

Laboratory Use Charges, Equipment, and General Guidelines

At Biologix, we provide a conducive environment for students and researchers to carry out molecular aspects of life science research. Our facility is well equipped for molecular methods like

- DNA/RNA Isolation (from various sources)
- Plasmid Isolation
- Gel Electrophoresis
- Polymerase chain reaction and (RvTtr-PCR)
- Protein extraction and quantification
- Western blot
- SDS PAGE
- DNA fragmentation assay

In addition we offer **PCR primers design**, Genotyping and **DNA Sequencing** services. Please call for more information.

Available Equipment

Microcentrifuge
 Minifuge
 Vortex
 Heat Block/Dry Bath
 Thermal Cycler
 Microwave
 PCR Cabinet
 Autoclave
 Oven
 Gel Electrophoresis (Agarose & PAGE)
 Analytical Balance
 PH meter
 Micropipette
 Microscope
 Deep Freezer
 Refrigerator

Reagents and Consumables.

		50rxn	100rxn	200rxn	250rxn
Requirements for PCR	PCR master mix	50rxn	100rxn	200rxn	250rxn
	Nuclease-free water	500ul	1ml		
	Primers				
Tubes	PCR tubes	20pcs	50pcs	100pcs	
	Micro-centrifuge tubes				
Tips (x96)	Yellow tips	20 – 200 ul			
	Blue tips	1 – 10 ul			
	White tips	100 – 1000 ul			
Chemicals	Ethanol				
	Isopropanol				

The items above can be purchased from us if needed at the quantities stated. Call for price

Gel Electrophoresis (consumables for electrophoresis are not sold separately)	
Agarose Gel electrophoresis (up to 20 lanes per run)	₦ 15,000.00
PAGE (per run)	₦ 35,000.00

Isolation Kits				
DNA Isolation (Tissue samples (plasma, serum, blood etc.))	20 preps	50 preps	100 preps	200 preps
DNA Isolation (Bacteria, fungi etc.)	√	√	√	√
DNA Isolation (Plant, soil, water etc.)	√	√	√	√
Plasmid Isolation	√	√	√	√

FEES	
Consultation/Job analysis/Technical assistance Approval to use the lab is subject to <ul style="list-style-type: none"> ✓ A well detailed work flow and SOP ✓ Pipette proficiency training ✓ Availability of all materials needed ✓ Payment of consultation fee 	₦ 5,000.00
Bench fee per week <ul style="list-style-type: none"> ✓ Access to all the laboratory equipment ✓ Uninterrupted power supply ✓ Conducive workspace 	₦ 10,000.00

***Note that approval to use the laboratory is subject to availability of equipment and payment of consultation fee.**

General guidelines for using our molecular biology lab

Please review this guide before working in our laboratory.

Following Protocols

Our protocols are very much like the ones used in research labs; it is concisely written and will not include details such as “label your tubes” as it is widely understood that an unlabeled tube could be disastrous. Therefore, you are expected to **think** and **anticipate** while you use any protocol.

Using a protocol efficiently and effectively involves four major steps

1. **Read** the entire protocol carefully, making a list of any equipment or components needed. Ensure you **understand** what you need to do in each step — look up words you do not understand.
2. **Ensure** that you have all the required equipment and materials, and that you know how to use them.
3. As you work through the protocol, **read** each step in its entirety, right before you **do** it.
4. **Anticipate**. For example, if you would need another set of labelled tubes in step 5, prepare these tubes during the 5 min spin in step 3. **Essentially, you must stay few steps ahead.**

Sterility

In molecular biology we often use sensitive biological agents such as enzymes and naked DNA molecules. Biological molecules can be damaged or degraded by enzymes and naked DNA molecules found on non-sterile surfaces and even floating in the air. Thus, all manipulations are done with sterile materials (e.g. sterile tips). In our lab, for instance, sterile tips and tubes have a tape attached. Furthermore, to protect the sterility of your materials, please:

- + Clean your bench with the provided 70% ethanol at the beginning of every laboratory;
- + Keep tip and tube containers closed, except when using;
- + Do not touch the materials with your hands or any other non-sterile surfaces

Proper use of equipment and reagents

Pipettes: Your pipetting skills will be tested in the first lab.

Microcentrifuge: A centrifuge must always be **balanced** before being run. This means that every tube must be directly across another tube of equal weight. However, it is not necessary to weigh the tubes if the tubes have identical content and volume. For example, if you are doing two plasmid preps side by side, the tubes should have the same component and volume.

Once the centrifuge is loaded

1. place the rotor lid on the rotor
2. close the centrifuge lid
3. set the speed (make sure you know what the speed should be)
4. set the timer (the timer usually starts the centrifuge)

Always place your tubes with the hinge facing the outer rim of the rotor. This will make it easier to find pellets, after spinning down.

Working with reagents

When repeatedly pipetting the same reagent into multiple tubes, you must change tips between tubes — this prevents contaminating the reagent or cross contamination of the tubes (one exception though – if the tubes are empty, you can use one tip for all the tubes).

Safety

Tie back long hair and avoid loose clothing.

Often times than not, **we use** safer dyes like **SYBR safe** — four to five times less mutagenic when compared to ethidium bromide.

Wash up the **washables** at the end of your work and properly discard any waste material into the trash.

Make sure you are using all equipment correctly and be aware of what is going on around you. Turn off electrical equipment when not in use.

Watch out for heat block that has very hot surface.

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