.
<b>Step 13</b>	Return to the autoclaving room after 2 hours.
<b>Step 14</b>	Making sure the cycle is completed before opening the door. Beware of hot steam when opening the door.
<b>Step 15</b>	Wearing thermal gloves, remove the tray from autoclave by lining up and locking the trolley into position and carefully sliding the tray out. unlock the tray before moving the trolley.
<b>Step 16</b>	Close the autoclave door.
<b>Step 17</b>	Check the autoclave tape has black lines (indicating the desired temperature was reached).
<b>Step 18</b>	Unload autoclave trolley onto the laboratory trolley. Tick the entry in the registration book to show the materials have been collected.
<b>Step 19</b>	Wet glassware, pipette containers and other tubes should be placed in the drying ovens.
<b>Step 20</b>	Carefully shift the laboratory trolley back to the iGEM laboratory, and leave materials on trolley to cool.
<b>Controls/ Calibration</b>	N/A
<b>Waste Disposal</b>	N/A
<b>Emergency Procedures</b>	<b>First aid measures</b> Skin contact/burns: In case of burns, immediately flush skin with plenty of water and Identify your supervisor. Apply first aid and seek medical advice if necessary.
<b>References</b>	
<b>Authorised By</b>	Amber Willems Jones