



AREA IX

LABORATORIES

**D.1. EVIDENCE
COMPLIANCE ON THE
REQUIREMENTS AND
OPERATION OF
LABORATORIES, IF
APPLICABLE**



D. SPECIAL PROVISIONS

D.1. Evidence of Compliance on the requirements and operation of laboratories, if applicable

Compliance on lab requirements and operation as explained is a set of practices, rules and processes that a laboratory implements to ensure that its activities conform to the laws, regulations, norms and ethical standards applicable to its clientele.

BIOLOGY LABORATORY

1. Compliance on Calibration

- evidence of provision of three (3) Certificate of Calibration by the Department of Science and Technology (DOST) for Climatic Chamber and Camprock Analytika Ezzentialez Trading for Analytical Balance, Dissolved Oxygen and pH Meter

UNIVERSITY OF SOUTHERN MINDANAO Kabacan, Cotabato Philippines										
CALIBRATION PLAN FOR LABORATORY EQUIPMENT										
QUANTITY	NAME OF EQUIPMENT	School Year (1) 2021		School Year (2) 2022		School Year (3) 2023		School Year (4) 2024		School Year (5) 2025
		1 st Sem	2 nd Sem	1 st Sem	2 nd Sem	1 st Sem	2 nd Sem	1 st Sem	2 nd Sem	1 st Sem
2 units	Analytical Balance		No participating bidder							
2 unit	pH Meter									
1 unit	D.O Meter									
1 unit	Oven									
2 unit	pH Meter				Service not offered					
1 unit	D.O Meter				Service not offered					
2 unit	Oven									
2 unit	Incubator									
2 units	Analytical Balance									
7 pcs	Test of Weights									
2 units	Analytical Balance									
2 units	pH Meter									
2 unit	D.O Meter									
4 unit	Digital Pipette									
2 unit	Laminar Flow									

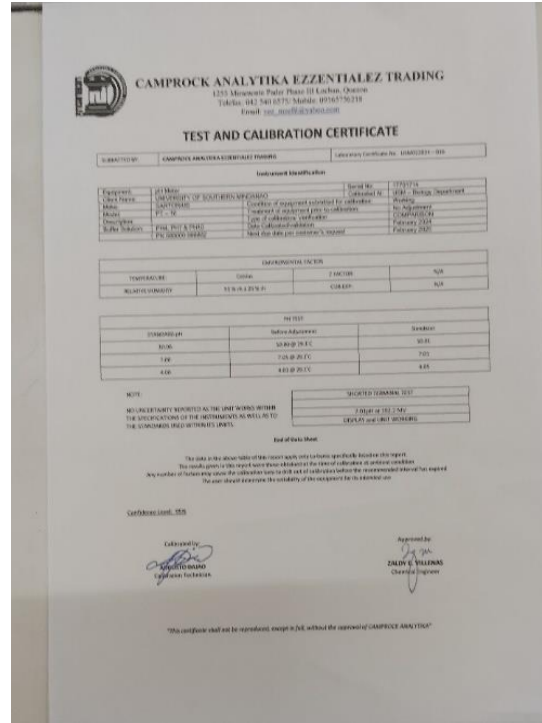
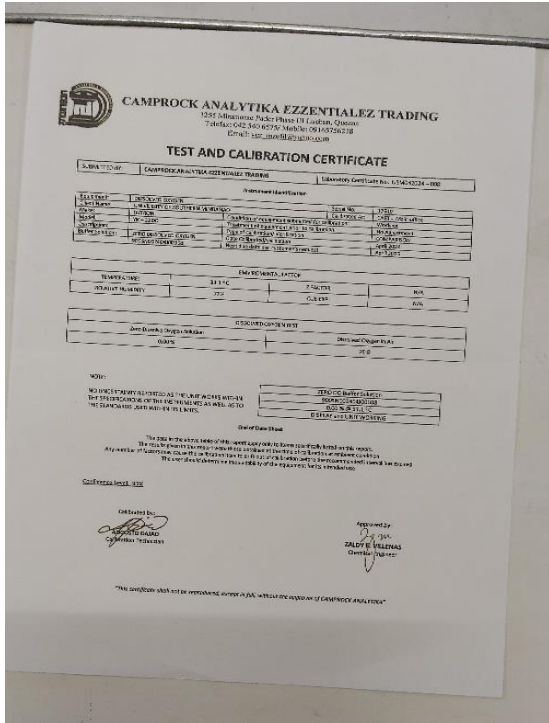
Legend:

- No Participating Bidder
- Calibration Done
- Processing
- Calibration Plan

Prepared by: *Julia S. Karamang*
Lab Technician

Checked by: *DROWAL L. LUMADAS*
Bio Lab in-charge

CAMPROCK ANALYTIKA EZZENTIALEZ TRADING	
TEST AND CALIBRATION CERTIFICATE	
Identified by: CAMPROCK ANALYTIKA EZZENTIALEZ TRADING	Laboratory Certificate No. LUM022324-003
Equipment: Analytical Balance	
Lab. Name: UNIVERSITY OF SOUTHERN MINDANAO	Serial No: 206920
Model: OPHO	Calibrated At: USA - 25°C/50% RH
Make: Ohaus	Condition of equipment at date of calibration: Working
	Amount of equipment used for calibration: No quantity
Certificate Information	
Equipment checked at the time of test: 25 °C	Type of calibration: Verification
Amount of equipment: 45 kg	Time of calibration: February 2024
	Next due date per customer's request: February 2025
Traceability Statement	
The identified Laboratory participates to other national standards (NIST), to meet accuracy standards of measurements, to maintain physical standards, by reference to the calibration hierarchy, or to conform to international standards and use part of the hierarchy of metrological standards to establish a continuing and accurate and traceable hierarchy with the level of conformity required by the laboratory. The laboratory has been identified above in the certificate number to be used in subsequent measurements traceable to equipment calibrated in the certificate.	
End of Data Sheet	
The data in the above title of this report apply only to items identified in this report.	
This report is given only to the customer to whom it was issued and is not valid for other customers or other locations.	
Any number or factory error code of the calibration items is not valid unless the factory recommended interval has expired.	
The Laboratory does not claim to be responsible for the accuracy of the equipment to be calibrated.	
EQUIPMENT TECHNICAL SPECIFICATIONS	
Standards used: Calibration Agency: Certificate No. Date Issued	TEST METHOD USED: COMPARISON
Set of Weights: JFIMELAB: 0715-8093: July 17, 2023	
Calibrated by: <i>[Signature]</i>	Approved by: <i>[Signature]</i>
CAMPROCK ANALYTIKA EZZENTIALEZ TRADING	DANNY E. YALLANS Quality Engineer



2. Compliance on Training and Education

- evidence of provision of Certificates of comprehensive safety training and continuous education for all lab personnel, including the handling of hazardous materials, proper use of PPE, emergency procedures and the safe operation of equipment







3. Compliance on Laboratory Safety

- In laboratory settings, lab safety is of paramount importance. It is not only protects the well being of researchers, lab personnel and students doing experiments but also safeguards the environment and public health.
- understanding the potential risks and hazards involved in lab work to implementing safety protocols and procedures is crucial, to ensure regulatory compliance working environment.

