

Part A: Bill of Materials

1. Identify the materials that are needed for constructing a prototype of your team's chemical product. Subsequently, create and complete a Bill of Materials for the prototype by using the Bill of Materials template in Appendix 1.

Bill of Materials (BOM) Template

Project Title:		Human Disinfectant Chamber						
Team members:		Alton, Ethan, Leon, Shou Chun, Sean						
Created by:		Group 3						
Date created:		15 December 2021						
BILL OF MATERIALS (BOM)								
No	Description of item	Supplier (include hyperlink to the item in website of seller)	Quantity	Quantity unit	Unit price (\$ SGD)	Total Cost	Available at W319 Lab or FabLab ? (Y/N)	
1	Arduino Uno Maker	-	2	1	-	-	Y	
2	Nozzle 03 (atomiser)	https://shopee.sg/Italianculture-Metal-Low-pressure-Atomizing-Misting-Nozzle-Spray-Injector-Atomization-Head-MY-i.260983579.13144434804?gclid=Cj0KCQiAweaNBhDEARIsAJ5hwbdEWAnqsNSD05E32kVYSZ0-3gVz2XXd5Z6IFWYBb4TEQ7JgdcU6xb8aAv3KEALw_wcB	1	03	2.32	2.32	N	
3	Infrared Sensor	https://sg.cytron.io/c-sensor/c-optical-infrared-sensor/p-infrared-sensor-module	2	1	0.68	1.34	N	
4	Peristaltic Pump 3mm to 5mm	https://shopee.sg/-Ready-Stock-GROTHEN-DC-6V-DIY-Dosing-Pump-Mini-Peristaltic-Dosing-Head-Self-Priming-Function-Large-Flow-23ml-min-for-Aquarium-Lab-Chemical-Analytical-Water-Liquid-i.277026990.8065460393?sp_atk=7b38b5f0-490e-4b50-9ffa-968c881db9ce	1	1	16	16	N	

5	Plastic Tubing 3mm	https://shopee.sg/1M-Silicone-Tubing-Water-Air-Hose-Pipe-Transparent-3mm-for-RC-Boat-Ship-Pump-i.140392556.2754612604?sp_atk=631e9ee0-3ce4-4ec3-a272-432ffbe16d93	1	metre	4.00	4.00	N
6	Clear Acrylic 3mm	-	1	1	-	-	Y
7	Sandpaper	-	1	1	-	-	Y
8	Acrylic Glue	https://shopee.sg/-stationery-ABS-Plastic-Model-Cement-Special-Glue-Acrylic-Plexiglass-Fast-Adhesive-i.293604036.8717301576?sp_atk=73bf4cf0-c0be-47f3-8073-a5a6db5406cc	1	Bottle	4.76	4.76	N
9	Disinfectant (Isopropyl Alcohol, 70% v/v, medical grade)	https://shopee.sg/Isopropyl-Alcohol-99-and-70--i.153031150.6725912484?sp_atk=b9934f5f-7759-44bb-b380-75016e9e4da2	1	Litre	15.90	15.90	N
10	Stepper Motor	https://sg.cytron.io/p-5v-28byj-48-stepper-motor-plus-uln2003-driver-board?search=stepper%20motor&description=1	1	Motor	2.86	2.86	N
11	Ball Bearing 	https://sg.cytron.io/p-608zz-ball-bearing-for-3d-printer?search=ball%20bearing&description=1	3	1	0.46	1.38	N
12	Plastic Tubing 5mm	https://shopee.sg/1M-PU-Tube-8mm-4mm-6mm-10mm-12mm-Pneumatic-Air-Hose-Compressor-Pipe-Tubing-Water-Gas-Plastic-Hoses-Polyurethane-8x5mm-i.413366199.11646703191?sp_atk=eb58f0ef-5040-4dcd-8fe5-46aa68062ea1	1	metre	1.26	1.26	N
13	Micro 360 Degree	https://sg.cytron.io/p-micro-360-degree-continuous-rotation-servo	1	1	5.71	5.71	

	Continuous Rotation Servo						
14	MG90S Metal Gear Micro Servo	https://sg.cytron.io/c-motor-and-motor-driver/c-dc-motor/c-servo-motor/p-mg90s-metal-gear-micro-servo	1	1	5	5	
Grand Total Cost:						59.99	

(20 marks)

