

LABORATORY INFORMATION MANAGEMENT SYSTEM (LIMS)

VERSION 2.0

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1. INTRODUCTION

The Department of Livestock (DoL) is pleased to inform that the Laboratory Information Management System (LIMS) database under the NCAH domain has been enhanced. LIMS, the online database system designed to manage the information of all the veterinary laboratory activities in the country was launched during 2019 and was meant for all the laboratory facilities under the Department of Livestock (DoL) viz. National Centre for Animal Health (NCAH), Regional Livestock Development Centres (RLDCs), Satellite Veterinary Laboratories (SVLs) and Dzongkhag Veterinary Laboratories (DVLs).

During the course of its use, the need for enhancement was raised by the end users to make it more user friendly and also secure. Hence, accordingly the enhancement was carried out and also the training was provided to almost all the end users through the funding support of Fleming Fund country grant.

The program is hosted at the same sub-domain under the NCAH domain,
address/URL: <http://lims.ncah.gov.bt>

2. MAIN FEATURES

The system's key features include, but not limited to

- Registration of owner
- Registration of animal/feed
- Registration of sample
- Testing of individual and pool samples
- Test verification
- Sample referral
- Proficiency testing
- Sample repository
- Laboratory consumable store management
- Data archival and reports

The system is intended for data collection of all the services rendered through veterinary laboratories in the country.

The National Centre for Animal Health (NCAH) is the system's administrator.

2.1 Log in page

- The system's admin shall register field users of the system based on some personal information such as CID, full name, email, designation, centre's location, etc.
- The login credential (username and password) of the registered user shall be communicated through an email from lims@moaf.gov.bt.
- Click on/ copy-paste in the browser, the link, <https://lims.ncah.gov.bt/>, to access the system. The link shall redirect the user to the login page (Figure 1).
- Enter the Username and Password provided through an email (Figure 1).



- After the first login, change the password from the default one. On updating with the new password, it will redirect to the Dashboard.

2.0. USER ROLES

2.1 Sample manager

User	Service	Remarks
Sample Manager	Registration	Registration of the animal or feed owner
		Registration of an animal or feed against the registered owner
		Registration of a sample against the registered animal or feed
		To search for a registered owner/animal/feed/sample

	Sample Repository	To refer a sample to an international referral lab upon forwarding from the centre's lab in charge for international referral without testing. A part of the sample gets archived along with international referral
		Archival of samples without testing and forwarded by the lab incharge for direct archival
	Quality Assurance System	Receives the PT request sent by the lab incharge of the same lab and PT participation request sent by the sample manager of the conducting lab. PT sample details are filled and forwarded to the concerned lab technician of the same lab
		Receives the PT (samples received from the international PT conducting lab) command from the lab incharge and assigning to the concerned lab technician of the same lab
	Referral	Views the list of samples referred from another lab and assigns specific lab sections for testing.
	Reports	Generate all the tests reports performed by test specific or sample specific
		Reports about all the samples archived
		Generate annual stock, inventory of consumables

2.2 Laboratory technician

User	Service	Roles
Lab Technician	Section-specific Testing	Views the list of samples forwarded by the sample manager for routine testing. Enters the test details and findings and submission for verification to the lab incharge. If a test (routine) has been sent back by the lab incharge for re-testing, retest and submits back to lab incharge for verification.
		Views the list of PT samples forwarded by the lab incharge to test the given samples. Conducts test on the PT sample and submit to the lab incharge for verification. If a test (PT) has been sent back by the lab incharge for re-testing, retest and resubmit for verification.
		Views list of referred samples forwarded by the sample manager for testing and submit to the lab incharge for verification. If a test (referred sample) has been sent back by the lab incharge for re-testing, retest and submit for verification.
	Repository	View the list of tested samples forwarded by the lab incharge for repo/archival. Assign the equipment id, compartment id and store sample for future studies. Also, reposit the samples directly without testing
	Reports	Generate all the tests reports performed

	Inventory Usage Record	Shows the table concerning stock of consumables and other materials received and issued by the store incharge
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2.3 Laboratory in-charge

User	Service	Roles	
Lab Incharge	Test Verification	View the list of test forwarded by the testing lab technicians. In this section, the test submitted gets verified or send back to the testing technician for re-testing. The tested PT sample also gets verified here.	
	Result for PT	Has the option to upload PT results received from the assessing international or national lab (NEQAS and EQAS) after participating in the PT called by a testing lab.	
	Sample Repo	To initiate direct archival of a sample without any testing.	
	Sample Referral	To initiate direct referral of an untested sample to an international referral laboratory. It appears in the interface of the sample manager, from where archival of the sample referred in an international lab is done.	
	Quality Assurance System		To assign a PT sample to relevant section of a participating lab and send to the sample manager of the same lab to add sample details and forward to the participating lab.
			To participate in a PT conducted by the external (national/international) laboratory. Here, the PT samples received is being forwarded to the sample manager, where it appears under External PT (EQAS and NEQAS) and gets forwarded to the assigned/recommended lab section.
	Officiating Assignment		To assign an officiating person for a particular role
			To revoke the assigned officiating role
	File Upload		To store any other relevant files such as surveillance report and past lab reports
	Inventory Usage Record		Shows the table concerning stock of consumables and other materials received and issued by the store incharge
Reports		To generate all the tests performed by specific sections selected	
		Reports about all the samples archived	

2.4 Store in charge

User	Service	Roles
Store In charge	Master Management	Listing of storage equipment, provision of unique equipment number and mapping the equipment with compartments are done here.

	Inventory Record	To enter new laboratory items received in the lab. Details such as specific storage location, equipment and compartment, can be entered here. List of added items shows on opening this page.
		From here, the store incharge issues lab items to other officials in the same laboratory
		To check the stock balance of an item in another lab's store and request for mobilization
		Shows the list of requests for lab items to be issues/mobilized to other laboratories. The store manager has the option accept or reject the request. List of lab items requested from another lab also shows here with the status.
		To generate stock report based on the filters applied

2.5 Administrator

User	Service	Roles
Admin	Master Management	To add/delete/update jurisdictions such as centers at national, regional and dzongkhag level and also update the list and mapping of geographical jurisdictions (dzongkhag, gewog and village)
	Administration	Add/delete/update role, client type, designation, gender, referral, and lab sections.
		Add/delete/update purpose, animal species, type and breed
		Add/delete/update Sample types, subtypes and subclass.
		Add/delete/update test type, sub-type and section-specific tests and results and units
		To map result range and inference against a particular test and subtest
		Add/delete/update Consumable type, Item Name, Storage equipment, equipment Number and Compartments.
		Add/delete/update system users.

3.0 REGISTRATION

3.1 Owner Registration

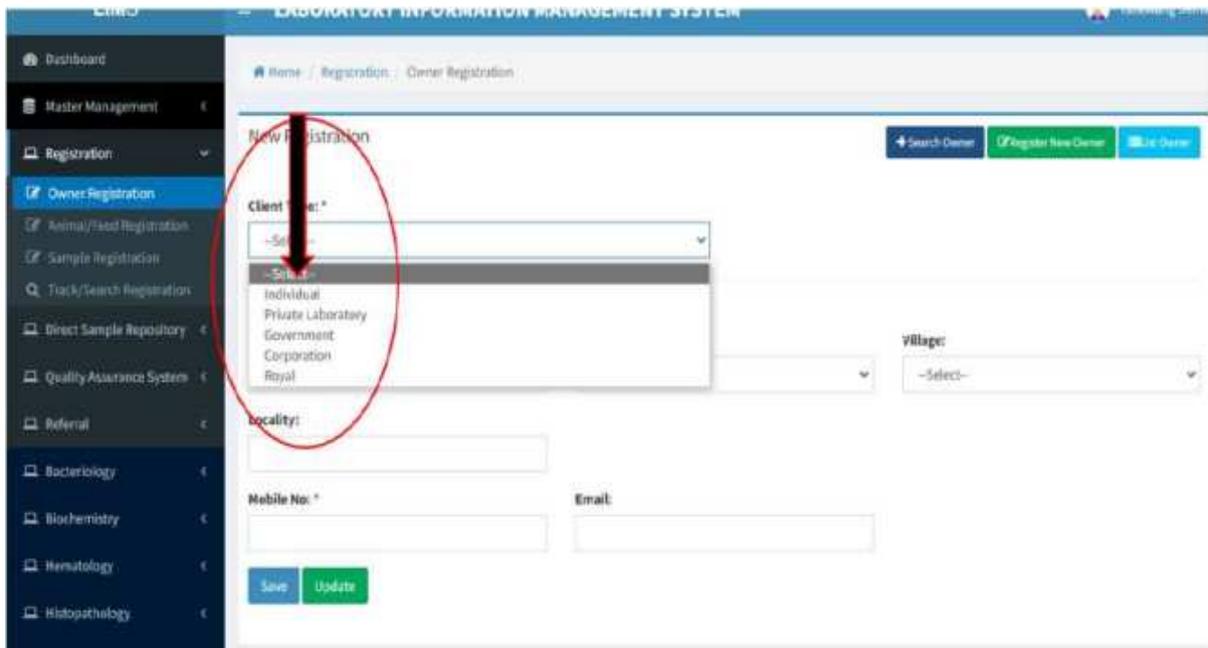
In the dashboard of sample manager, select the owner registration.



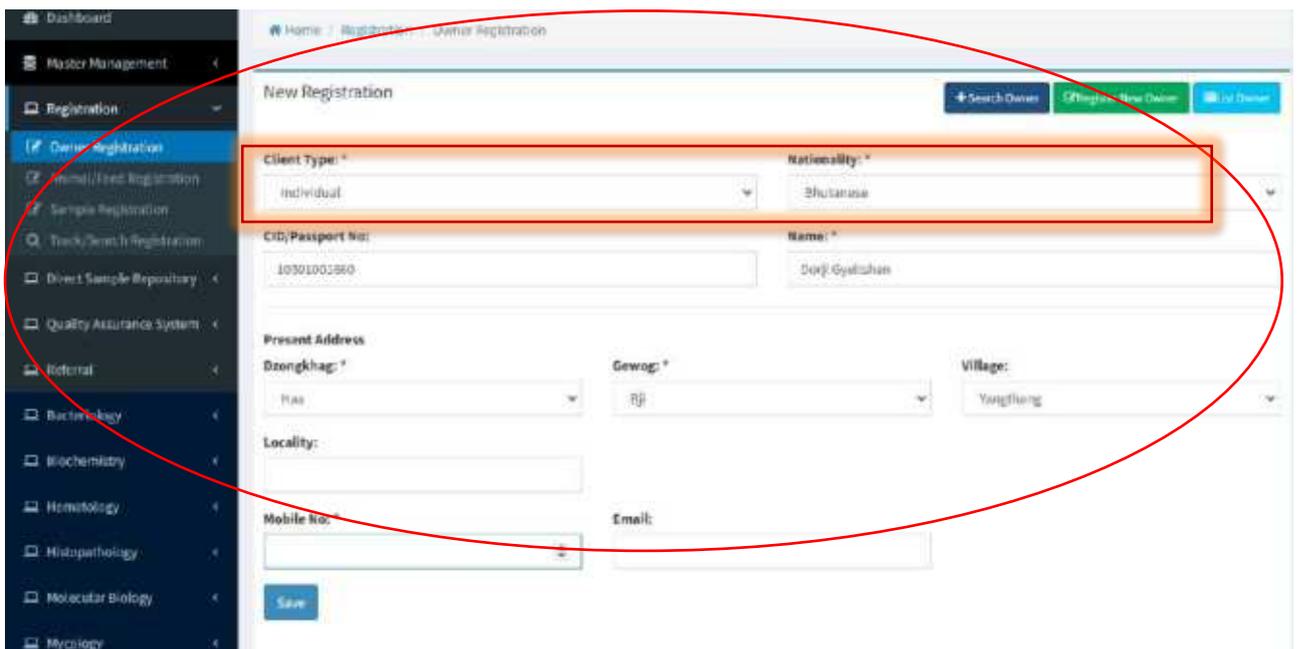
Click on Register New Owner



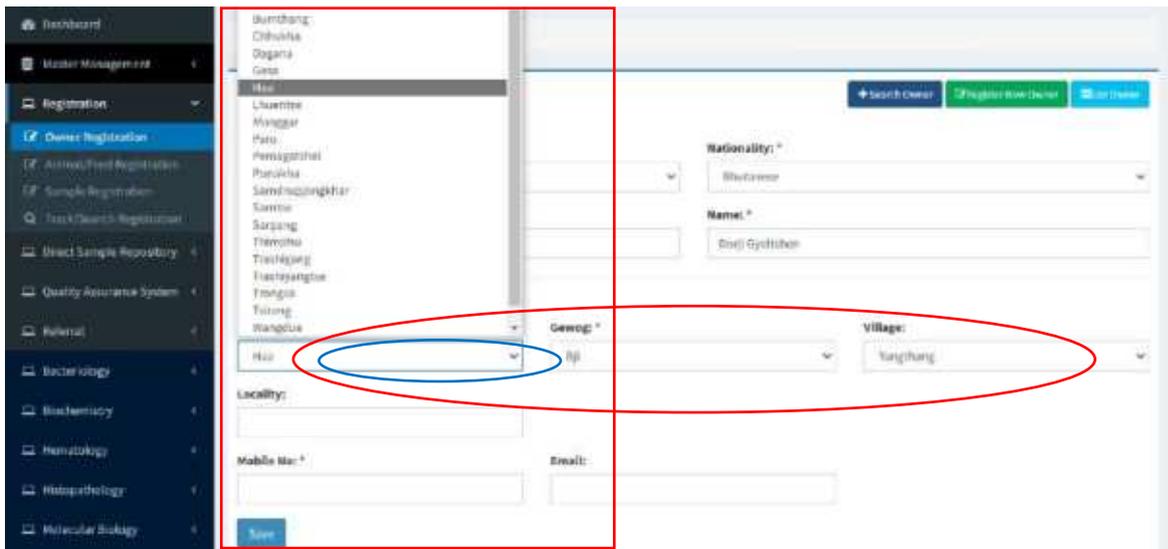
Select the client Type either individual, Private laboratory, Government farm, corporation and Royal .



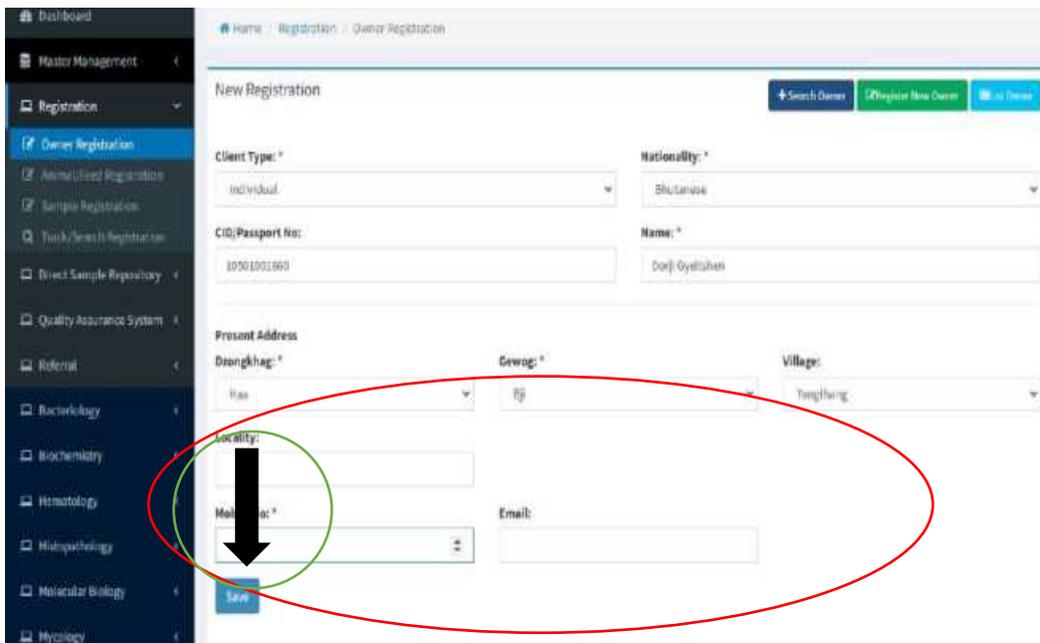
Choose the individual ,Nationality and put the owner CID number then it will fetch the name and address which is in census.