LABORATORY SAFETY

ESSENTIAL MATERIALS FOR SAFETY

BE FAMILIAR WHERE THESE ITEMS ARE LOCATED

Jug of water, Towel, Fire extinguisher, Spill kit, First aid kit

FIRST AID KIT

WHAT'S INSIDE?

- Adhesive cotton
- Adhesion plasters
- Analgesic/Anesthetic tablets
- Bandage/Gauze for dressing
- Burn-treated scissors
- Forceps
- Disinfectant
- Rubbing alcohol
- Safety pins

REMEMBER WHEN NOT IN USE

- Gas outlets/Tanks are turned off
- Alcohol burner is covered
- Appliances are unplugged
- Lights are switched off

STORE CHEMICALS PROPERLY

- Chemicals must be stored with compatible chemical families
- Label bottles clearly
- Separate cabinets should be available for equipment apparatus and chemicals
- Cover containers with well-fitting stoppers or lids
- Place safety codes

SAFETY CODES

HAVE CLEAN WATER SUPPLY READILY AVAILABLE. IT CAN BE STORED IN LARGE CONTAINERS KEPT WITHIN EASY REACH.

DISPOSE WASTES PROPERLY HAVE SEPARATE PROPERLY LABELLED WASTE CANS

WASTE PAPER, RECALCULATED PAPER, WASTE GLASS

MAIN SWITCH, ELECTRONIC WIRE INSULATION, ELECTRIC OUTLETS, FAUCETS AND SINKS SHOULD ALWAYS BE IN GOOD CONDITION

HANDLING ACCIDENTS

REPORT ANY ACCIDENT NO MATTER HOW UNIMPORTANT IT MAY SEEM. IN CASE OF ACCIDENTS, DO NOT PANIC.

MINOR BURNS/CUTS

BURNS
Immerse burned part in cool basin of water for at least 10 minutes. Dry or blot wet part with clean dressing. Apply a clean strip of adhesive or adhesive bandage.

MINOR CUTS
Carefully wash this out area. Remove all fragments from wound with sterilized forceps then cover with dry clean dressing.

SPLASHES FROM CHEMICALS

EYE
Flush water from a faucet or basin over the eyeside thoroughly for at least 15 minutes. Seek medical assistance immediately.

INGESTED POISONS
Bring the patient outdoors to receive fresh air while waiting for medical assistance. Do not induce vomiting. For first aid, give a universal antidote.

INGESTED CHEMICALS OR POISON
Do not induce vomiting. For first aid, give a universal antidote.

UNIVERSAL ANTIDOTE POWDER
2 parts activated charcoal (or burnt wood or rice)
1 part magnesium oxide
1 part tartaric acid or instant tea
Add 2 tsp of the above mixture in 1/2 glass warm water.

SMALL FIRES
Use fire extinguishers to put off fires. Use sand to extinguish burning metal chips, oil and water-insoluble chemicals. Cover with a blanket and roll a person whose clothes are burning. Small fires may be smothered with a wet cloth.

LABORATORY TECHNIQUES / SAFETY RULES and REGULATIONS

Handling of Liquids

- In obtaining liquids from bottles, never allow the part of the neck of the bottle to touch other bottles. Hold the stopper by its flat top or place it down on a clean surface.
- In pouring liquids use a vertical flange to remove the stopper by grasping it between fingers with the palm up. Tilt the receiving vessel and bring the neck of the bottle in contact with its flange. A stirring rod may also be used.
- In pouring liquids using a stopper, it should never touch the container or the content of the receiving vessel.

Handling Solids

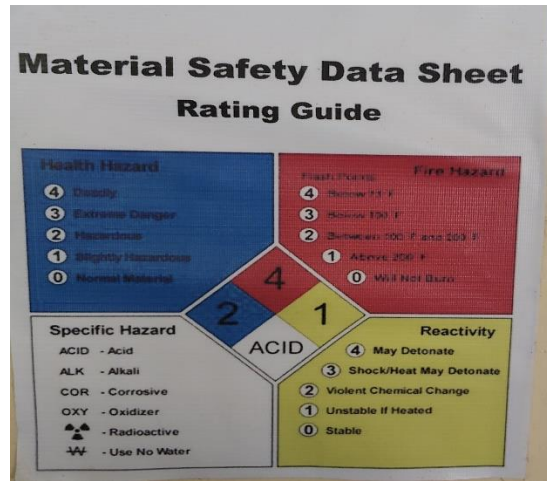
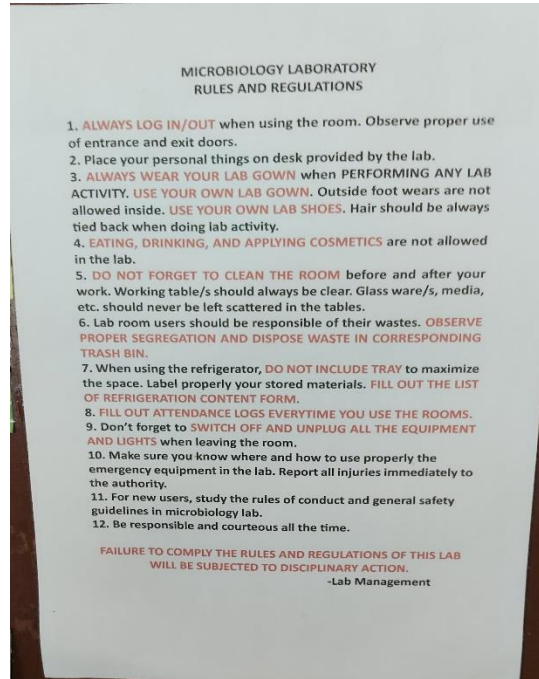
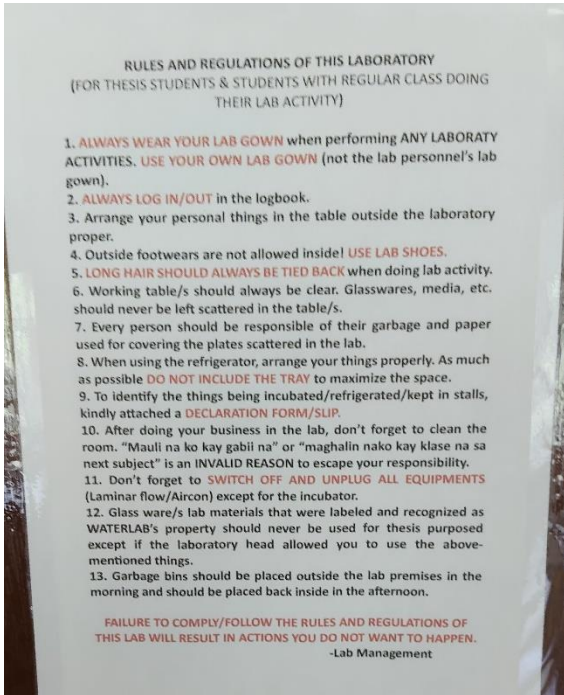
- In obtaining samples of powdered or crystalline solids, use wide-mouthed containers. Tip the reagent bottle and rotate it back and forth about an imaginary axis while pouring.
- In pouring the solid into a test tube, use an aluminum foil that has been creased down the center. This will avoid the solid from spilling over.

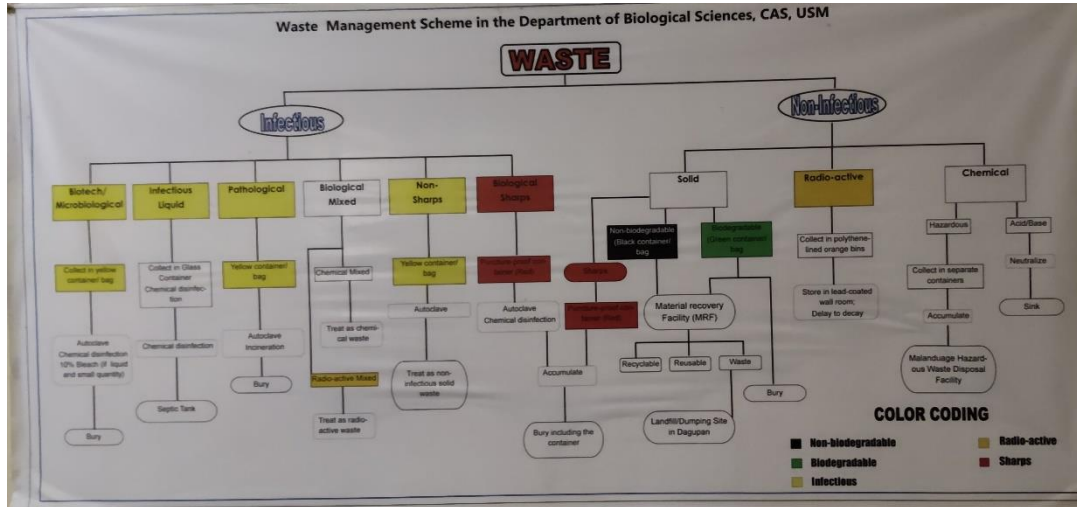
Heating of Chemicals

- Liquids in a beaker or in an evaporating dish: The vessel should be at most three-fourths full. Place it on a wire gauze supported on an iron ring attached to a ring stand or a tripod.
- Use a test tube clamp to hold the test tube. Don't apply heat directly at the bottom, move it slowly up and down.
- Use a test tube holder to hold the test tube. Don't apply heat directly at the bottom, move it slowly up and down.
- Use a test tube holder to hold the test tube. Don't apply heat directly at the bottom, move it slowly up and down.

B. Filtration

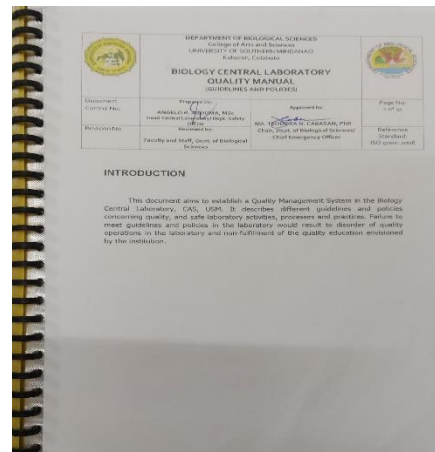
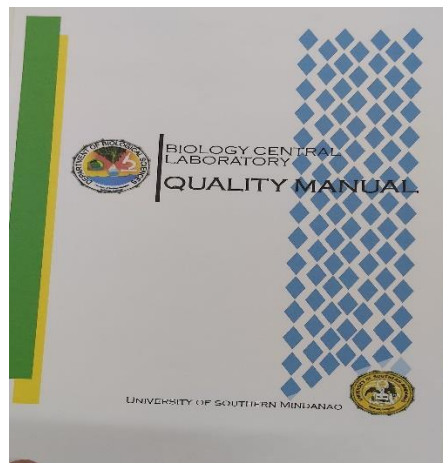
- Folding a filter paper: fold and crease it in half; fold again to form a quadrant, but don't crease. Each fold should be off center. Tear off a small piece of one corner, and then open forming a cone. The cone's side has three layers of paper while the other has one layer.
- The filtration set-up: Support the filter paper, using a cone-shaped funnel with a stem through which the liquid drains. Place the paper in the funnel, moisten with a solvent and fit tightly to the wall without reaching its top. Support the funnel in an iron ring attached to a ring stand. Place a beaker under the funnel with its tip touching the inner wall of the beaker.