We can also edit the present address of owner Dzongkhag ,Gewog and Village



Write the locality address if require ,type the mobile number of owner ,if owner has the Email address you just write and also it is not mandetory so we can save the data.



If the ower CID is registraed already in the system the system will pop the message saying (owner with thus CID/Passport has alrdy registered so you just update.

New Registration
[+ Search Owner](#)
[/ Register New Owner](#)
[/ Lic Owner](#)

Owner with this CID/Passport has already registered.

Client Type: * Nationality:

CID/Passport No: Name: *

Present Address
 Dzongkhag: * Gewog: * Village:

Locality:
 Mobile No: Email:

[Save](#)
[Update](#)

We can Search the Owner details if it was updated in system before.

- Dashboard
- Master Management
- Registration
 - Owner Registration
 - Animal Feed Registration
 - Sample Registration
 - Track/Search Registration
- Direct Sample Repository
- Quality Assurance System
- Referral
- Bacteriology
- Biochemistry

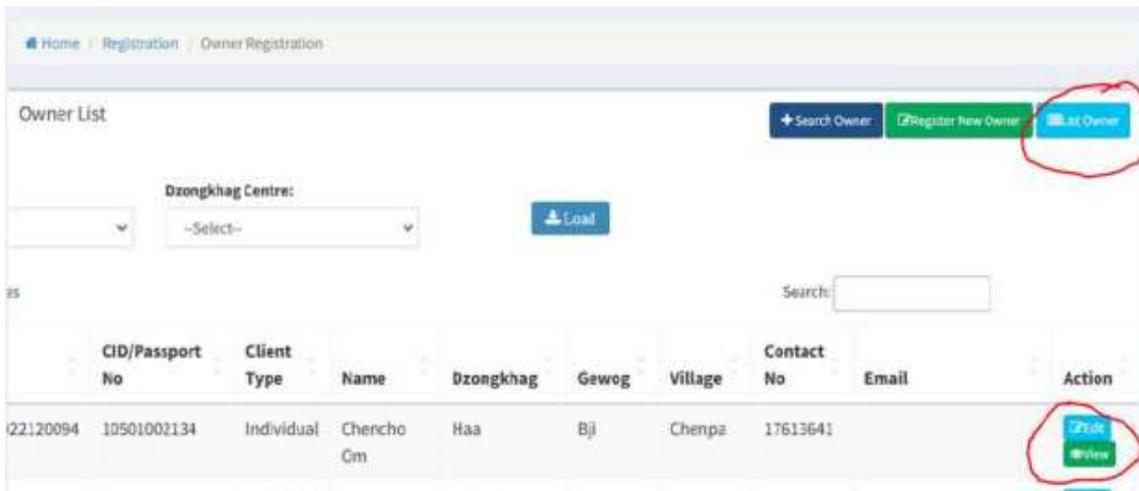
Home / Registration / Owner Registration

Owner Registration

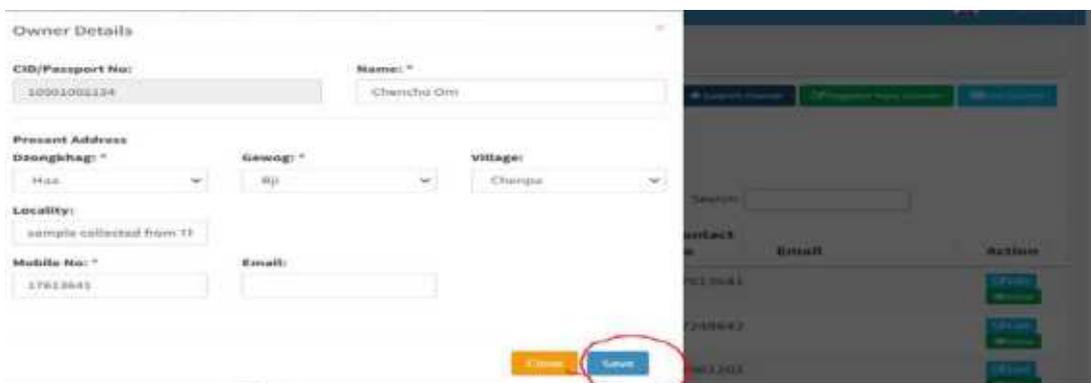
[+ Search Owner](#)
[/ Register New Owner](#)
[/ Lic Owner](#)

CID/ORN: *
Q Search

We can also check the list owner and edit the details if necessary .

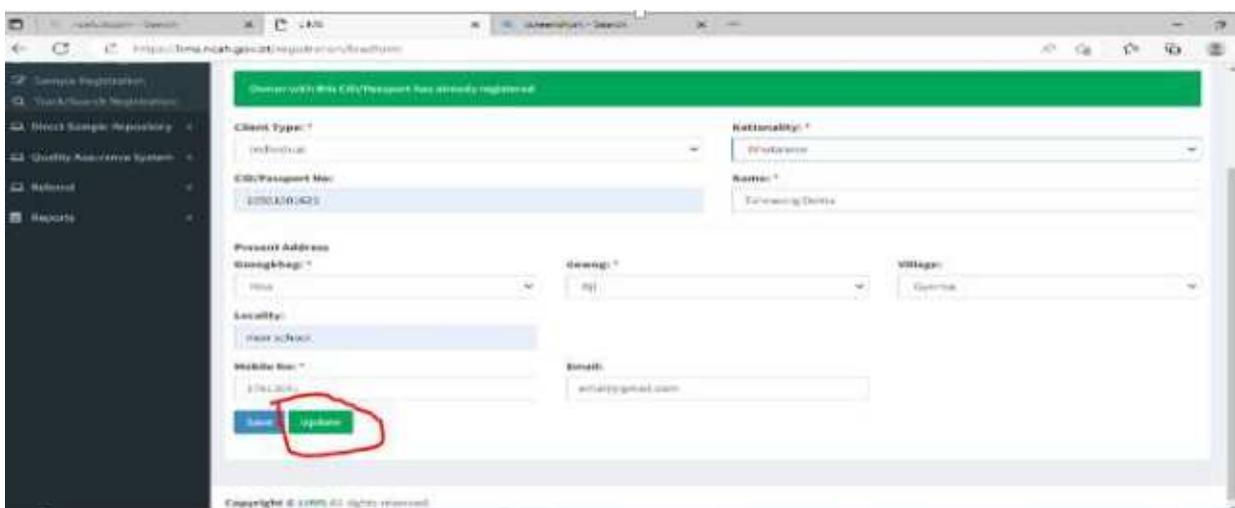


Edite the daetails of Owner and save



Old Registration Updates and Edit Detail,

If the Owner CID already punched in system means, then we just need to update the old details or edit the address and update.

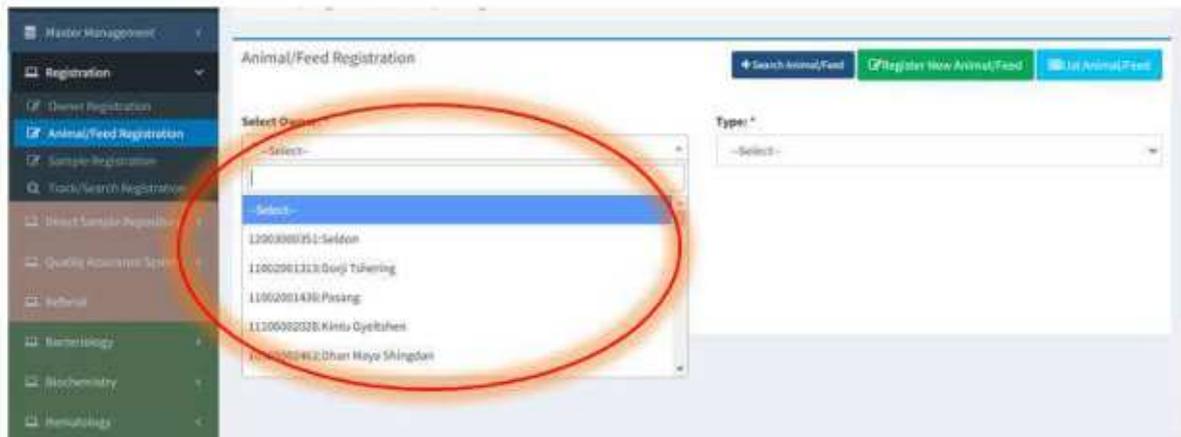


3.2 Animal Registration

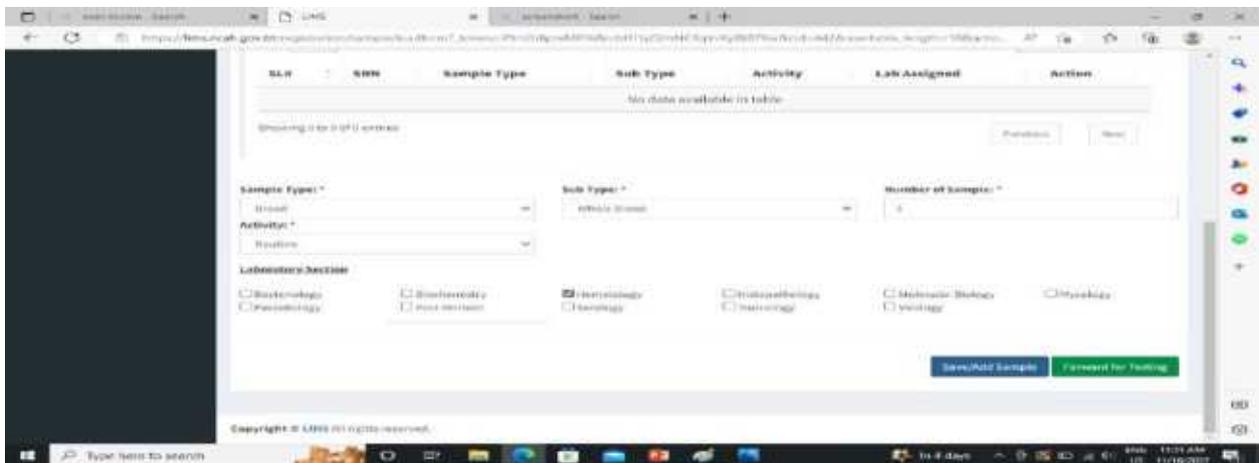
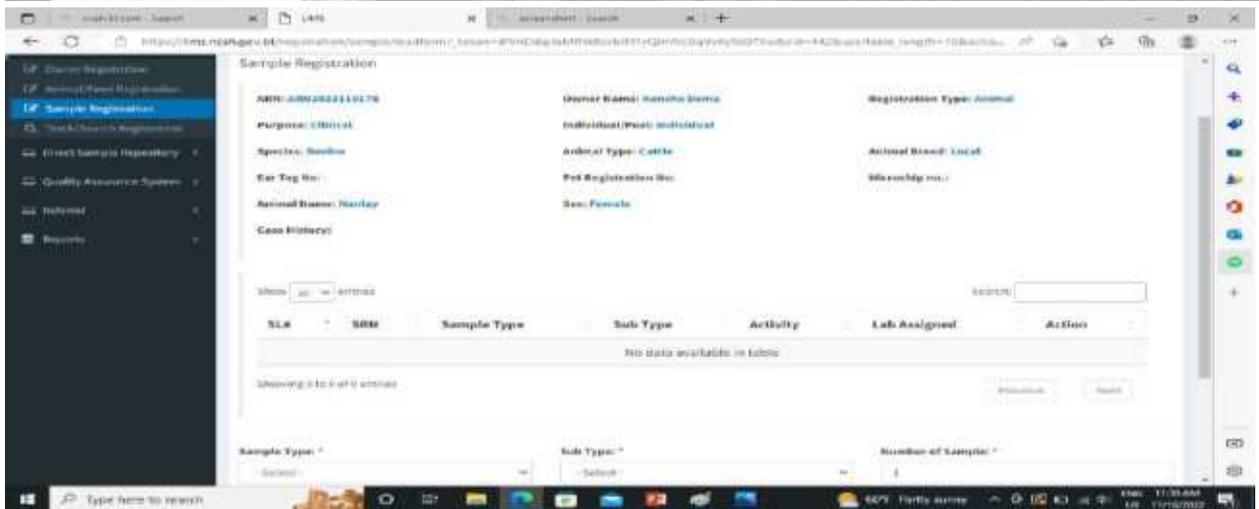
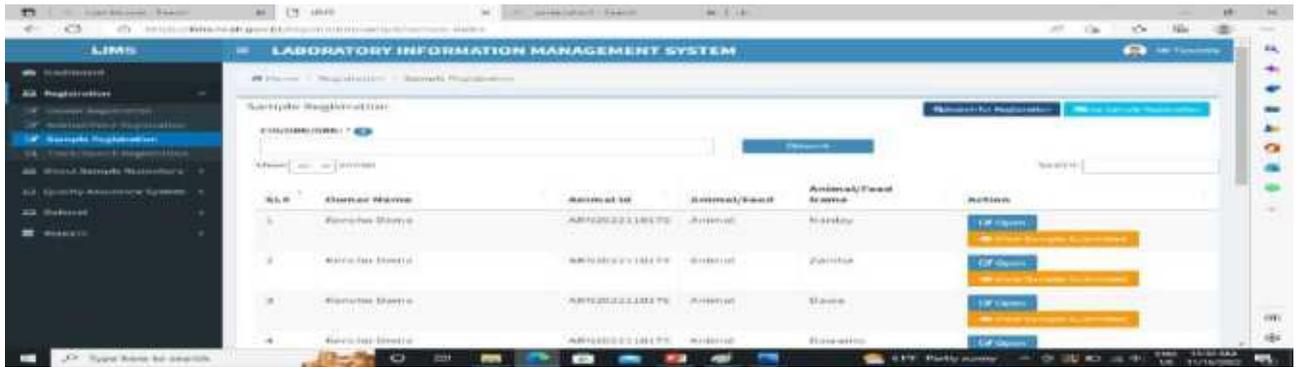
Select the Animal/Feed Registration and click on Register New Animal/Feed.



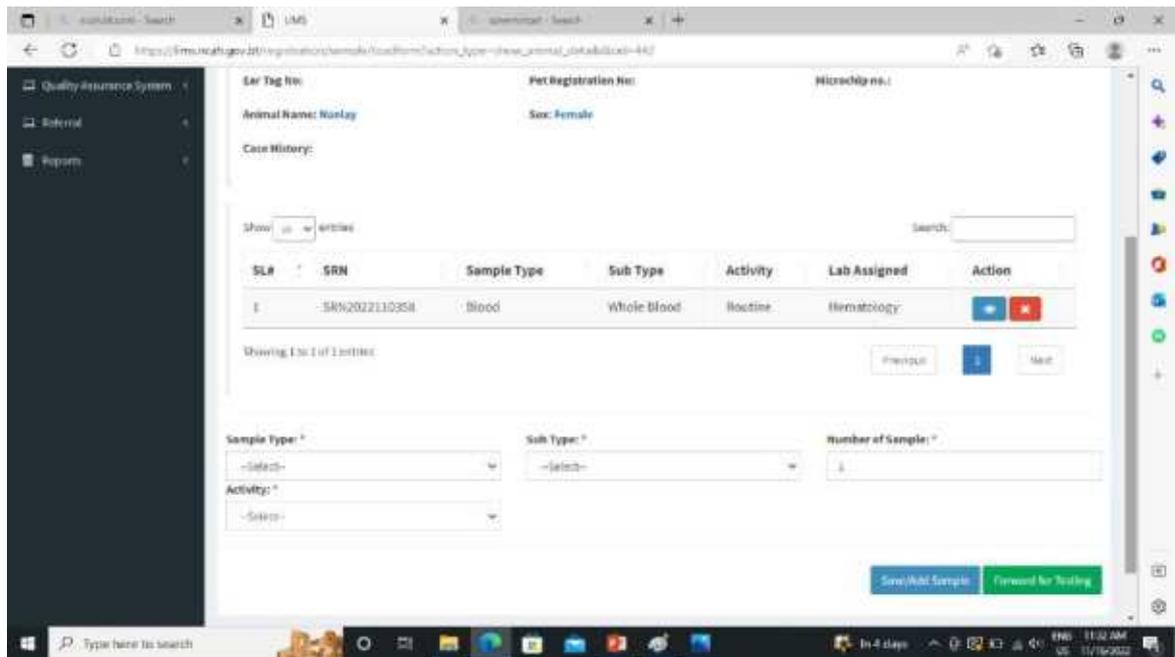
Select the new owner from the dropdown and put the owner CID to fine old updates.



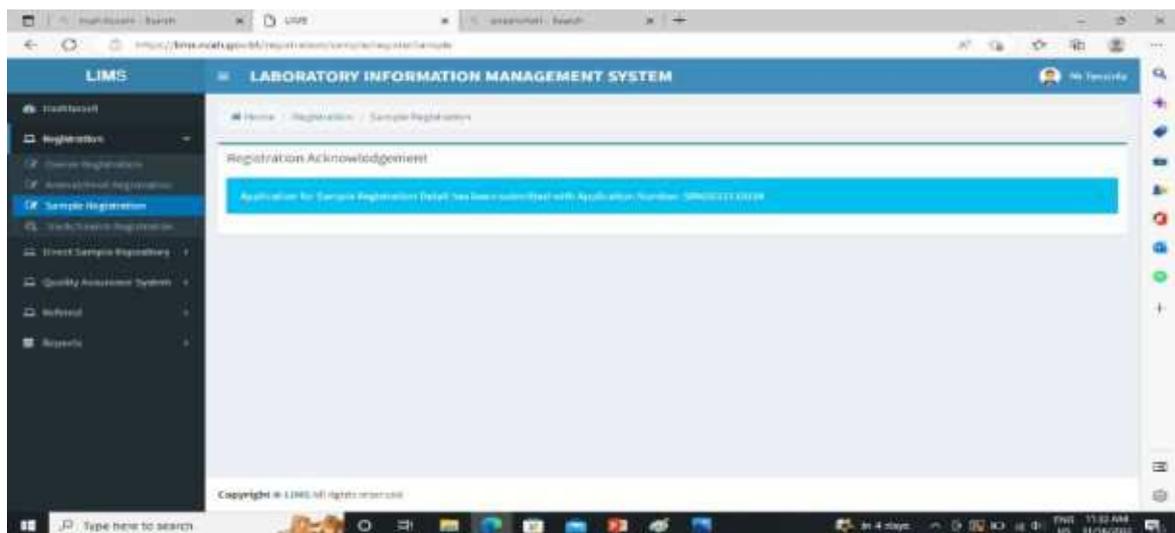
3.3 Sample Registration



Save/Add Sample and Forward for Testing

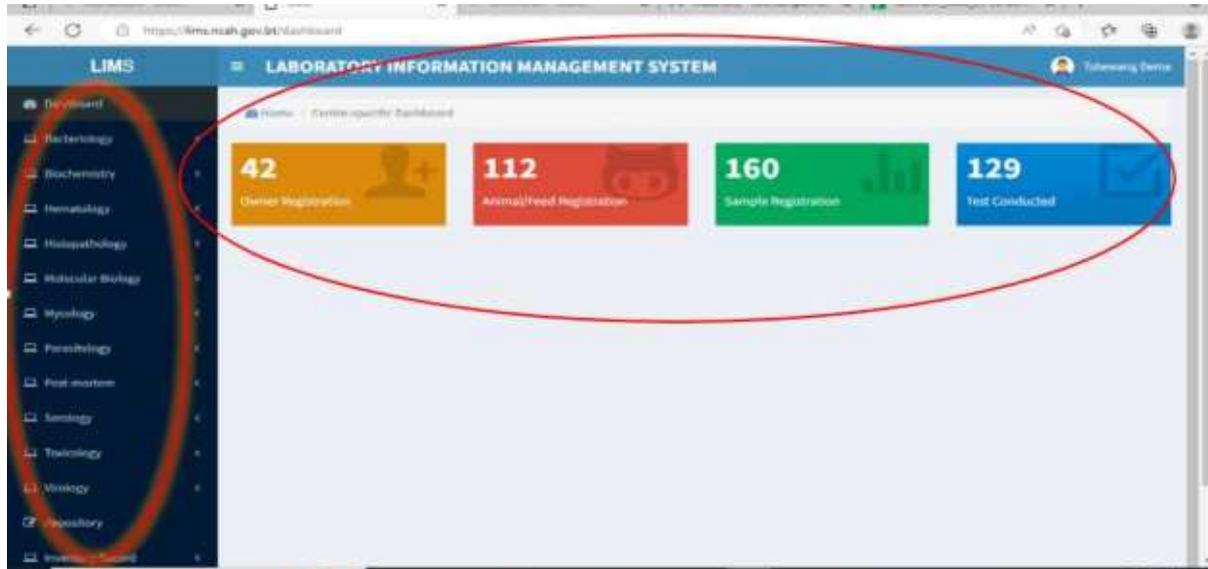


Acknowledgement from Sample Manager after sample forward to Technician



3.4 Conducting test by technician

All the sections are displayed on the left side of the screen,so you have to choose your own section .

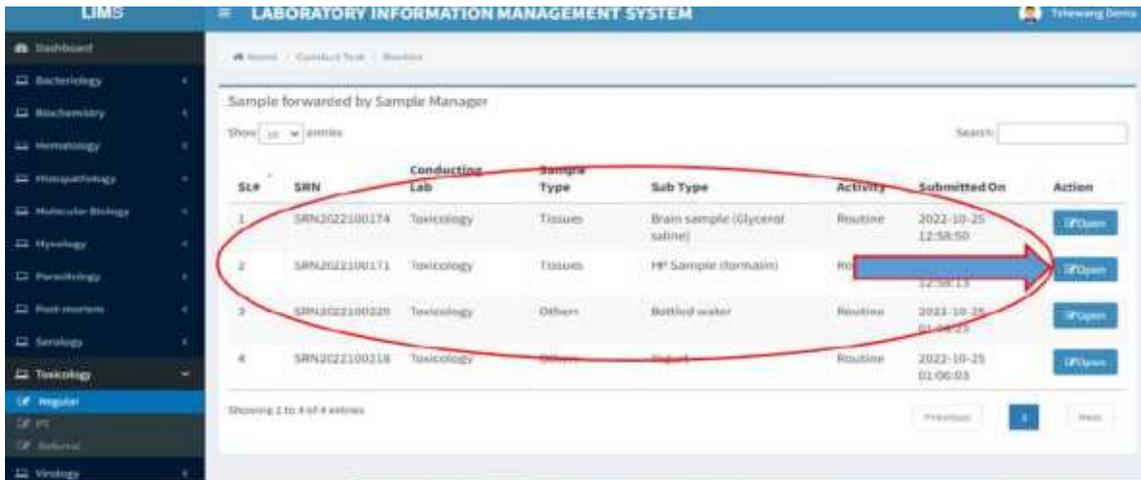


3.4.1 Test type

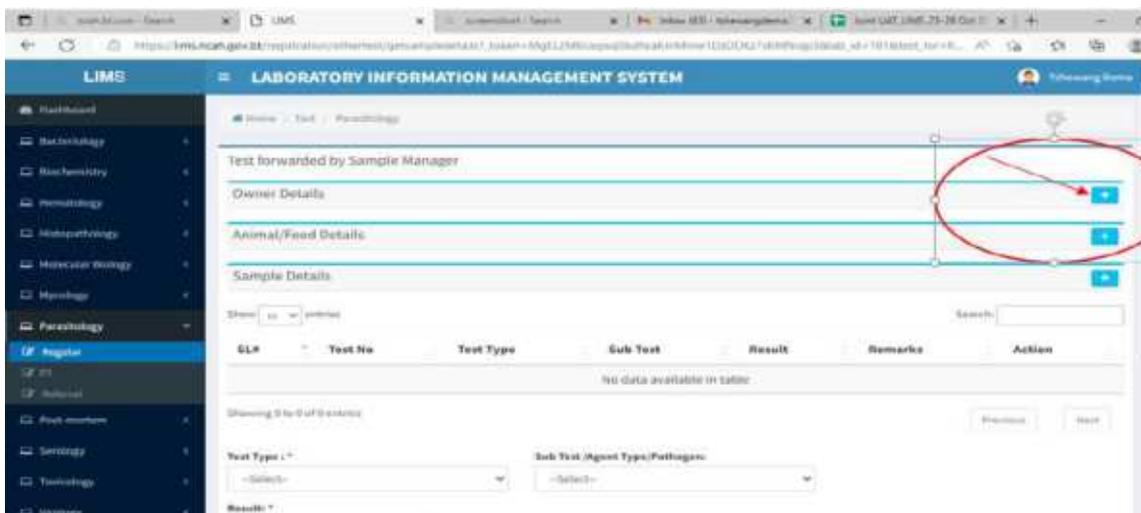
Directly click on section and select the Regular, PT or Referral based on your sample information



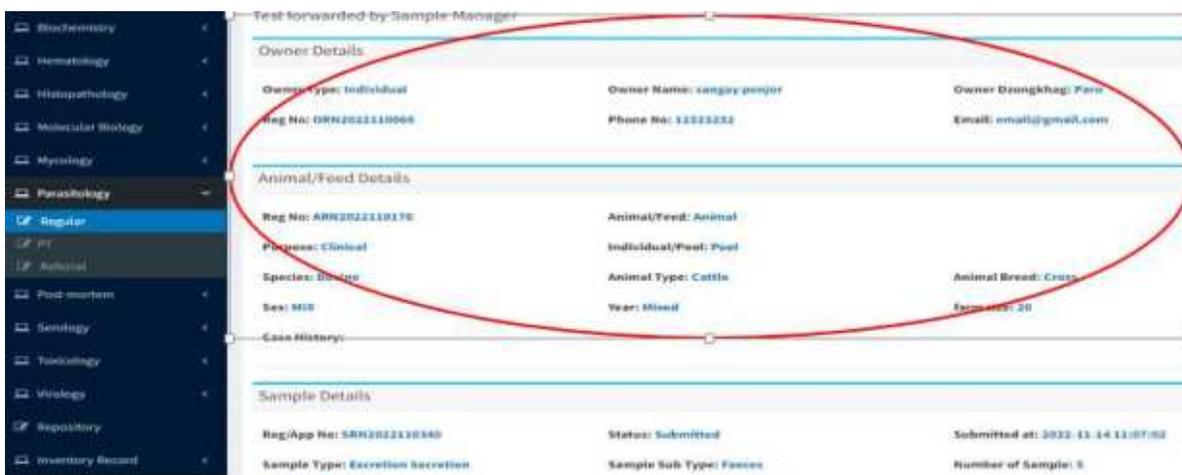
The information of samples which was forwarded by Sample Manager will be display in the page and you just take an action.



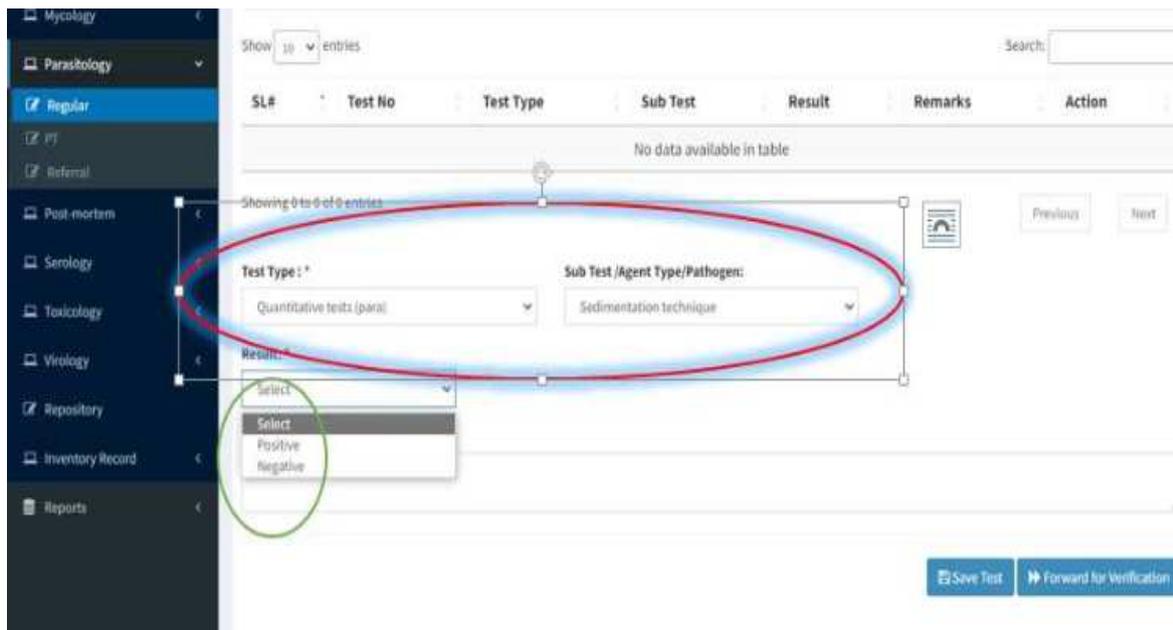
After opening the page we should check all the details by clicking on Plus sign  whether the information are correct or not.



The Important information to revisit: Owner Details, Animal Details and Sample Details.