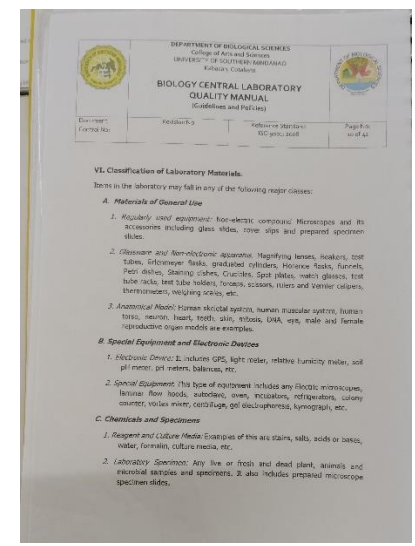
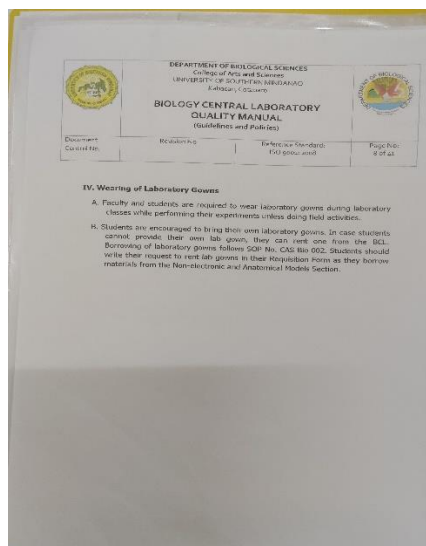
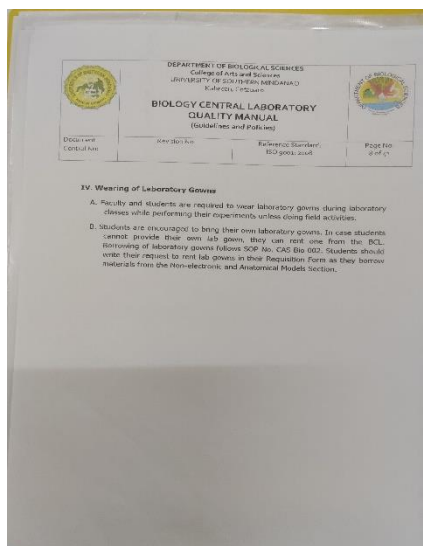
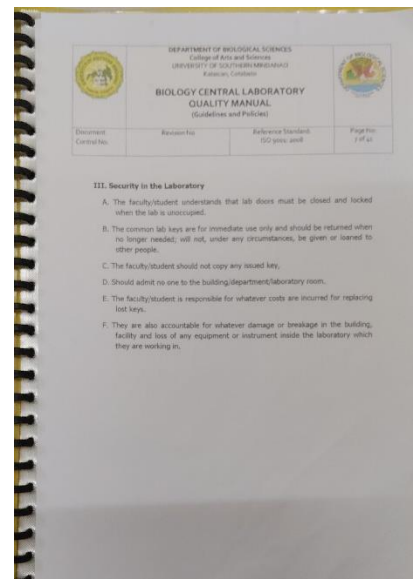
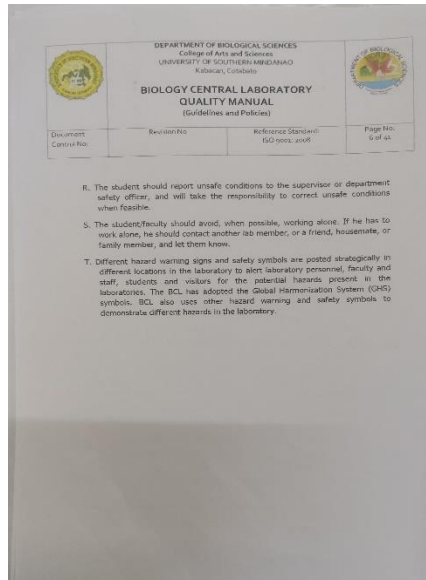
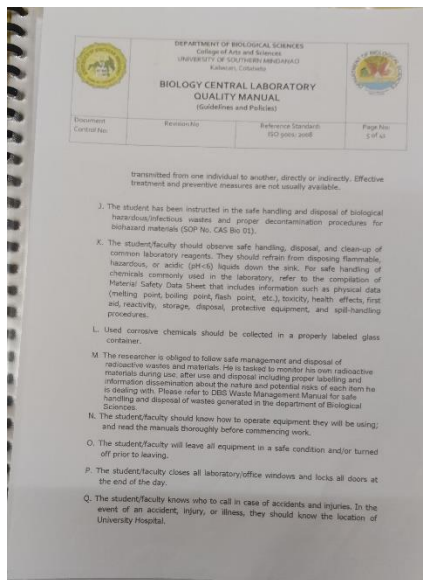
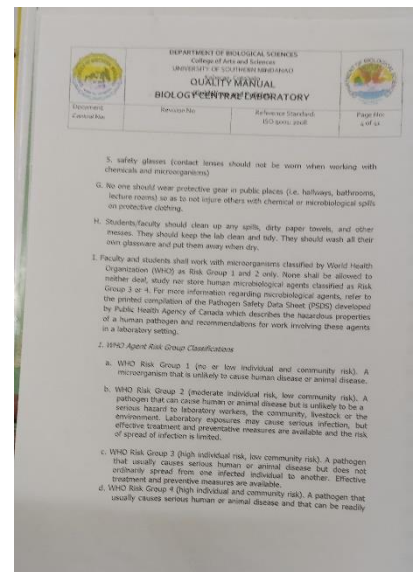
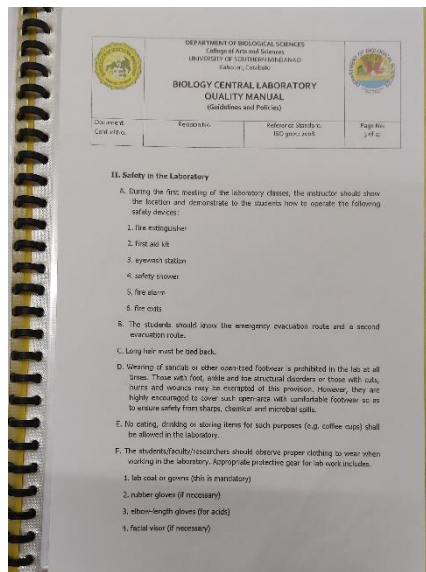
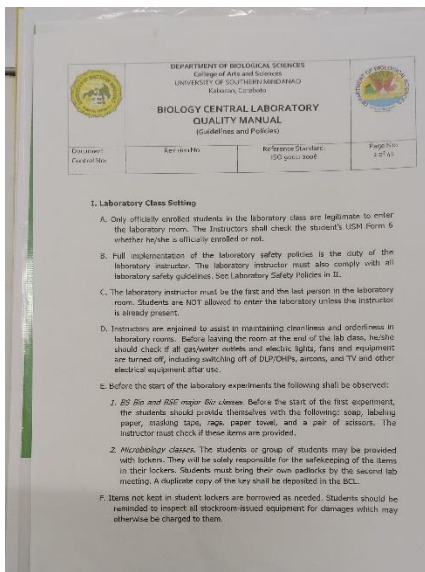


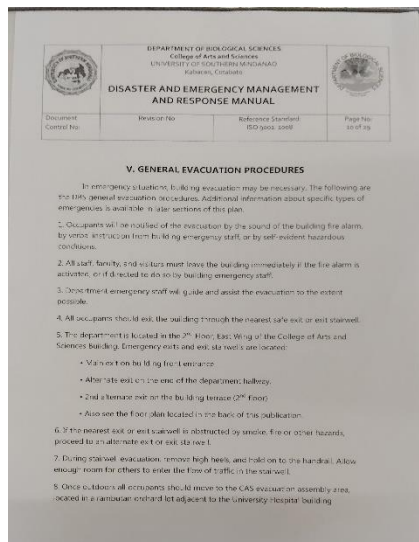
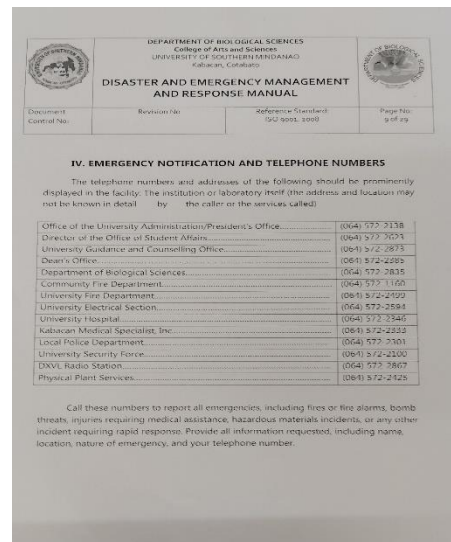
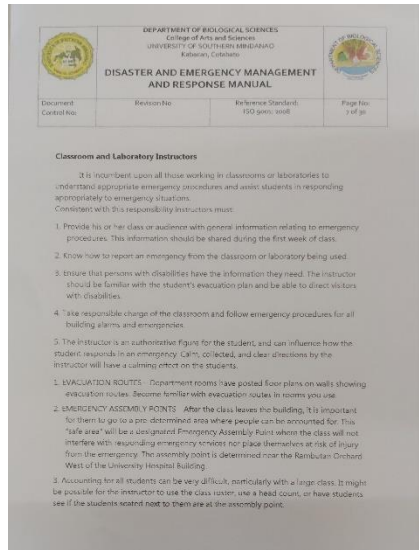
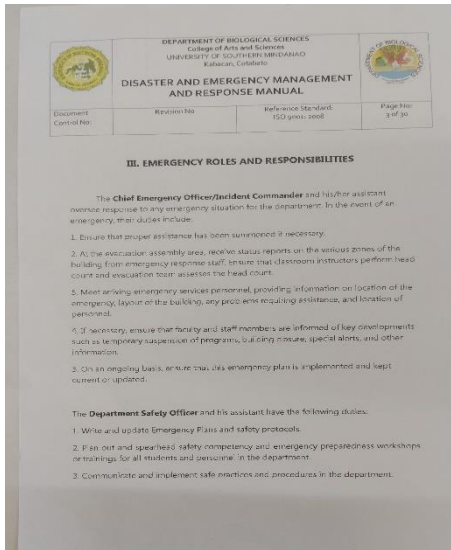
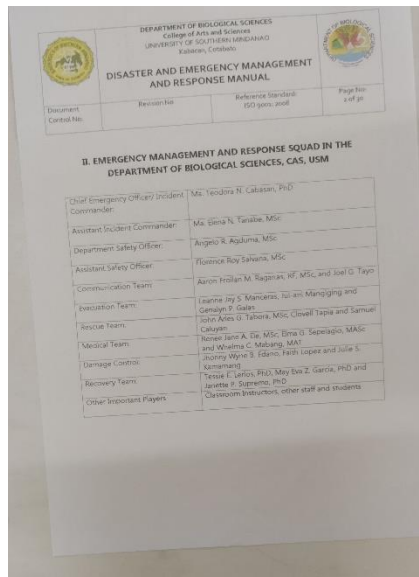
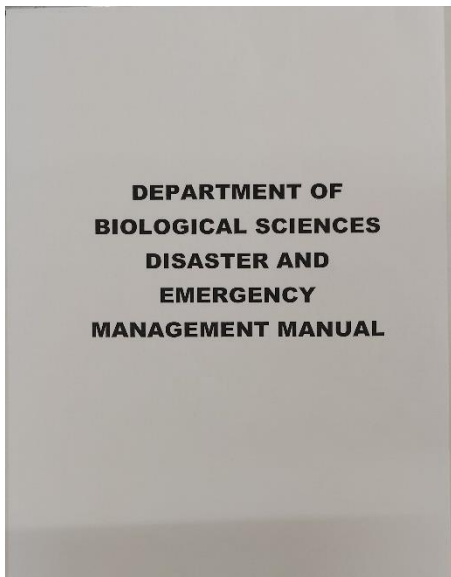