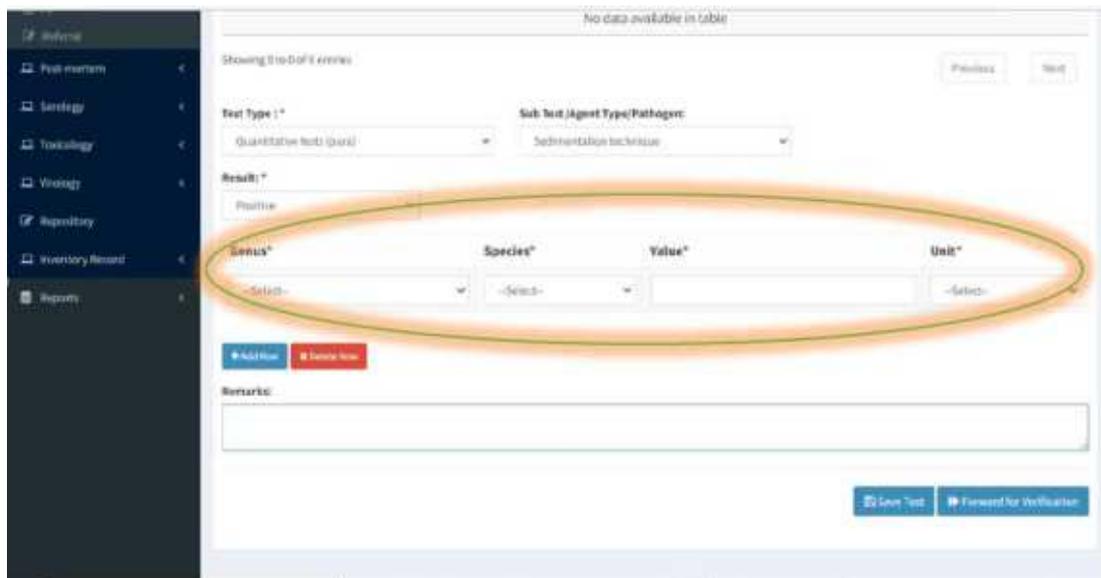


Select the Test type, Sub Test /Agent Type/Pathogen and Results.

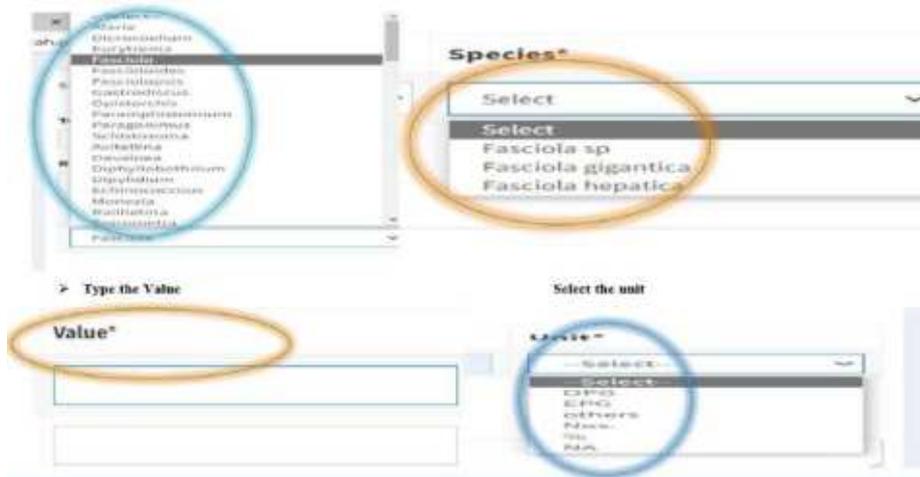


3.4.2 Result

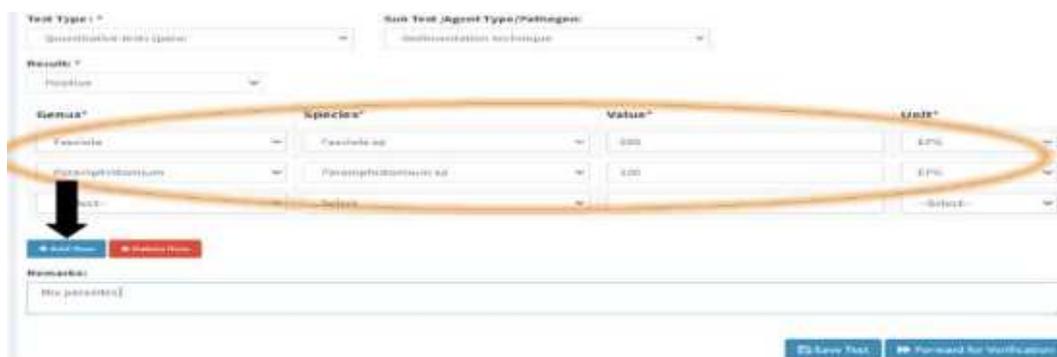
In case the sample is positive we have to select **Genus, Species, Value and Unit.**



Select the Genus and Species from dropdown.



Add Row if you found the different parasites eggs in the same sample.



We cannot save and forward the test, if we keep the row empty without adding results, that's why we have to delete the row and save test first and forward for verification.



3.4.3 Forwarding for verification

After forwarded the test to in-charge the system updated the acknowledge and the particular test data will disappear from technician Page.

Test Details for this Sample has updated successfully

Show 3 entries

SL#	SRN	Conducting Lab	Sample Type	Sib Type	Activity	Submitted On	Action
1	SRN2022100174	Parasitology	Tissues	Brain sample (Glycerol saline)	Routine	2022-10-25 12:58:56	Open
2	SRN2022100169	Parasitology	Blood	Blood smear	Routine	2022-10-25 12:57:49	Open
3	SRN2022100168	Parasitology	Carcass & Organs	Carcass	Routine	2022-10-25	Open

3.4.4 Sample Repository by Technician

Directly click on Repository

Coccidia Coccidia sp 608 OPG

Remarks:

Storage Details

Date of Archival:

Storage Equipment:

Equipment Number:

Equipment Compartment Number:

Remarks:

The New Repo Request by laboratory incharge will be listed in the page by section wise, open the particular section to archive.

New Repo Request by incharge

Show 4 entries

SL#	Labortary Section	Test Id	Test Type	Sub Test Type	Activity	Date	Action
1	Parasitology	TN2022111078	Quantitative tests (para)	Sedimentation technique	Regular	2022-11-09 10:32:09	Open
2	Virology	PTTN2022111059	Florescent Antibody Technique (FAT)	Rabies virus	PT	2022-11-04 02:52:51	Open
3	Toxicology	TN2022100403	Quantitative Tests(Toxicology)	Total Zearalenone Group	Regular	2022-10-25 10:45:08	Open
4	Toxicology	TN2022100402	Qualitative Tests(Toxicology)	Total Aflatoxins	Regular	2022-10-25 10:36:09	Open

Check the sample details and select the Date of Archival, storage Equipment, Equipment Number and Equipment compartment Number from the dropdown list.

After you selected all the details then you give remarks and save .

10.5 Storage of sample

After save your Repo details this acknowledgment will appear on the dashboard .

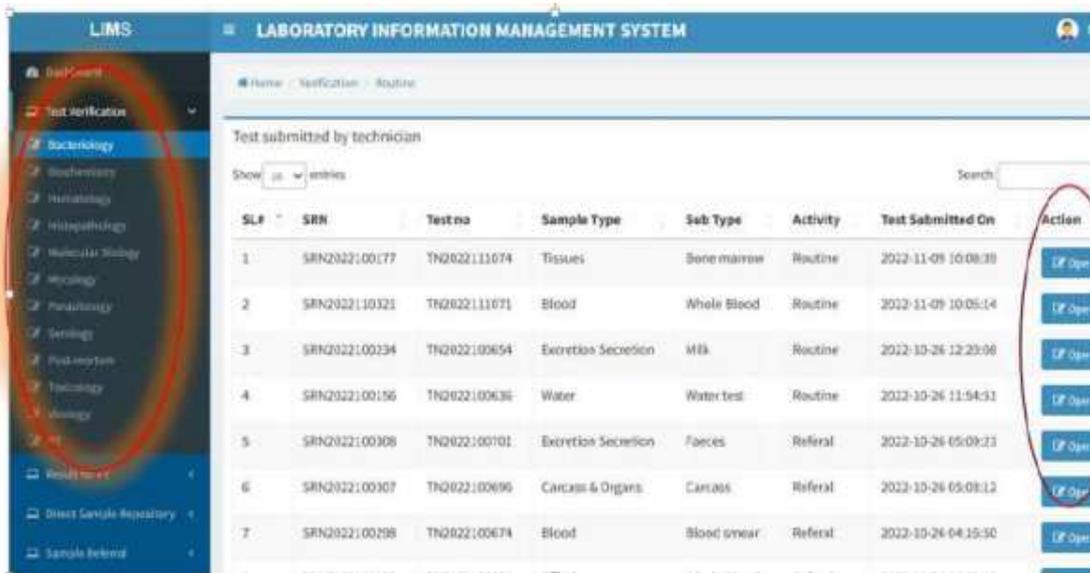


In-charge has authority to verify all the Routine, PT, Referral and NEQAS test and also initiate for both EQAS & NEQAS.

3.4.5 Test verification by lab in charge



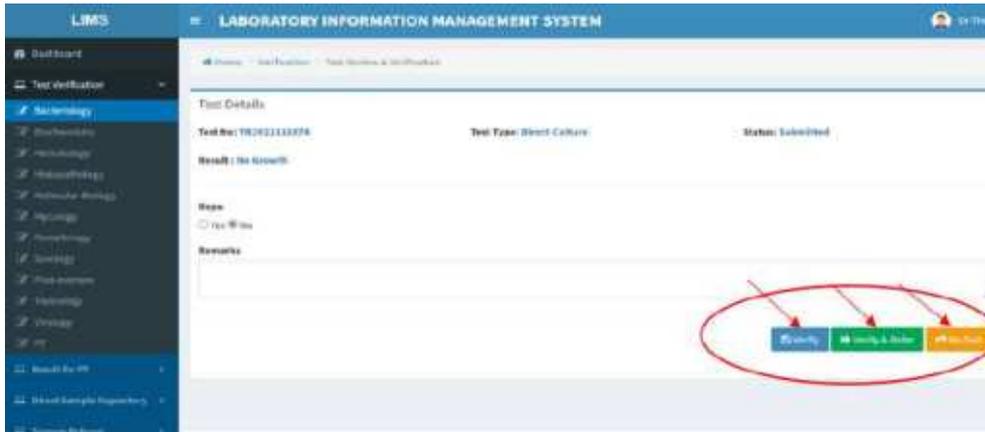
Under test Verification the section wise name was shown so, directly click on the particular section to open the test forwarded by lab technician.



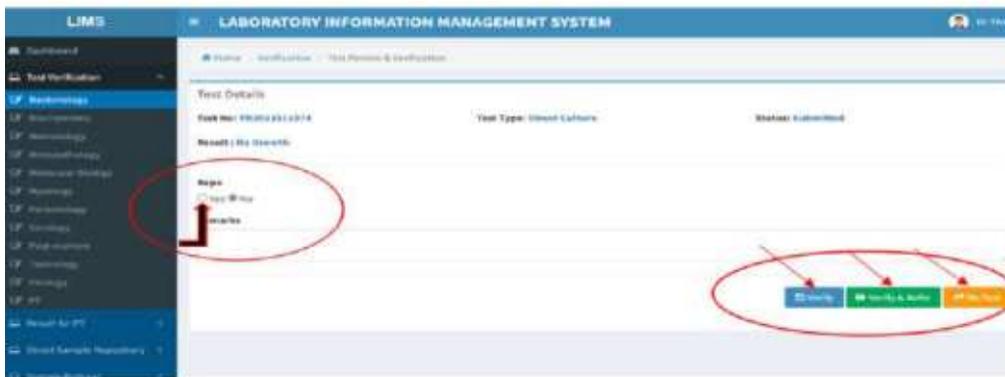
Check the sample details and open the test.



There is three option either to verify directly, verify & referral and to send back to laboratory technician for retest.



In charge will initiate either to Repo the samples for future reference during verifying time.



5.0 PROFICIENCY TESTING (PT)

5.1 Conduct PT

For National PT NCAH conducting PT for RLDC LAB

User	Feature
Lab Incharge (NCAH)	Initiate PT
Sample manager(NCAH)	Sample Registration and forward
Sample manager(RLDC)	Forward the sample
Lab Technician (RLDC)	Conduct test
Lab Incharge (RLDC)	Verify
LAB Incharge (NCAH)	Check result through Report

Laboratory In charge of NCAH will initiate PT.

Click on Conduct PT

LIMS LABORATORY INFORMATION MANAGEMENT SYSTEM

Home / Registration / PT

PT Registration

Show 10 entries Search:

SL#	Registration Number	Conducting Lab	Activity	Type	Status	Remarks	Submitted Date
1	PT2022110297	Parasitology	PT	Conduct PT	Forwarded	send PT sample to DVH Para	2022-11-17 13:49:05
2	PT2022110296	Parasitology	PT	Conduct PT	Forwarded	PT	2022-11-17

Select Name of lab/Section choose the national ,Region and center from the dropdown to whom going to conduct the PT ,write clear remarks and send it to manager

PT 14:40:16

9	PT2022110283	Hematology	PT	Conduct PT	Forwarded	pt	2022-11-04 14:17:20
10	PT2022110200	Post Mortem	PT	Conduct PT	Forwarded	PT for postmortem	2022-11-03 12:25:42

Showing 1 to 10 of 13 entries

Name of Lab: *
Bacteriology

National: *
NCAH

Region: *
RLDC Talmasham

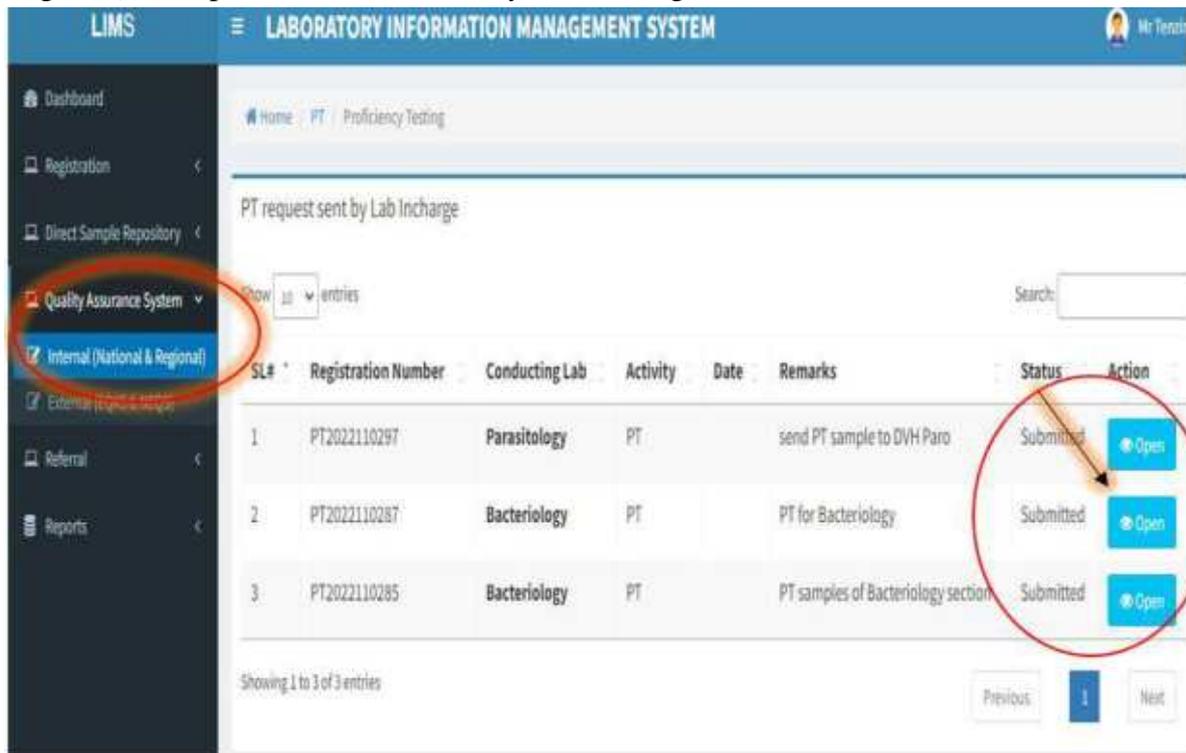
Center: *
Select

Remarks: *
send PT sample to RLDC Lab

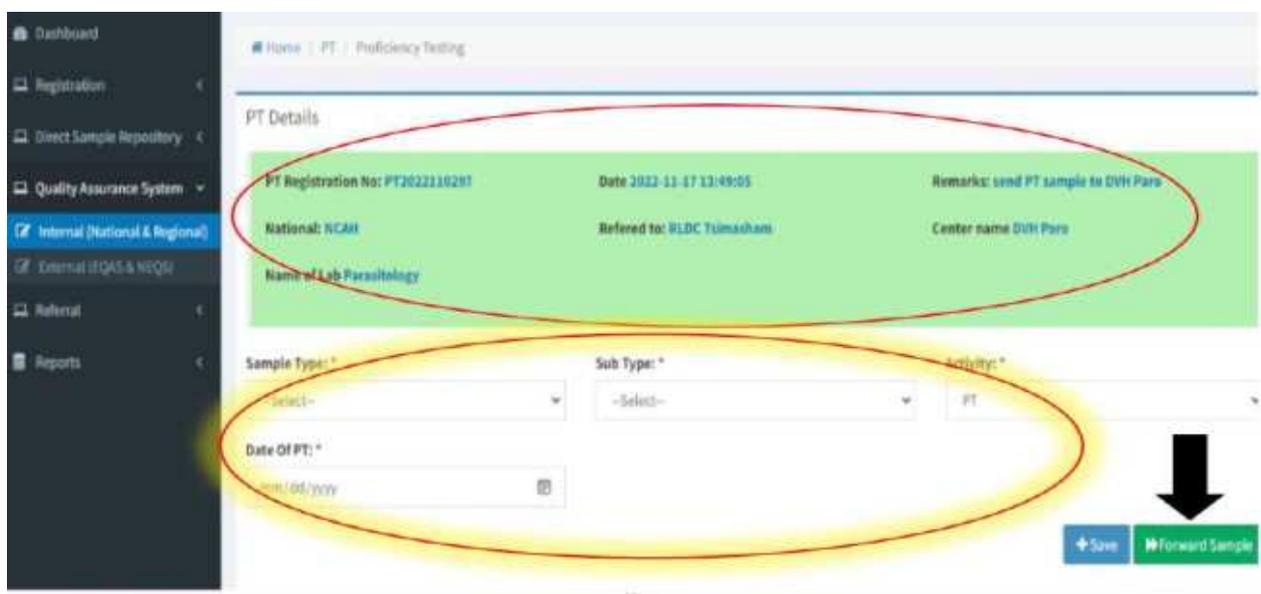
Send to Sample Manager

Processing PT by sample manager

Sample manager will select the Quality Assurance System and choose internal (National & Regional) and open the PT submitted by Lab incharge.

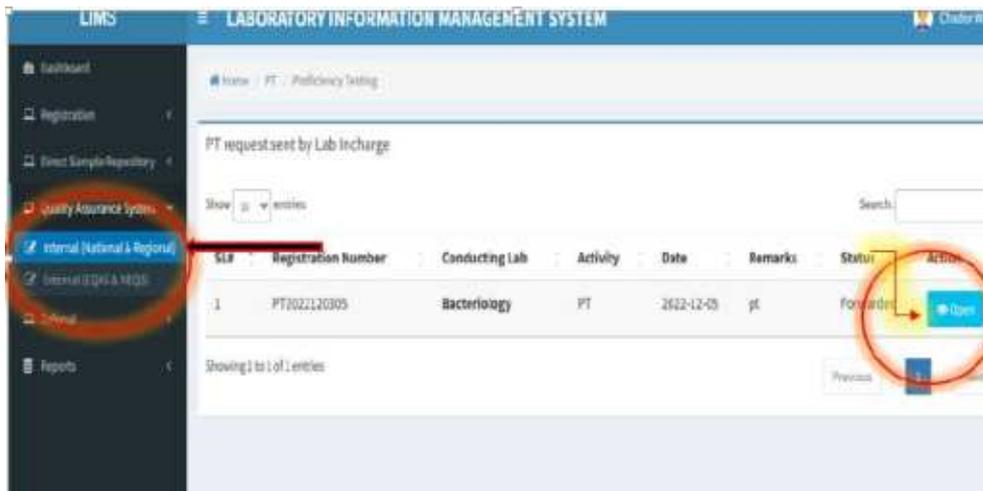


Check the PT Details and then select the Sample type ,Sub Type and Date of PT from the dropdown and forward the sample to RLDC Sample manager

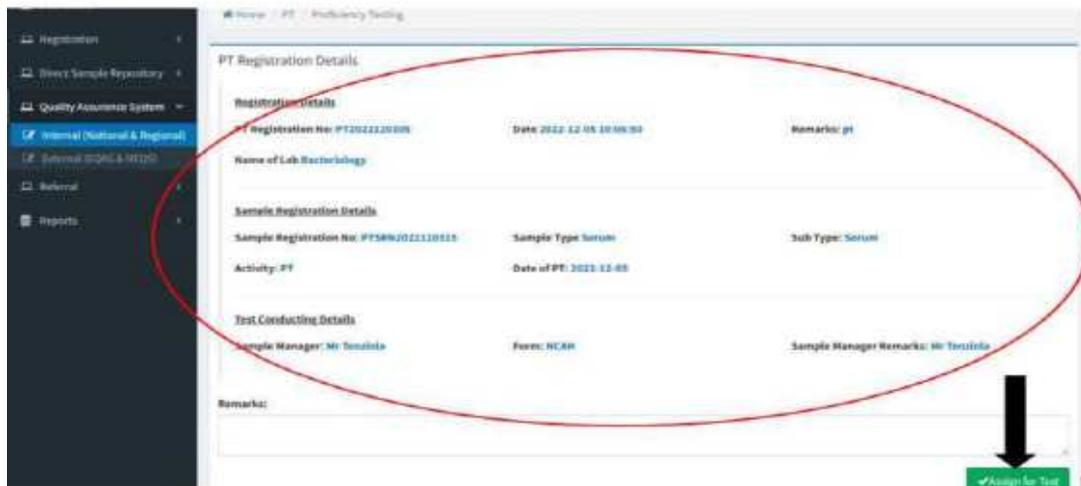


Process by RLDC Sample Manager.

Sample Manager will check under quality Assurance system whether he received the new internal PT from NCAH and then he will open.



Check all the details and click on assign to forward the samples to laboratory technician for sample testing.

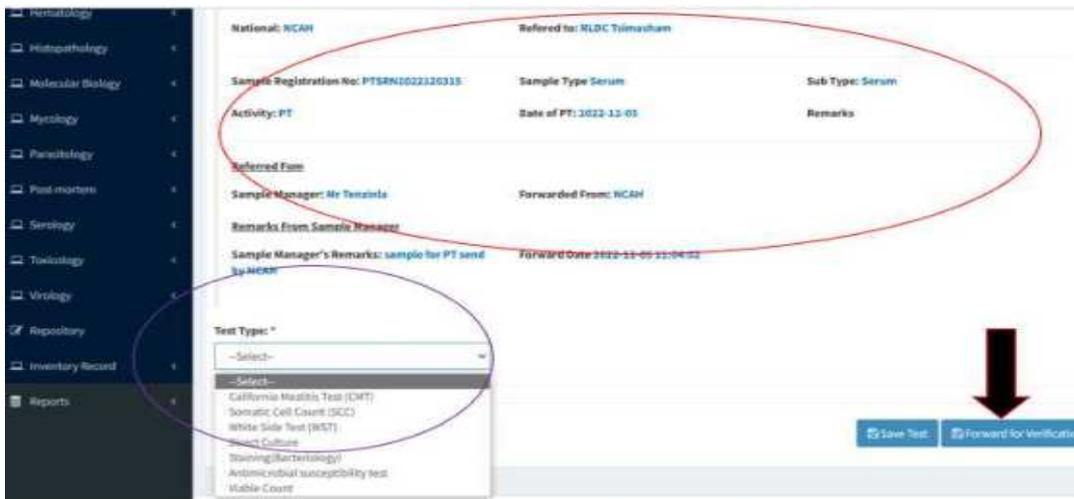


Process by RLDC Technician

The technician of RLDC directly checks the dashboard of respective section and click on PT and open the test Perform button.

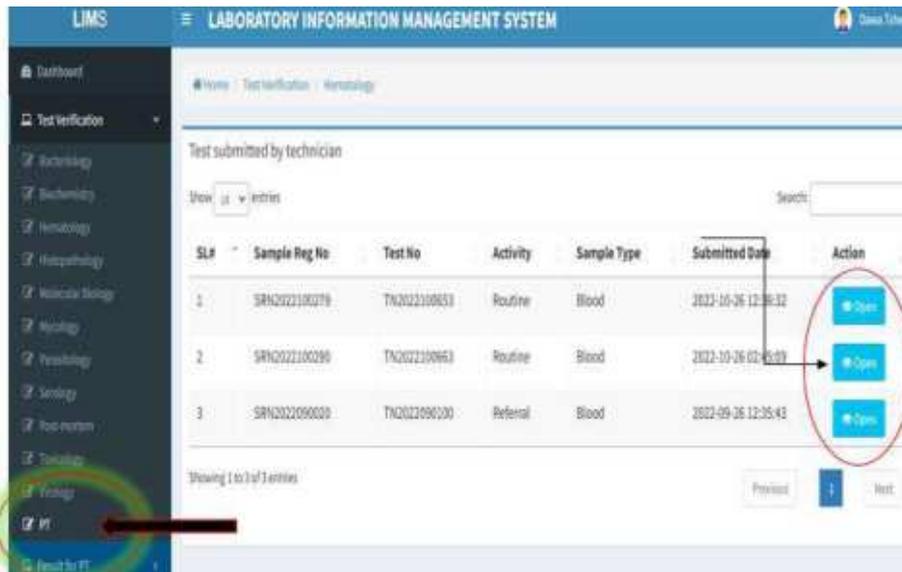


Check all the details and select test type to perform the test as usual and forward for verification to lab in charge.

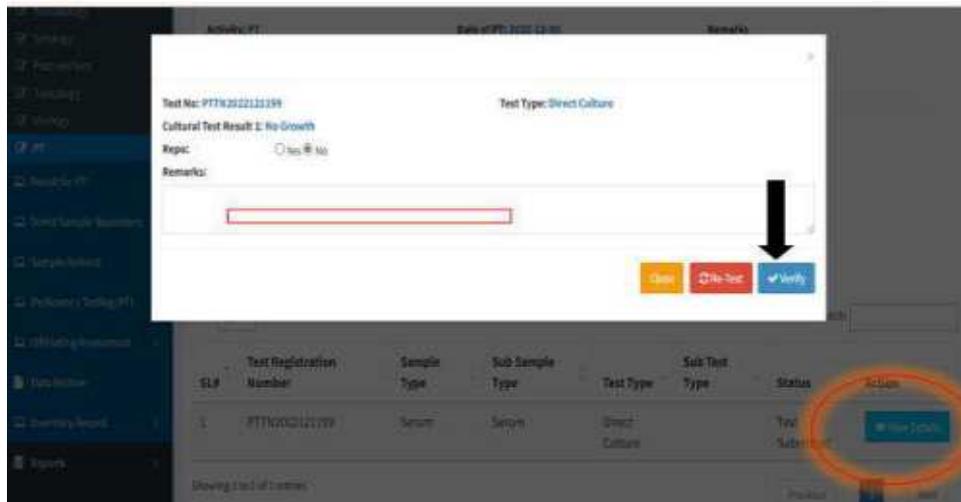


Verification by Laboratory In charge of RLDC

Directly check the PT in the dashboard, check the TN/ submitted date and open the test which submitted by technician.

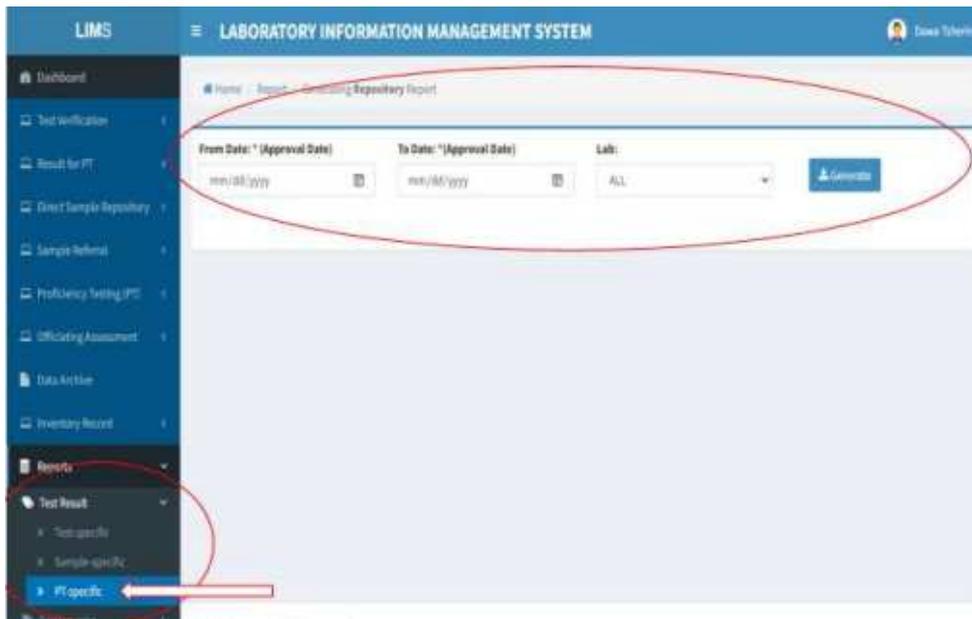


View the test, write some remarks and verify.



PT Reports

NCAH will check PT result through Report: Directly click on PT-specific and select from date (Approval Date) To Date (Approval Date), choose the lab from the dropdown and generate the results.



PT Results

Results can print it from system if the network available, from anywhere.