4. Compliance on Documentation and Record Keeping

- maintaining accurate records is crucial for ensuring compliance and demonstrating a commitment to lab safety. Documentation should include records of safety training sessions, risk assessments, incidents, and inspections.
- proper storage and accessibility of safety documentation, both in physical and digital formats, should be ensured. These records serve as valuable resource for safety audits and inspections, incident reporting and investigation, developing emergency response plan, evacuation procedure and emergency contacts and continuous improvement of lab safety practices.







DEPARTMENT OF BIOLOGICAL SCIENCES WASTE MANAGEMENT MANUAL

	DEPARTMENT OF BIOLOGICAL SCIENCES College of Arts and Sciences UNIVERSITY OF SOUTHERN MINDANAO Koronadal, Cotabato	
WASTE MANAGEMENT MANUAL		
Document Control No.	Revision No.	Reference Standard (ISO 9001:2008)
		Page No. 8 of 15

MANAGEMENT PLAN FOR NON-INFECTIOUS WASTES

- Non infectious wastes should be identified and segregated within the area of work. Waste generators should classify these wastes as solid, chemical or liquid and infectious. As far as possible, waste should always be assessed if it is reusable, recyclable, and possibility for repair.

*NCRP: Infectious Waste is treated differently. Please see the Management Plan of Infectious Wastes in the succeeding section.

Segregation, Packaging and Storage of Non-Infectious Solid Wastes

- Solid wastes (wet and dry) should be segregated immediately after they are generated. Those that can be recycled, reused and repaired should be placed in properly labeled.
- Examples of Solid Wastes that can be recycled are used and reused papers, pens, plastic bottles, cardboard, etc., when items when it can be reused are plastic, and cardboard, etc., they should be placed separately in the storage rooms to be accumulated for some time. They are transported to the Material Recovery Facility (MRF) at the back of the CAG building.
- For solid wastes that cannot be recovered for recycling, reusing and repair, they should be placed in trash bins located in Non-hazardous waste bins and hallway of the department. They are then gathered by the student laboratory workers, Recyclable Technology (Institutional Laboratory means), or vendors and transported in the MRF for collection and disposal.

Collection and Disposal of Solid Wastes

- Solid wastes transferred and stored in the MRF shall be collected by authorized university personnel. They are usually transported and delivered in sanitary landfill. (See University Waste Management Plan for Collection and Disposal).

	DEPARTMENT OF BIOLOGICAL SCIENCES College of Arts and Sciences UNIVERSITY OF SOUTHERN MINDANAO Koronadal, Cotabato	
WASTE MANAGEMENT MANUAL		
Document Control No.	Revision No.	Reference Standard (ISO 9001:2008)
		Page No. 9 of 15

Segregation, Packaging and Storage of Non-infectious Chemical Wastes

- Chemical wastes should be identified as hazardous and non-hazardous. Non-hazardous chemical wastes include solutions of NaCl, sugars, egg albumin, culture media that do not contain heavy metals and toxic components, etc.
- Hazardous chemical wastes should be segregated as to ignitability, corrosivity, reactivity and toxicity.

The Ignitability characteristic applies to:

- Liquids with a flash point less than 140°F.
- Solids capable of spontaneous combustion under normal temperature and pressure.
- Oxidizing materials.
- Ignitable compressed gases.
- Examples include ethanol, sodium nitrate, hydrogen gas, xylene and acetone.

The Corrosivity characteristic applies to wastes that are:

- Aqueous solutions with a pH less than or equal to 2 or greater than or equal to 12.5.
- This does not apply to solid or non-aqueous materials.
- Examples include hydrochloric acid, nitric acid, and sodium hydroxide.

The Reactivity characteristic applies to the following:

- Materials that react violently or generate toxic fumes when mixed with water.
- Cyanide or sulfide bearing wastes which evolve toxic fumes when mixed with acids or bases.
- Material that is normally unstable or explosive.
- Examples include sodium metal, reactive sulfides, potassium cyanide and picric acid.

The Toxicity characteristic applies to wastes that have the potential to contaminate groundwater if improperly disposed of.

- These materials are regulated as hazardous waste due to their potential to leach out specific toxic substances in a landfill.
- It includes certain heavy metals, pesticides and organic compounds.

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WASTE MANAGEMENT MANUAL		
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MANAGEMENT PLAN FOR RADIOACTIVE WASTES

In the department, this type of waste is rarely encountered. In case that this kind of waste is generated, safe disposal of used and unused radioactive material and objects contaminated with it is vital. This is to ensure that the radiation exposure to public, radiation workers and environment does not exceed the prescribed safe limits.

- Radioactive waste in the department should be classified in following ways. The researcher/handler should know the different classifications of the radioactive material before using for safe handling and disposal of radioactive wastes.

According to level of activity:

- High level waste
- Medium level waste
- Low level waste

According to the form:

- Solid waste
- Liquid waste
- Gaseous waste

According to half-life:

- Long half-life waste (Half-life more than a month)
- Short half-life waste (Half-life less than a month)

Segregation, Packaging and Storage of Radioactive Wastes

- The radioactive waste should be identified and segregated within the area of work. Use covered waste collection bins with disposable polythene lining should be used for collecting solid radioactive waste and polythene carboys for liquid waste. Collecting radioactive waste in glassware should be avoided. Each package should be monitored and labeled for the activity level before deciding upon the mode of disposal. When two different isotopes of different half-lives are used for each. Each bag or bin must bear a label with name of the isotope, level of activity and date of monitoring.