5.2 External Quality Assurance System (EQAS)/ National External Quality Assurance System (NEQAS)

EQAS

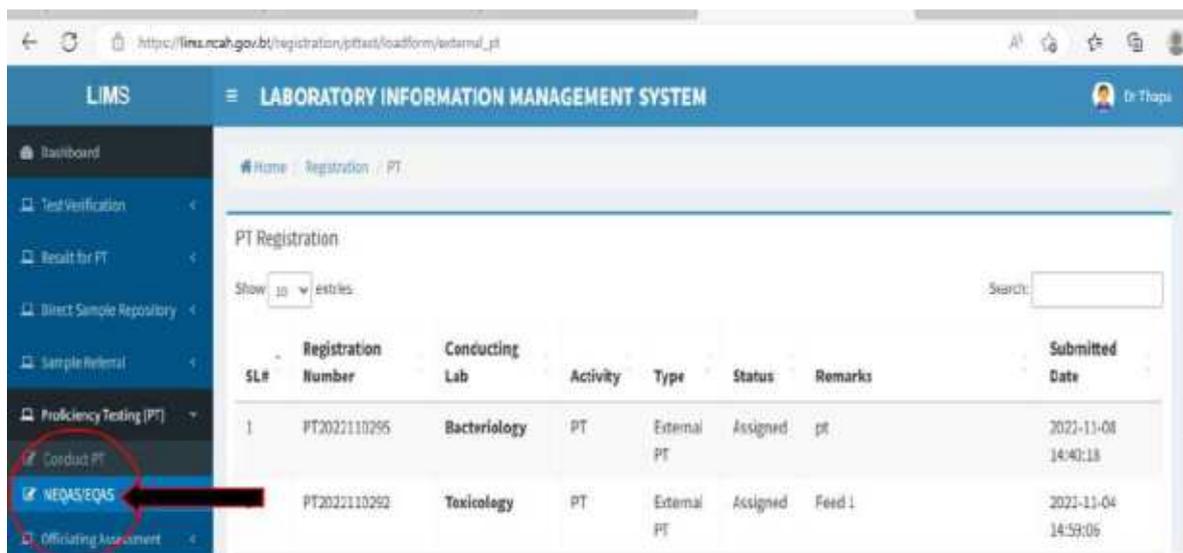
SI No.	User	Feature
1	Lab Incharge (NCAH)	Initiate EQAS
2	Sample manager(NCAH)	Sample Registration and forward
3	Lab Technician (NCAH)	Conduct test
4	Lab Incharge (NCAH)	Verify and View report

NEQAS

SI No.	User	Feature
1	Lab Incharge (NCAH)	Initiate NEQAS
2	Sample manager(NCAH)	Sample Registration and forward
3	Lab Technician (NCAH)	Conduct test

Lab In charge

Lab In charge will initiate both the sample for EQAS & NQAS



The screenshot shows the LIMS interface with the following data in the PT Registration table:

SL#	Registration Number	Conducting Lab	Activity	Type	Status	Remarks	Submitted Date
1	PT2022110295	Bacteriology	PT	External PT	Assigned	pt	2021-11-08 14:40:18
	PT2022110292	Toxicology	PT	External PT	Assigned	Feed I	2021-11-04 14:59:06

Manager will select the Name of Lab section which is going to send the sample for EQAS/NEQAS , give a reference number clearly .

ID	Reference Number	Department	PT	External PT	Assigned	Assigned by	Created Date
9	PT2022110281	Bacteriology	PT	External PT	Assigned	1234	2022-11-04 09:58:30
10	PT2022110280	Biochemistry	PT	External PT	Assigned	for ecqas bio	2022-11-03 15:54:02

Showing 1 to 10 of 109 entries

Previous 1 2 3 4 5 ... 11 Next

Name of Lab: *

- Select-
- Select-
- Bacteriology
- Biochemistry
- Hematology
- Histopathology
- Molecular Biology
- Mycology
- Parasitology
- Post Mortem
- Serology
- Toxicology
- Virology

Reference Number:

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Selected the level from the dropdown NEQAS/EQAS, write the remarks and forward to sample manager.

ID	Reference Number	Department	PT	External PT	Assigned	Assigned by	Created Date
9	PT2022110284	Biochemistry	PT	External PT	Assigned	qwertyui	2022-11-04 14:39:35
10	PT2022110281	Bacteriology	PT	External PT	Assigned	1234	2022-11-04 09:58:30

Showing 1 to 10 of 109 entries

Previous 1 2 3 4 5 ... 11 Next

Name of Lab: *

Level:

- Select-
- Select-
- NEQAS
- EQAS

Reference Number:

Send to Sample Manager

Sample Manager

Sample Manager will directly select the quality assurance system, chose the External (EQAS & NEQAS) and open the PT sample which was submitted by lab In charge.

LIMS LABORATORY INFORMATION MANAGEMENT SYSTEM

Home / PT / Proficiency Testing

PT request sent by Lab Incharge

Search

SL#	Registration Number	Ordering Lab	Level	Activity	Date	Remarks	Status	Action
1	PT2022110302	Hematology	HEQAS	PT		HEQAS	Submitted	Open
2	PT2022110304	Virology	HEQAS	PT		HEQAS	Submitted	Open
3	PT2022110301	Post Mortem	HEQAS	PT		Test	Submitted	Open
4	PT2022110307	Parasitology	HEQAS	PT		Test	Submitted	Open
5	PT2022109194	Biochemistry	HEQAS	PT		Test	Submitted	Open
6	PT2022109189	Biochemistry	HEQAS	PT		remark	Submitted	Open

The important information to revisit of PT Details by sample manager and select the sample type, sub type, chose date of PT to register the sample and save and forward to lab Technician.

Lab Technician

Select your own section, choose PT and check the sample which was submitted by sample Manager carefully and click on perform test.

LIMS LABORATORY INFORMATION MANAGEMENT SYSTEM

Home / PT / Biochemistry Testing

PT Details

PT Registration No: PT2022110302 Date: 2022-11-24 12:14:02 Remarks: HEQAS

Name of Lab: Hematology

Level: HEQAS Reference Number: TR111

Sample Type: * Blood Sub Type: * Blood smear Activity: * PT

Date Of PT: * 11/24/2022

Save Forward Sample

Select your own section, choose PT and check the sample which was submitted by sample Manager carefully and click on perform test.



Technician will check the PT registration details and conduct the test same as normal routine samples and forward to lab Incharge for verification.



Lab In charge

Click on PT, check the details of test and then verify & refer /verify the PT samples.



6.0 REPORTS

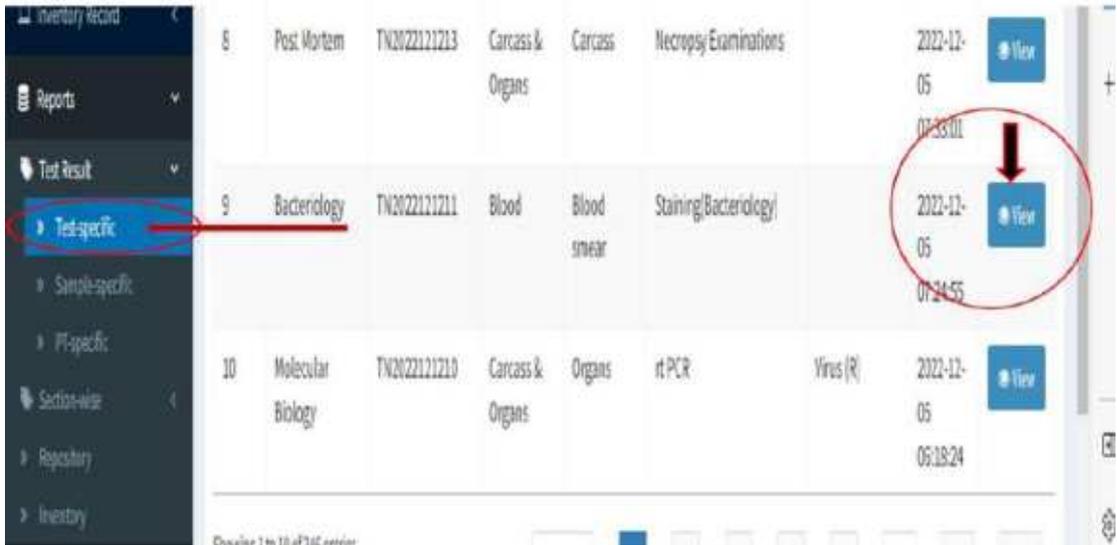
Four Types of Reports

--	--	--	--

Test Result	Section-wise	Repository	Inventory
-------------	--------------	------------	-----------

Test results.

Test-Specific: Directly click on test –specific to view your results by checking your test type.



Option to search the particular section results by using your TN.



Sample-Specific

Click on sample –specific to view the results by checking SRN and Date.

7	Serology	SRN202211041	Serum	Serum	2022-12-01 03:29:26	View
8	Molecular Biology	SRN2022110413	Blood	Whole Blood	2022-11-29 08:23:29	View
9	Serology	SRN2022110408	Serum	Serum	2022-11-28 04:16:40	View
10	Serology	SRN2022110409	Serum	Serum	2022-11-28 04:16:02	View

Showing 1 to 10 of 149 entries

Previous 1 2 3 4 5 ... 15 Next

Repository

Click on Repository to check the record of repo samples.



Select the repo from the dropdown, tested sample repo or direct sample repo put from date, to date and select activity PT, regular or referral samples and generate the records.



Records for repository

We can also export the records to excel

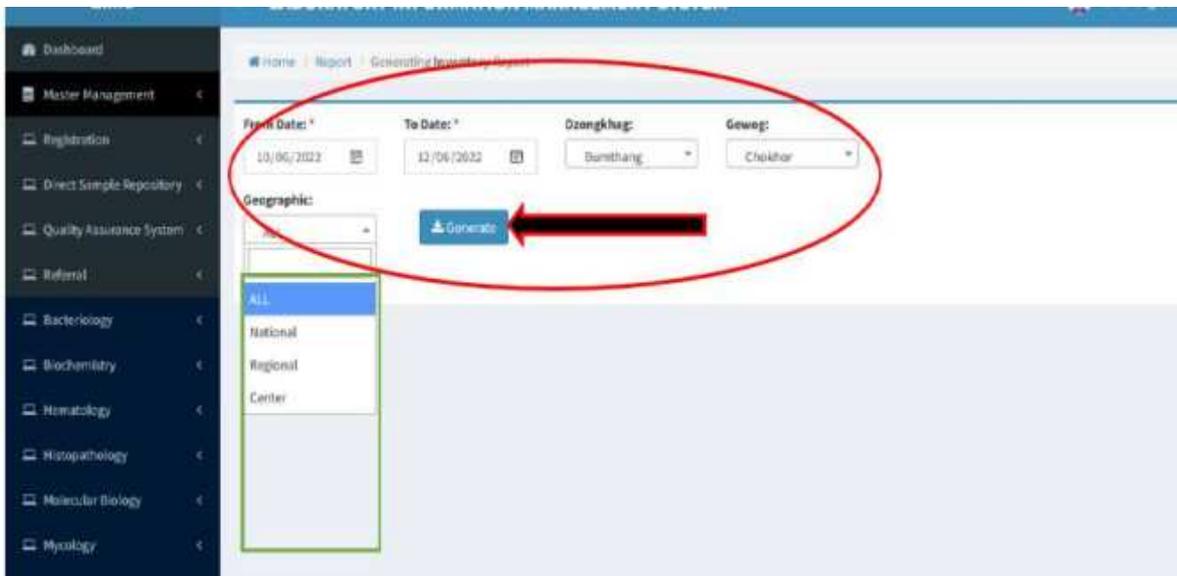
Registration No	Sample Type	Test No	Test Type	Sub Test Type	Storage Equipment	Equipment No.	Equipment Compartment number	Remarks	Center
102022090001	Non-Formulated				Chukha Maha Storage	Chuka middle maha storage	Chukha Storage	teste	NCAH
102022090003	Parasitic Sample				Deep Freezer -80°C	NCAH/LSU/DF-07	Compartment A	dhsadf	NCAH
102022090002	Tissues				Alaria	no	464	sdfgdfg	NCAH
102022090004	Others				Admin	ok	yy	test	NCAH
102022100007	Soil				Shelf1	EQ101	Lower left	ok	DVH Bumthan
102022100008	Tissues				DVH Punakha_Shelf	One	Top	oo	RLDC Zhemgan
102022100009	Swab and Smear				Alaria	no	464	ok	NCAH

Inventory reports

Click on inventory to check the record of inventory chemicals and equipment.



Put from date, to date and select the dzongkhag, gewog and goeographic from the dropdown either national, regional or center and generate.



Records of Inventory, we can also export the records to excel.

SL#	Item Name	Manufacture Date	Expiry Date	Presentation	Initial Quantity	Quantity Issued	Quantity balance
1	Cefotaxime	2022-10-01	2024-07-21	any	120	144	-24
2	Oxacillin (OKA)	2022-07-27	2023-02-07	30ml/50 ml vial	10	4	6
3	Penicillin G (PEN)	2022-11-01	2022-11-30	bol	20000	9000	10100
4	Vancomycin (VAN)	2022-10-04	2022-12-04	10 ml vial	100	10	90
5	Bacto Agar	2022-10-19	2022-10-29	500gm	10	7	3
6	Blood Agar Base	2022-07-01	2022-11-26	500g	100	51	49
7	Benzene	2022-10-08	2022-10-31	presentation	50	9	41
8	Rabies rapid Antigen test kit	2021-09-01	2023-09-04	Kits	5	3	2
9	Eosin yellow	2022-10-01		500g	500	100	400

Finally results for laboratory finds




དཔལ་ལེན་འབྲུག་གཞུང་།
 རྒྱལ་ཡོད་རྒྱལ་ཁབ་ཚོང་ལུ་འཕུལ་བྱེད་ལྷན་ཁག་།
 ROYAL GOVERNMENT OF BHUTAN
 Ministry of Agriculture and Forests
 Department of Livestock
 Thimphu

LAB NAME: NCAH

Sample Registration Number : SRH2022120438 Date Generated : 2022-12-06

Owner Details

Name : NHPBC/Wangchutaba CID : Contact No : 17928969
 Village : Gewog : Chang Dzongkhag : Thimphu

Animal details/ Feed details

Sample Category : Animal
 Species : Swine Animal Type : Pig Breed : Local
 Age : Unknown Sex : Unknown Animal Name :
 Individual/Pool: Pool No. of samples : 12

Age : Unknown Sex : Unknown Animal Name :

Individual/Pool: Pool No. of samples : 12

Sample Details

Sample Type : Excretion Secretion Sample Sub Type : Faeces Number of Sample : 10

LAB SECTION: Parasitology

Test No: TN2022121223

Test Type	Sub-Test	Result	Species	Value	Unit	Tested By	Verification Date
Quantitative tests (para)	Sedimentation technique	Ascaris	Ascaris suum	all animals effected with Ascaris	Nos.	Tshewang Dema	2022-12-06 11:52:53

Verified by: Dr Nirmal Kumar Thapa

This is an electronically generated Laboratory Information Management System (LIMS) test report. To verify the authenticity of this report, please contact National Centre for Animal Health, Serbithang www.ncah.gov.bt

 Print

While printing the results, there is option to save the report in PDF.



Total 2 sheets of paper

Printer:

- Microsoft Print to PDF ✓
- Send To OneNote 2013 Ready
- OneNote for Windows 10 Ready
- Microsoft XPS Document Writer Ready
- Microsoft Print to PDF Ready

Color: Color

 Print  Cancel

ROYAL GOVERNMENT OF BHUTAN
Ministry of Agriculture and Forests
Department of Livestock
Thimphu

LAB NAME: NCAH

Sample Registration Number : SM202210439
Date Generated : 2022-12-06

Owner Details

Name : ANPBC, Thangtshala
CIP :
Contact No : 1762899

Village :
Gewog : Chang
Dangkhag : Thimphu

Animal details (Feed details)

Sample Category : Animal
Species : Swine
Animal Type : Pig

7.0 OFFICIATING ASSESSMENT

Assigning Officiating- Whenever the concerned officials are on tour or leave, the lab In charge will assign someone in his/her absence.

LIMS LABORATORY INFORMATION MANAGEMENT SYSTEM Dr N K Thapa

Assign Officiating

Name: *

Role: *

Action: *

From Date: *

To Date: *

Remarks: *

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Revoke officiating- When the officials on tour or leave re-joins the office, the officiating role is to be revoked through this interface.

LIMS LABORATORY INFORMATION MANAGEMENT SYSTEM Dr N K Thapa

Revoke Officiating

Show 10 entries Search:

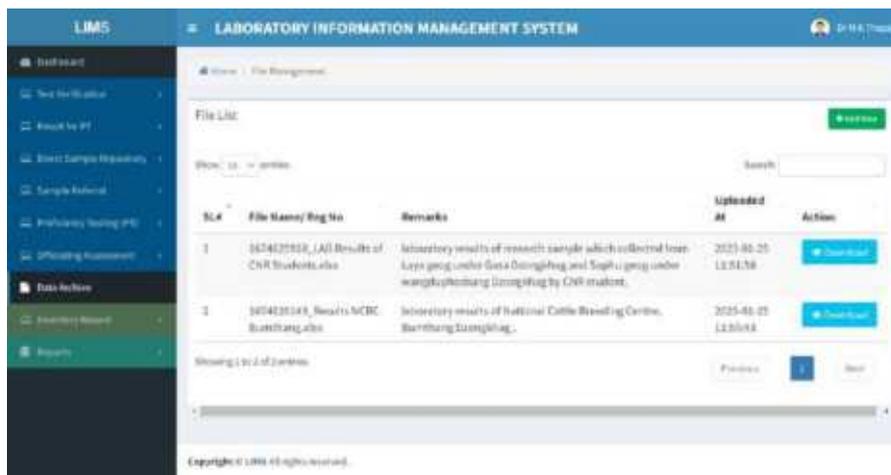
SId	Name	From Date	To Date	Status	Action
1	Dechen Chozom	2022-12-01	2022-12-12	Revoked	<input type="button" value="View"/>
2	Namgay	2022-12-01	2022-12-13	Revoked	<input type="button" value="View"/>
3	DVH Lab Tech	2022-12-13	2022-12-21	Revoked	<input type="button" value="View"/>
4	All Role	2022-12-13	2022-12-29	Officiating	<input type="button" value="View"/>
5	All Role	2022-12-07	2022-12-29	Officiating	<input type="button" value="View"/>
6	DVH MONGAR	2022-12-14	2022-12-30	Officiating	<input type="button" value="View"/>
7	Jamtshu	2022-12-13	2022-12-17	Revoked	<input type="button" value="View"/>

Showing 1 to 7 of 7 entries Previous Next

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8.0 DATA ARCHIVE

Other data like PT results/reports or surveillance reports can be uploaded by adding in this feature and can be downloaded when required.



9.0 STORE MANAGEMENT

9.1 Stock management (store in-charge)

As we login as a Store In-charge, two services will be accessible, namely Master Management and Store Inventory (Figure 1).

Master Management is for the development of virtual store aligning with the physical store for laboratory consumables and reagents maintained at a Centre, whereas Store Inventory is for the purpose of stock management, where one can enter, issue, request and mobilize the laboratory items.



Figure 1: Services available for Store In-charge.

9.1.1 Master management

This service for the purpose of building a virtual store where one can assign identification name and number to the storage equipment and its compartments.

Stock



Figure 2. Services to provide ID for storage equipment.

Storage Equipment

This service must be used for giving a categorical name to different storage equipment available in a Centre's storeroom or laboratory.

- Click on Storage Equipment to view the list of equipment available and to add new equipment to your store (Figure 3).
- Click on Add New (Figure 3) to open a page where name of the new equipment can be entered and saved (Figure 4).



Figure 3. View and add equipment to the store.

- In the Details page, enter the name of the equipment, description (optional) and keep the status as active (Figure 4).



Figure 4. Add new equipment and save.

- Upon saving the details, the new equipment added to your store will show in the list of equipment as shown in Figure 5.
- To search the specific equipment if the list is long, enter the name of the equipment in the Search field at the top right corner (Figure 5).



Figure 5. List of equipment added to the store.

Equipment Number

Once the equipment name has been added, equipment numbering can be done through this service. For example, if there are more than one cupboard in a store, all these cupboards can be assigned a unique identification such a cupboard A, B, C, etc.

- Click on Equipment Number to view the list of equipment and its number (Figure 6).
- To add a new Equipment Number, click on Add New on the top right corner (Figure 6) to open the page where relevant details can be entered and saved (Figure 7).



Figure 6. View or add equipment number.

- To give a number or name to the existing equipment, first select the name of the Storage Equipment from the dropdown and then enter the name or number to be assigned against the selected equipment (Figure 7).



Figure 7. Enter details for numbering an equipment.

- Click on the Save button the save the name or number entered (Figure 7). Once saved, it will be viewable in the Storage Equipment page as shown below.



Figure 8: View the list of added name or number against the equipment selected.

Equipment Compartment

For every storage equipment, there will be multiple compartments where the laboratory items could be kept segregated. This service must be used to assign compartment number to the specific equipment selected.

- Click on Equipment Compartment to view the list equipment with unique identification name or number and its compartments (Figure 9).
- To add a new compartment to a storage equipment, click on Add New on the top right corner of the page (Figure 9).



Figure 9. View equipment details and add new equipment's compartment.

- In the Details page, select the equipment of interest from the Equipment ID list and enter the compartment name to be assigned (Figure 10).
- Description field is non-mandatory; however, the status button must be selected to Active to show in the list of compartments later (Figure 10).



Figure 10. Page to enter equipment's compartment name.

- Upon clicking on Save button (Figure 10), the compartment name will be added and shown in the list of equipment under the Equipment Compartment page (Figure 11).
- To search for a specific compartment, enter the name in the search bar on the top right of the page below the Add New button (Figure 11).

LIMS LABORATORY INFORMATION MANAGEMENT SYSTEM

Dashboard
Master Management
Stock
Storage Equipment
Equipment Number
Equipment Compartments
Blank Inventory

Compartment Mapped List

Show 10 entries

Search

SL#	Equipment Id	Name	Description	Status	Action
41	Shelf A	Comp 1	Comp 1	Active	
42	Shelf A	Comp 2	Comp 2	Active	
43	Shelf A	Comp 3	Comp 3	Active	
44	biochem shelve 1	rapid kit parvo	parvo kit	Active	
45	ROOM 1	FLOOR	FLOOR	Active	
46	rapid kit parvo	rapid kit parvo		Active	
47	Steel Rack_NCAH_1	Top_Right	Top_Right	Active	

Figure 11. View the list of equipment and its compartments.

9.2 Store inventory

This service is for the purpose of stock management, and it has the following sub-services:

- a. Stock Entry – to enter new stock.
- b. Stock Issue/Balance – to issue laboratory equipment to the concerned lab technicians.
- c. View Other Store's Stock – to view and request items for other stores.
- d. Stock Verification List – to verify and issue items as per the request received from other stores.
- e. View Annual Stock Details – to view the stock reports based on the timeframe selected.



Figure 12. Sub-services under Store Inventory.

Stock Entry

- Click on Stock Entry to open a page where the list of available stock can be viewed and also to add new item to the existing stock (Figure 13).
- To check the stock details against a particular item, enter the name of the item in the search bar to filter. Details such as name, batch, presentation, quantities and dates can be viewed (Figure 13).
- The details recorded against a consumable can be updated or deleted by clicking on the relevant action button on the right end of each row under the column name Action (Figure 13)



Figure 13. View and add stock details.

- To add a new stock detail, click on Add New Item to open a pop-up page where all the required details can be recorded and saved (Figure 14).
- Select name of the item from the list of Consumables Type, which will be added by the system' admin, and enter all the fields as required.
- Select the storage equipment name, number and compartment where the item would be stored (Figure 14).
- Enter the quantity received in the field named Initial Quantity (Figure 14).

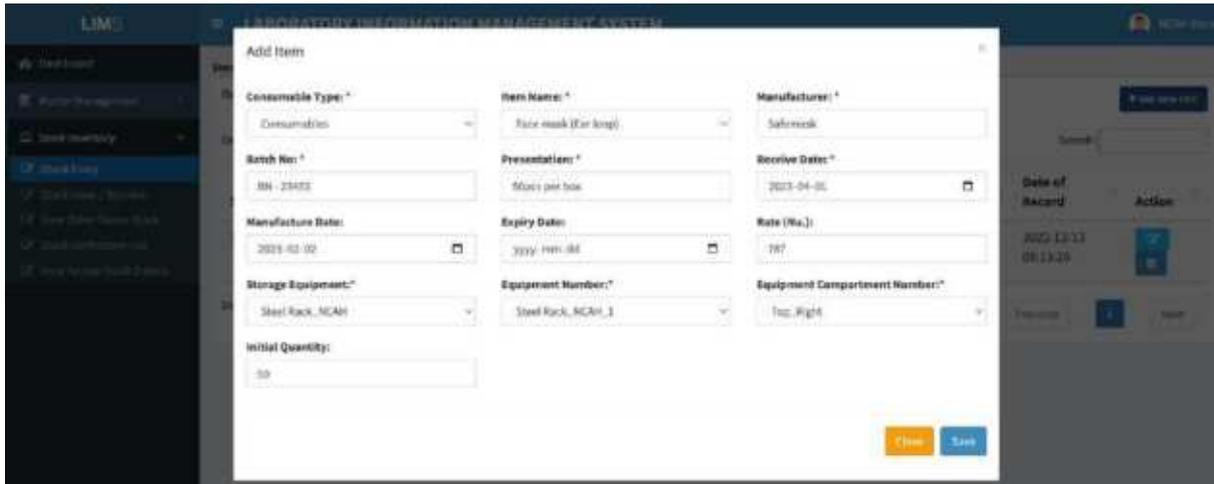


Figure 14. Page to add new stock details.

- Upon saving the details by clicking on the Save button, the details can be viewed in the Stock Entry page (Figure 15).

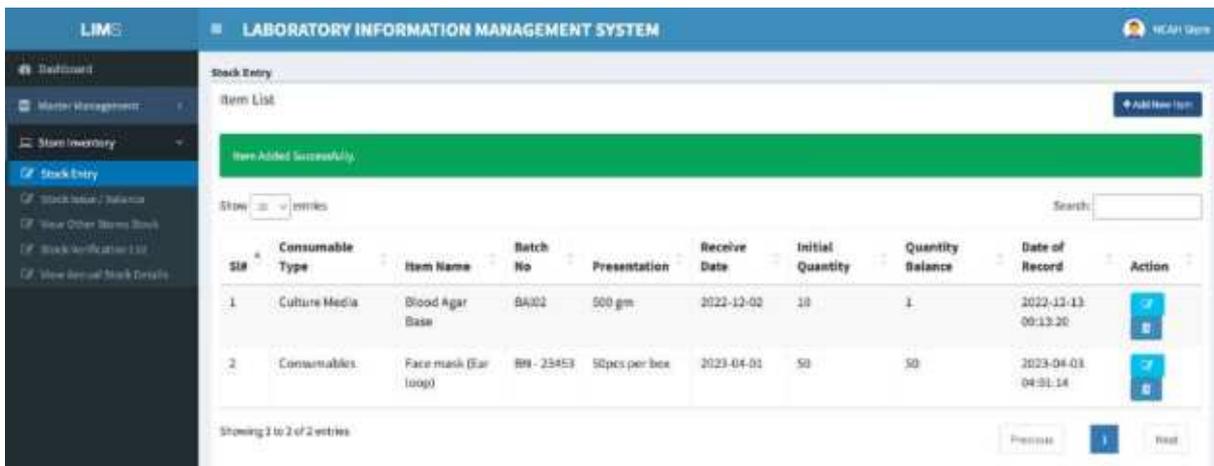


Figure 15. Showing the list of added stock to a store.

Stock Issue/Balance

This is service shall be used when issuing the items requested by the lab technician of the same Centre.

- Click on Stock Issue/Balance to view the details of the stock available in the store (Figure 16).
- Search filter can be used to find the specific lab item (Figure 16).
- Action buttons, namely Add Issue and View are to issue the requested items and view the details after issuing respectively (Figure 16).



Figure 16. Stock issue/balance page.

- To issue an item to the concerned lab technician, click the Add Issue button against the item of interest. It will open a pop-up page where necessary details must be entered (Figure 17).

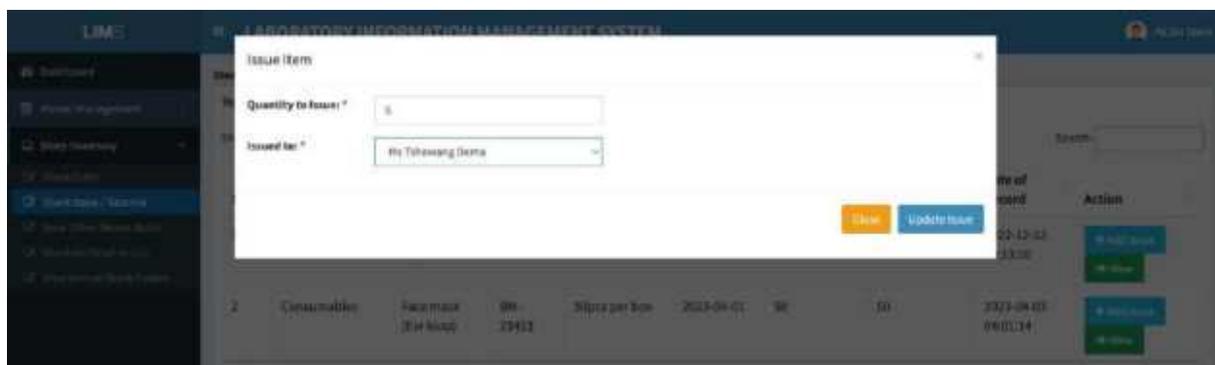


Figure 17. Item issue details.

- Enter the quantity to be issues and select the name of the lab technician to whom the item is being issued (Figure 17).
- Upon clicking Update Issue button (Figure 17), the current stock will be updated accordingly, and it can be viewed in the Stock Issue/Balance page (Figure 18)



Figure 18. Updated details after issuing an item.

- To view the transaction details after issuing at item, click on the View button (Figure 18). It will open a page where the details such as name of item, issued quantity and date can be viewed,



Figure 19: View details of issue against a selected item.

View Other Store's Stock

This service enables a Store In-charge to view other store's stock details and send request to the concerned Store In-charge to issue them from their stock. This service can facilitate mobilization of near-expiry laboratory reagents to other labs where it is required.

- Click on the View Other Store's Stock to check if the lab item of one's interest is available in other veterinary laboratory stores of the country and click on Search button to view the details (Figure 20).