	DEPARTMENT OF BIOLOGICAL SCIENCES College of Arts and Sciences UNIVERSITY OF SOUTHERN MINDANAO Koronadal, Cotabato	
WASTE MANAGEMENT MANUAL		
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		Page No. 11 of 15

Wastes should be collected in glass bottles or compatible plastic gallons with proper labels. Only a maximum of 10 gallons (all wastes added) may be stored in the department. Once limit is reached, they should be removed from the laboratory within 10 days.

Waste containers stored in the laboratory accumulation area must be:

- In good condition
- Compatible with the waste being stored
- Kept closed at all times except when filling
- Stored inside secondary containment bins
- Waste must always remain in the lab
- Never store waste in PUBLIC AREAS (such as hallways)
- Waste containers must be properly labeled and placed into secondary containment
- Label contains waste generator, lab source, contact information and chemical constituents and percentages.
- Don't use chemical symbols, abbreviations, or codes for waste identification.

Collection and Disposal of Chemical Wastes

Non-hazardous chemical wastes can just be disposed down the drain. Hazardous chemical wastes, however, should be treated differently. When the storage limit is already reached, the laboratory personnel should contact the university waste management committee to collect the chemicals and for proper disposal. For proper disposal of hazardous chemical wastes, please see the University Waste Management Plan.

	DEPARTMENT OF BIOLOGICAL SCIENCES College of Arts and Sciences UNIVERSITY OF SOUTHERN MINDANAO Koronadal, Cotabato	
WASTE MANAGEMENT MANUAL		
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Radioactive waste disposal

The collected radioactive waste is disposed of as per the following: (a) Dilute and Dispose (b) Delay and Decay and (c) Concentrate & Contain

Dilute and Dispose

Low activity solid waste may be disposed of as ordinary waste provided the activity of the waste does not exceed 1.5 microcuries (50 kBq) or the overall package concentration does not exceed 125 microcuries (mCi) (4.5 MBq). Such articles include vials, syringes, cotton swabs, tissue papers, etc. Similarly, liquid radioactive waste with activity less than microcurie level can be disposed of into sink with adequate flushing with water following the disposal.

Delay and Decay

Medium activity radioactive waste and those with half-lives of less than a month may be stored. The storage room should be properly ventilated with an exhaust system conducted through a duct line to a roof top fan. The storage space should have lead shielding of appropriate thickness (10-15%) to prevent radiation leakage. The radioactive waste should be stored for a minimum period of about 10 half-lives when after decay only 1% of the initial activity remains. It is then disposed of as low activity solid or liquid waste.

Concentrate and Contain

For high activity levels and for those with long half-lives (longer than a month), their disposal by delay and decay method is impractical because of longer storage period, particularly if space availability is limited. Radioactive waste is collected in specially assigned and labeled containers and then buried in exclusive burial sites.

CHEMISTRY LABORATORY

1. Compliance on Calibration

- evidence of provision of two (2) Certificate of Calibration by the Department of Science and Technology (DOST) for Climatic Chamber and Test Weight (5 pcs)

Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
REGIONAL OFFICE NO. XI
REGIONAL STANDARDS AND TESTING LABORATORY- DAVAO

CALIBRATION CERTIFICATE

Request Reference No. : R11-052018-MET-0903
Sample Code : MET-0987
Type of Job : Calibration of Climatic Chamber
Specific Location (On-site) : Pilot Lab
Date Submitted : May 3, 2018
Date Calibrated : May 3, 2018
Sample/Instrument Submitted : Furnace
Make/Model : BARNSTEAD THERMOLYNE / F48010
Serial No. : 1289040920131
Resolution : 1 °C
Submitted by : UNIVERSITY OF SOUTHERN MINDANAO
Address : Kabacan, North Cotabato

MEASUREMENT RESULTS:

Chamber Temperature Controller/Indicator (°C)		Mean Reading at each Measurement Location (°C)		Uncertainty (°C)
Test point	Reading	T1	T2	
300	311.00	295.98	296.53	± 4.99

SKETCH OF EUT

UNCERTAINTY OF MEASUREMENT

Uncertainty stated is the expanded uncertainty obtained by multiplying the combined standard uncertainty by the coverage factor k = 1.96. It has been determined in accordance with the "Guide to the Expression of Uncertainty (GUM)". The value of the measurand lies within the assigned range of values with a probability of 95%.

-Page 1 of 2 pages-

Address : Cor. Dumaliga and Tranding Rd., Rajada, Davao City
Tel. Nos. : 0822 227-1313 loc. 215 Fax No. : 0822 221-5429
Website : http://www.dost.gov.ph
Email : rsl.davao@dos.gov.ph

Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
REGIONAL OFFICE NO. XI
REGIONAL STANDARDS AND TESTING LABORATORY- DAVAO

CALIBRATION CERTIFICATE

Request Reference No. : R11-032018-MET-0560
Sample Code : MET-0605
Date Submitted : March 12, 2018
Date of Calibration : March 27, 2018
Calibration Item : Test Weight (5 pcs)
Make/Model : NONE
Serial No. : MET-0605
Material : CHROME PLATED
Submitted by : UNIVERSITY OF SOUTHERN MINDANAO
Address : Kabacan, North Cotabato

RESULTS:

Nominal Value	Marking / Identification	Conventional Mass Value	Uncertainty of Measurement ± mg	Coverage Factor, k
50 g	NONE	50 g + 0.152 mg	0.155	1.96
20 g	NONE	20 g + 0.481 mg	0.143	1.96
10 g	NONE	10 g + 0.032 mg	0.133	1.96
5 g	NONE	5 g - 0.191 mg	0.129	1.96
1 g	NONE	1 g + 0.026 mg	0.123	1.96
Environmental Conditions	Temperature	[22.5 ± 2.5] °C		
	Relative Humidity	[55 ± 10] % RH		
	Atmospheric Pressure	[1013.5 ± 20] hPa		

CALIBRATION METHOD:

The Test Weight was calibrated using reference standard traceable to SI units as maintained by NMI (ITD), with Reference No. 06-2013-TS/WT-0246. Calibration method is in accordance with DOST RSTL-DavaoCAL-CH-002 - "Calibration of Test Weights".

- Page 1 of 2 -

Address : Cor. Dumaliga and Tranding Rd., Rajada, Davao City
Tel. Nos. : 0822 227-1313 loc. 215 Fax No. : 0822 221-5429
Website : http://www.dost.gov.ph
Email : rsl.davao@dos.gov.ph

UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato
Philippines

CALIBRATION PLAN FOR LABORATORY EQUIPMENT

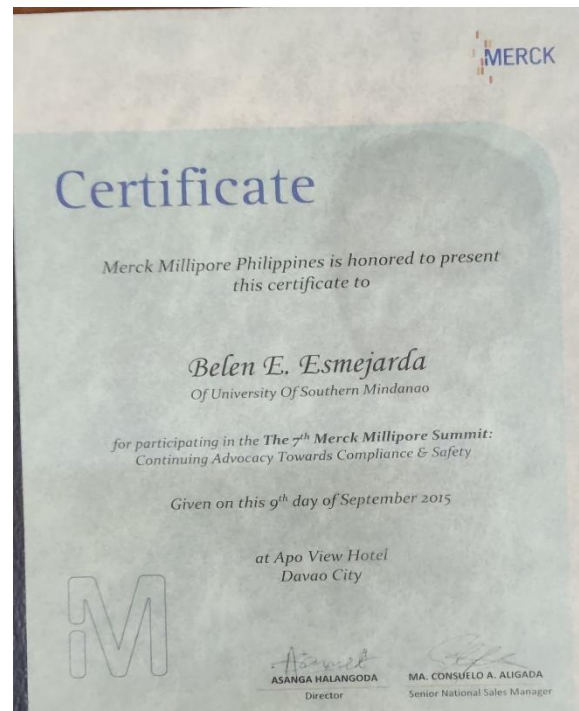
CHEMISTRY CENTRAL LABORATORY

QUANTITY	NAME OF EQUIPMENT	2023		2024		2025		As Needed	As Needed
		1 st Sem	2 nd Sem	1 st Sem	2 nd Sem	1 st Sem	2 nd Sem		
1	Rotary Vacuum Evaporator								
1	Oven								
1	Digital Thermometer								
1	Analytical Balance								
1	Burette (50mL)								
1	Volumetric Flask (500mL)								
1	Pipette (50mL)								
1	Furnace								
1	Weight (1.0000 gram)								
1	Weight (10.0000 gram)								
1	Weight (100.0000 gram)								
1	Fourier Transform Infrared Spectrophotometer								
1	Atomic Absorption Spectroscopy								
1	High Performance Liquid Chromatography								
1	Bomb Calorimeter								
1	Fumehood								
1	pH meter								

USM-EDL-Fcy-Rst 1.2022.01.08 Chemistry Central Laboratory Prepared by: QUEENIE L. RUPNO, RCI, MST

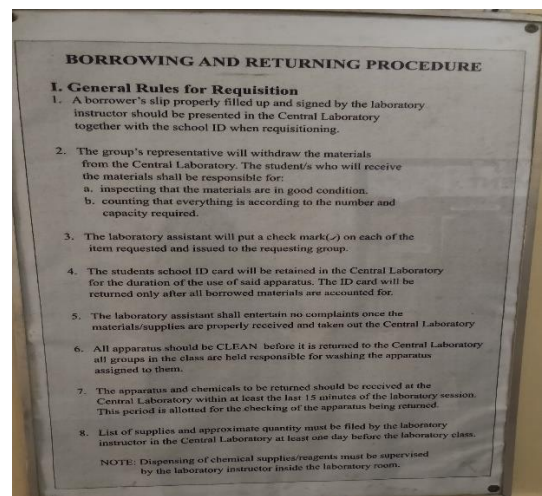
2. Compliance on Training and Education

- evidence of provision of Certificates of comprehensive safety training and continuous education for all lab personnel, including the handling of hazardous materials, proper use of
- PPE, emergency procedures and the safe operation of equipment





3. Compliance on practices on borrowing, releasing of tools/ gadgets by the laboratory technician or aide, and returning of apparatus etc.



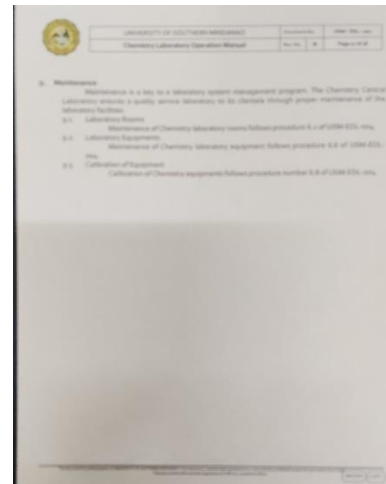
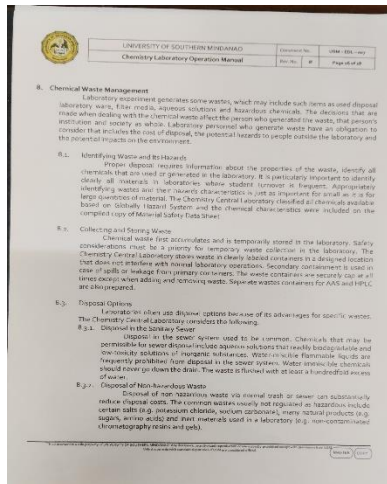
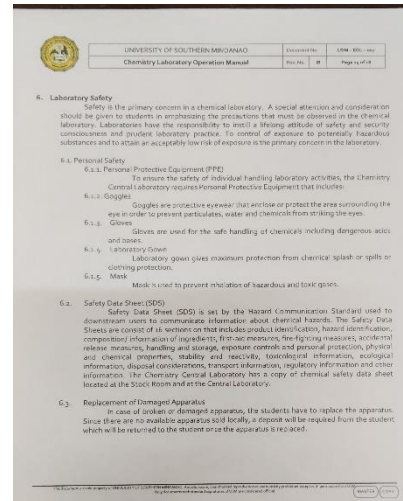
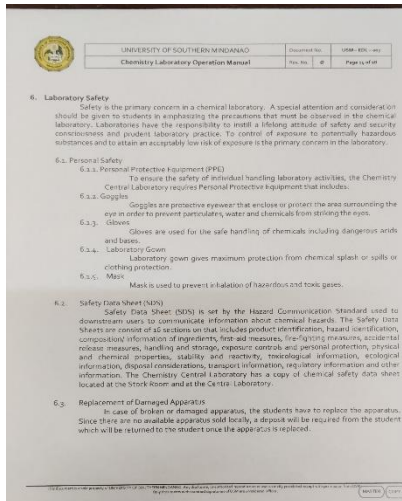
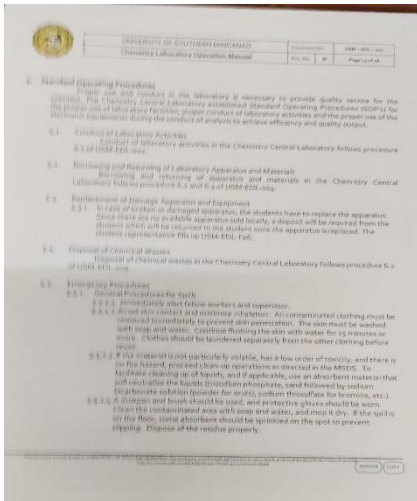
4. Compliance on Laboratory Safety

- In laboratory settings, lab safety is of paramount importance. It is not only protects the well being of researchers, lab personnel and students doing experiments but also safeguards the environment and public health.
- understanding the potential risks and hazards involved in lab work to implementing safety protocols and procedures is crucial, to ensure regulatory compliance working environment.



5. Compliance on Documentation and Record Keeping

- maintaining accurate records is crucial for ensuring compliance and demonstrating a commitment to lab safety. Documentation should include records of safety training sessions, risk assessments, incidents, and inspections.
- proper storage and accessibility of safety documentation, both in physical and digital formats, should be ensured. These records serve as valuable resource for safety audits and inspections, incident reporting and investigation, developing emergency response plan, evacuation procedure and emergency contacts and continuous improvement of lab safety practices.



Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
REGIONAL OFFICE NO. XI
REGIONAL STANDARDS AND TESTING LABORATORY - DAVAO

CALIBRATION CERTIFICATE

Request Reference No. R11-092922-MET-1363
Date Submitted September 25, 2022
Sample Code MET-02506
Date Calibrated September 27, 2022
Calibration Item Beam Balance*
Make/Model Ohaus / 709850 Series
Capacity 2910 g
Serial Number LCL-235-0138*
Repeatability 0.1 g
Calibrated at (On-site) Physics Central Laboratory
Actual Scale Interval, d 0.1 g

Submitted by UNIVERSITY OF SOUTHERN MINDANAO
DEPARTMENT OF PHYSICS
COLLEGE OF SCIENCE AND MATHEMATICS*
Address : Bal Matibay Plang Avenue, Poblacion, Kabacan, North Cotabato*

CALIBRATION RESULTS

REPEATABILITY: Test Load: 2000 g
ECCENTRICITY: Test Load: 100 g

Trial	Indication (g)	Position	Indication (g)	Error (g)
1	1998.0	1	100.0	0.0
2	1998.0	2	100.0	0.0
3	1998.0	3	100.0	0.0
4	1998.0	4	98.0	-2.0
5	1998.0	5	95.0	-3.0
6	1998.0	1	100.0	-1.0
7	1998.0			
8	1998.0			
9	1998.0			
10	1998.0			

Standard Deviation 0.00 g

ERRORS OF INDICATION:

Test Load (g)	Standard Mass Used (g)	Balance Indication (g)	Error (g)	Coverage Factor, k	Expanded Uncertainty (g)
0	0.00000	0.0	0.0	0.00	0.00
100	99.99910	100.0	0.0	1.98	1.148
500	499.998232	499.5	-0.4	1.98	5.725
1000	1000.00488	999.0	-1.0	1.98	11.46
2000	1999.84318	1998.0	-1.8	1.98	22.91
2500	2499.73850	2497.5	-2.2	1.98	28.64

Page 1 of 2 pages

Address : Cor. Duranillo and Friendship Hds., Rajada, Davao City
Tel. Nos. : (803) 2274313 loc. 210 Fax No. : (803) 221-6438

CERTIFIED TRUE COPY

LEONARDO M. DELA CRUZ
Chief Administration Officer

UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato
Philippines

CALIBRATION HISTORY

Name of Equipment: Beam Balance
Control Number: LCL-235-0138*
Brand/Model: Ohaus (Triple Beam)

Serial Number: _____
Calibration Cycle: 1st and 2nd

PHYSICS CENTRAL LABORATORY

Calibration Verification Date	Calibration Due Date	Calibration Result	Calibrated/Verified by:	Location	Remarks	Noted By:
15-04-2022		Calibrated	CAMPOLICA ANALYTICA	On-site	In good condition	1 st cycle
02-04-2018	10-28-2018	Not Calibrated	DOST		Requested for Calibration	
02-12-2021		Calibrated	DOST-Region XI	On-site	In good condition	2 nd cycle

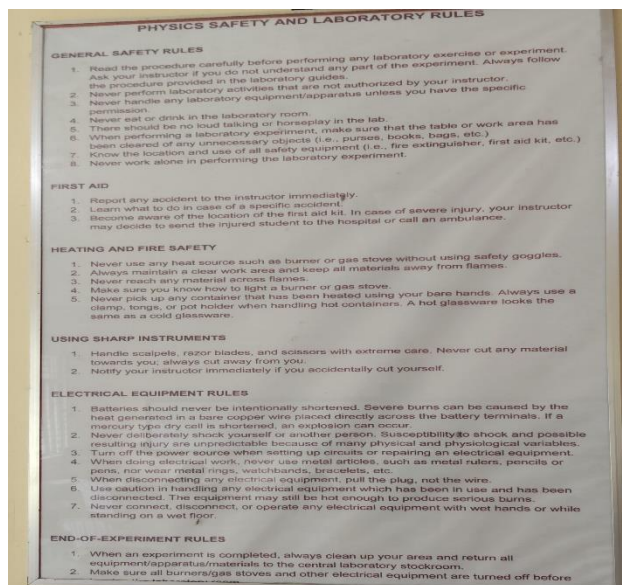
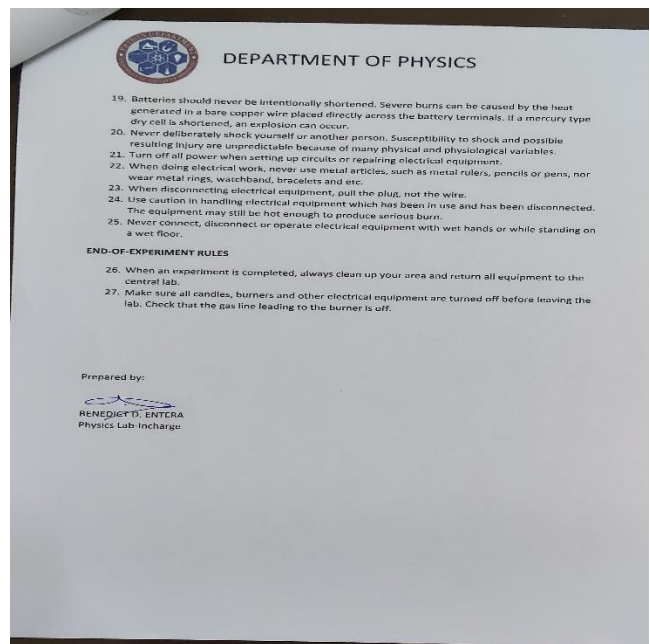
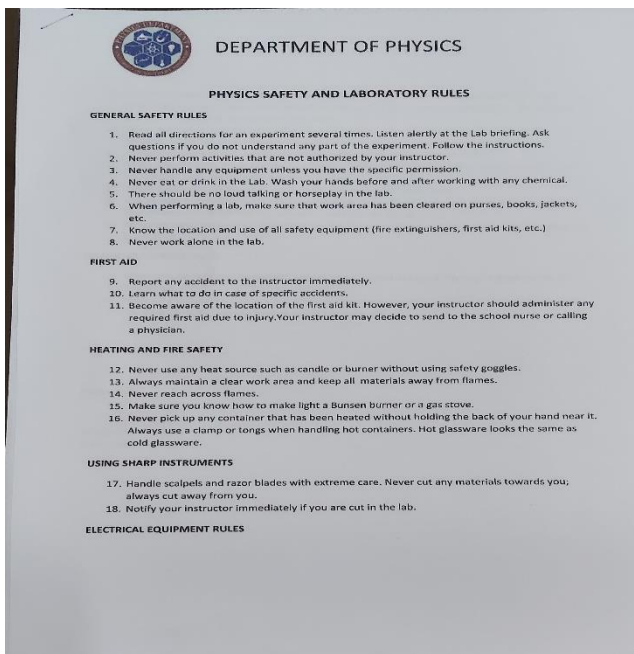
USA-EDL-956
Physics Central Laboratory
Prepared by: Jolly Grace B. Noriega

2. Compliance on practices on receiving request and releasing of tools/gadgets, apparatus etc by the laboratory technician or aide



3. Compliance on Laboratory Safety

- In laboratory settings, lab safety is of paramount importance. It is not only protects the well being of researchers, lab personnel and students doing experiments but also safeguards the environment and public health. Understanding the potential risks and hazards involved in lab work to implementing safety protocols and procedures is crucial, to ensure regulatory compliance working environment.



College of Engineering and Computing
Department of Computer Science and Information Systems
Kabacan, Cotabato



COMPUTER LABORATORY OPERATIONS HANDBOOK

Revised Edition 2010

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