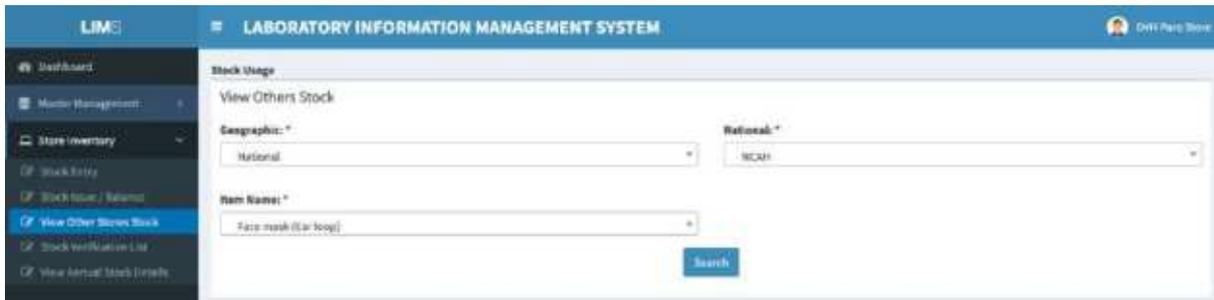


Figure 20. Page to view other store's stock.

- Based on the lab and item name selected, details against the item will show in the table as shown in Figure 21.
- Inspect the details from the table and if the quantity balance is enough for the request to be sent, click on the Request button to enter the quantity to be requested (Figure 22).
- The Request to field will be auto filled based on the target lab selected in Figure 20.
- Click on the Update Request to send the request to the selected lab's Store In-charge (Figure 22).

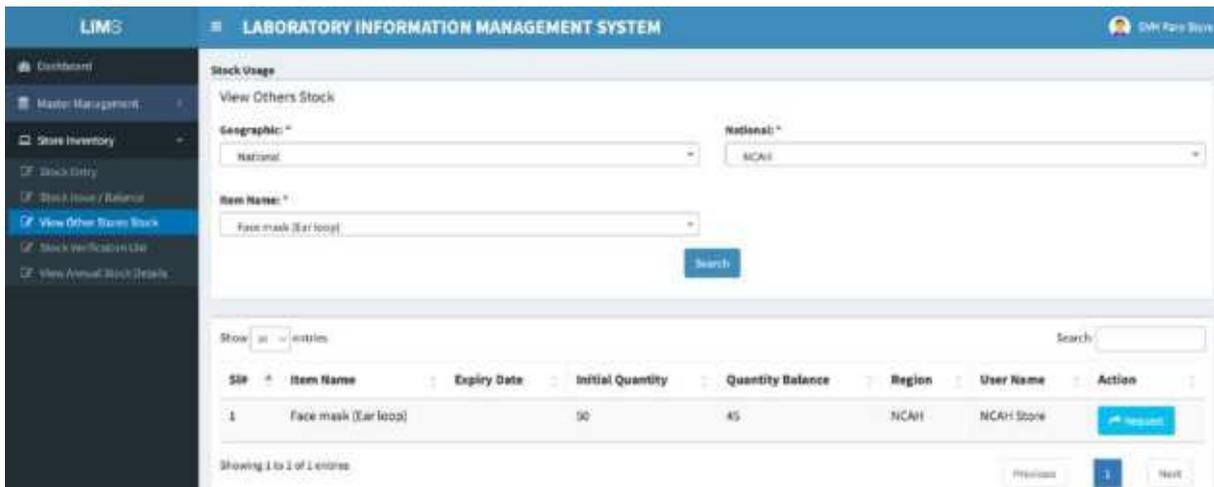


Figure 21. Stock details of the target lab.

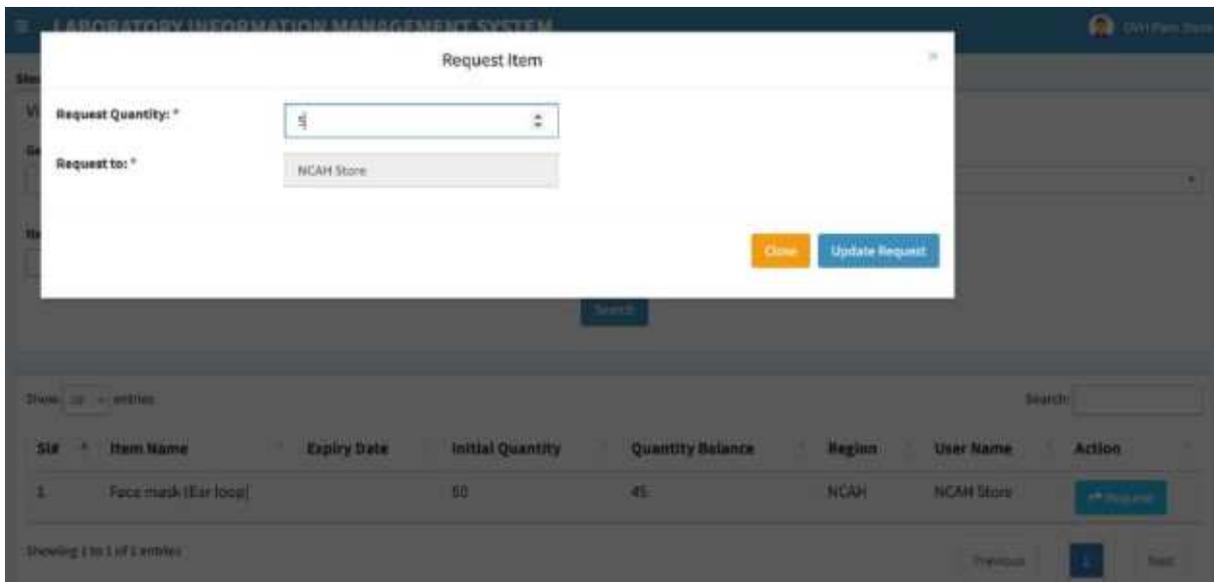


Figure 22. Item quantity to request from another store.

Stock Verification List

Requesting Lab



Figure 23. Stock verification list at requesting lab's page.

- Once the request has been sent to a lab to issue an item, the status against the selected item will show as REQUESTED in the Stock Verification List's page (Figure 23).

Request Receiving Lab

Once the request for a lab item has been sent from a lab, the lab item with a REQUESTED status will show in the Stock Verification List's page of the request receiving lab's Store In-charge.

- To take action against the request received, click on the Accept Request button (Figure 24).
- It will open a page Quantity Accepted field can be updated accordingly. If even a single item cannot be issued to the requesting lab, the Quantity Accepted field can be entered with 0 (zero) figure with some remarks if necessary (Figure 25).
- Once the details are filled and Accept Request button is clicked on, acknowledgement message of successfully accepted request will be shown (Figure 26).
- The status will then get updated to ACCEPTED and quantity will be updated accordingly as per the quantity accepted and issued.

S/N	Item Name	Quantity Balance	Quantity Requested	Quantity Accepted	Requested By	Requested From	Status	Action
1	Face mask (Ear loop)	45	5	0	DUH Para Store	DUH Para	REQUESTED	Accept Request

Figure 24. Stock verification list at the request receiving lab's end.

Accept Item

Item: Face mask (Ear loop) Quantity Requested: 5 Requested By: DUH Para Store

Requested From: DUH Para Quantity Accepted: 3

Remarks: *
Could spare only 3 boxes

Close Accept Request

Figure 25. To act against the item requested.



Figure 26: Item with accepted status at the request receiving lab.

Requesting Lab

Once the request has been accepted by the target lab, requested item and quantity accepted and issued by the target lab must be received through the Stock Verification List service.

- Click on the Stock Verification List to view the list of items requested. Once accepted, the status will get updated to ACCEPTED against the item of interest (Figure 27).
- Click on the Receive Request button to receive and update the stock. It will open a page where quantity received field must be updated as issued from the other lab (Figure 28).



Figure 27. Updated status of the request made.

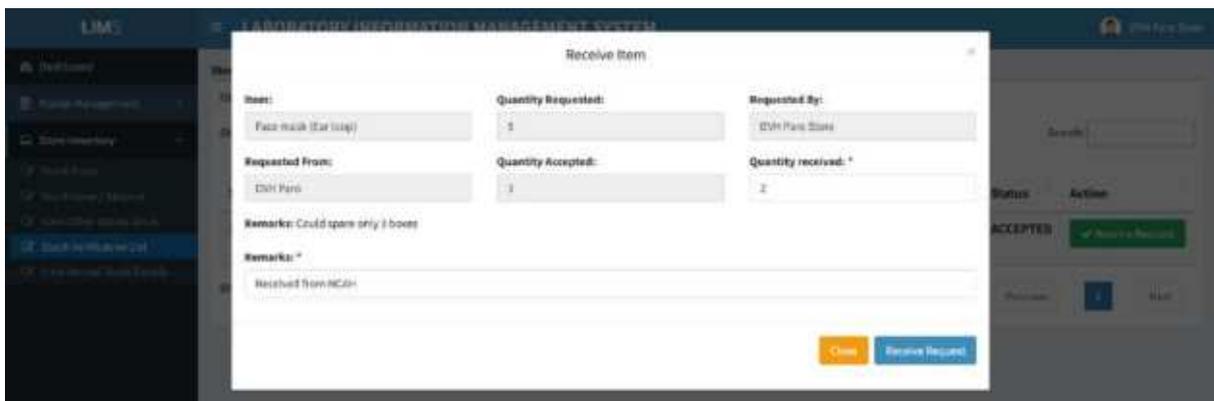


Figure 28. Updating after receiving the items requested.

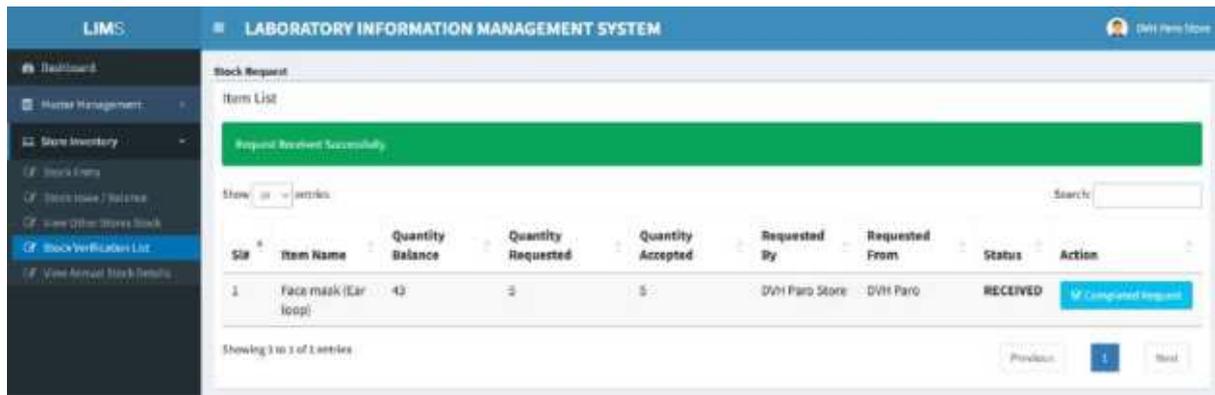


Figure 29. Updated stock after receiving the requested items.

- After filling the details as required, click on the Receive Request button to update the stock (Figure 28).
- The updated stock after receiving the items requested from another lab will get updated and it can be viewed in the Stock Verification List page with the status getting updated to RECEIVED and Action to Completed Request.

9.3 Stock management (lab technician)

Once the Store In-charge issues laboratory consumables and other items from the Centre's store, the concerned lab technician can manage its stock using the service called Inventory Record (Figure 30).



Figure 30: Inventory record for lab technician.

Stock Usage/ Balance

It is the sub-service under Inventory Record where laboratory items issued by the Store In-charge can be received, updated and viewed by the concerned lab technician.



Figure 31. Stock usage/balance page of lab technician.

- Click on Stock Usage/Balance sub-service under Inventory Record. The List of all the lab items issued or received will be shown (Figure 31).
- On the right end of each item, action buttons are available for stock usage, receiving stock and view stock details.



Figure 32. Action buttons for stock management.

- Click on Update Received Stock to receive the lab items and update the stock of the lab. The pop-up page will appear where quantity issued, quantity received, and remarks field will show. Enter the quantity received and update the stock (Figure 33).



Figure 33. Receiving and updating stock by the lab technician.

- To issue the items for utilization within the lab, click on Add Usage Stock button.
- Enter the quantity to be used in the Quantity Used field and click on Update Usage button to update the stock (Figure 34).

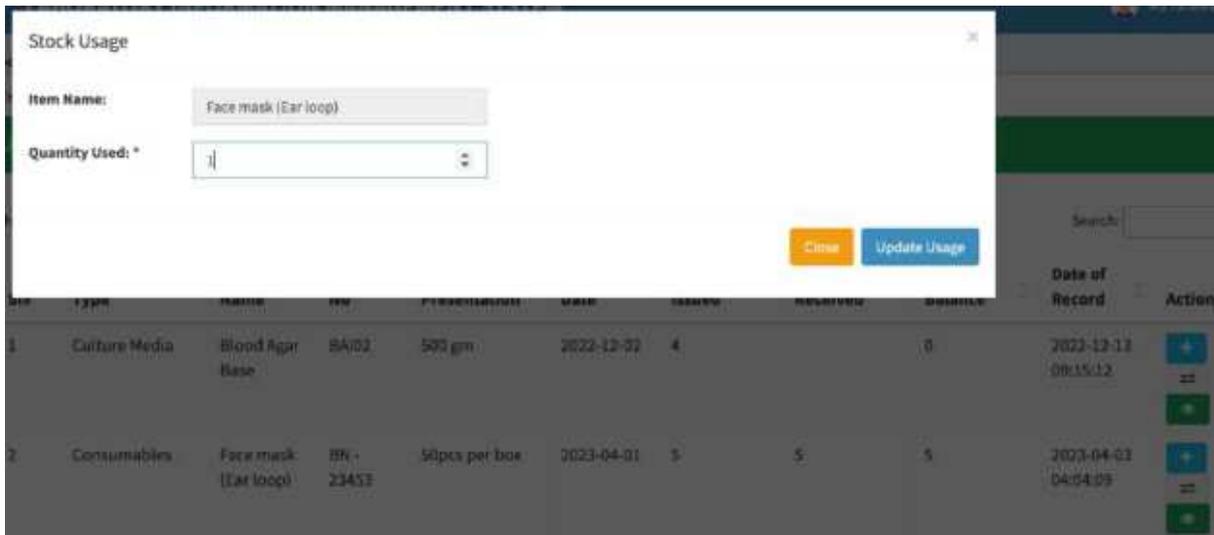


Figure 34: Stock issue and utilization by lab technician.



9.3 Annual stock details

This service is the generate the report concerning stock management of a store, view or export for various purpose.

- Click on View Annual Stock Details to generate the stock management information.
- Select From Date and To Date to filter the report.
- Click on Search button the generate the report.
- Use the Search field to filter and show the lab items of interest.
- The report can be export in excel format by clicking on the Excel button on the left top corner of the report page.

Sl#	Consumable Type	Item Name	Manufacturer	Batch No	Presentation	Receive Date	Manufacture Date	Expiry Date	Rate	Storage Equipment	Equipmen No
1	Culture Media	Blood Agar Base	Hi-media	BA02	50g/gn	2022-12-02	2022-12-09	2023-02-23	990.99	Shelf	Shelf
2	Consumables	Face-mask (Ear loop)	Sahemask	BN-23453	50pcs per box	2023-04-01	2023-02-01		187.00	Steel Rack_NCAH	Steel Rack_NCAH

Figure 35. Stock details report.

10 ADMINISTRATIVE FUNCTIONS

Dashboard displays master management, administration and reports:





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Master management:

It has features for mapping of various parameter as below:



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Administration:





It has just feature for user management v.i.z details of users as below



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Reports:

It has features for test result, section- wise, repository, inventory.



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