



OPENELIS
G L O B A L

OpenELIS Global

Laboratory Information System Software

User Manual



Order



Patient



Results



Reports

Version 2.0

June 2020

For information on OpenELIS Global, visit www.openelisglobal.org

Or contact:

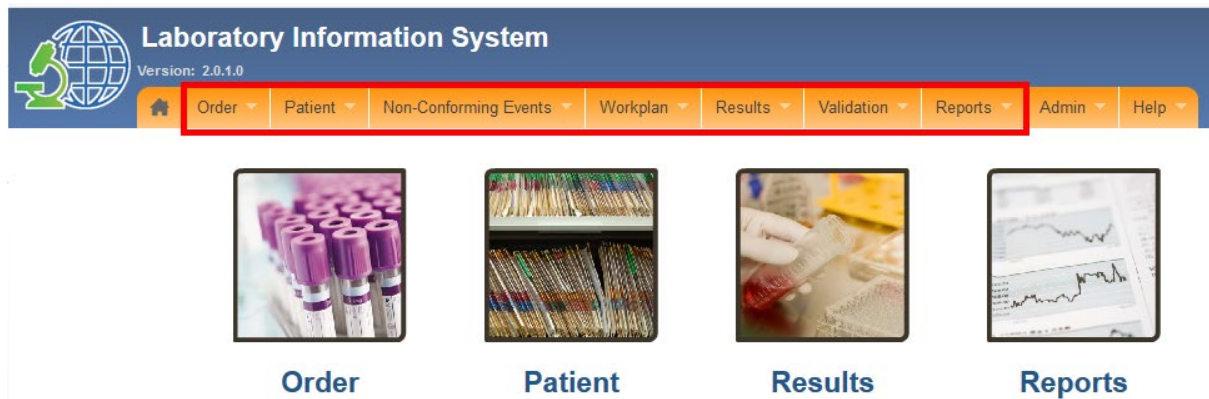
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PART 1: NAVIGATING OpenELIS GLOBAL

The OpenELIS Global system is made up of seven modules to help with the collection and reporting of laboratory data. Once you connect to OpenELIS Global, the main menu appears across the top of the screen with modules that reflect the main activities of the laboratory workflow.



The modules are presented in the order of the laboratory workflow. The main menu always remains on the page and you can navigate to other modules to suit your work needs.

The modules are:

- Order
 - Enter individual laboratory analysis orders including order, provider, sample, test, and patient information
 - Enter batches of orders for a common sample type and test
 - View orders that are transmitted to OpenELIS electronically
 - Modify order information
- Patient
 - Add new patient information
 - Search for and view patient information
 - Update patient information
- Non-Conforming Events
 - Report a non-conforming event
 - Document monitoring and follow-up activities for non-conforming events
- Workplan
 - Create work plans for use by dispatch or laboratory units
- Results
 - Enter results
 - View results
 - Document referrals to other laboratory for confirmatory or other additional testing
- Validation (Biological Validation)

- Validate results
- Reports
 - Generate individual patient results reports
 - Generate aggregate test reports
 - Generate laboratory management reports

Additional modules include

- Admin
 - Information about the software and set-up
 - Menus to configure various parts of the systems
 - Menus to manage users
 - Menus to manage the test catalog

The guide for this module is available separately

- Help
 - User Manual is available here

PART 2: QUICK TROUBLESHOOTING

Be sure to use your own login credentials and password. If you need to reset your password, contact your system administrator or other designated User Manager.

Select the language (English or French) **before** logging in.

If the **Save** button is not activated, check that you have completed all required fields.

Required fields are marked by a red asterisk: *

PART 3: QUICK LINKS

To view a patient's entire test history [Go to Page 42](#)

To update an order [Go to Page 18](#)

To print a barcode label for order papers and samples [Go to Page 28](#)

To enter results for a test referred to an external lab [Go to Page 53](#)

To view or print a patient's final results report [Go to Page 60](#)

PART 4: ENTERING LABORATORY ORDERS

OpenELIS is organized around laboratory order which are made up of samples and their associated tests. The laboratory order must also be associated with a patient. The guides in this section include:

- How to create a laboratory analysis order
- How to modify or update a laboratory order
- How to add or update a patient's information

How to create a laboratory analysis order



The laboratory order form has three parts: **Order**, **Sample**, and **Patient**.




Test Request

+ Order * **1**

+ Sample * **2**

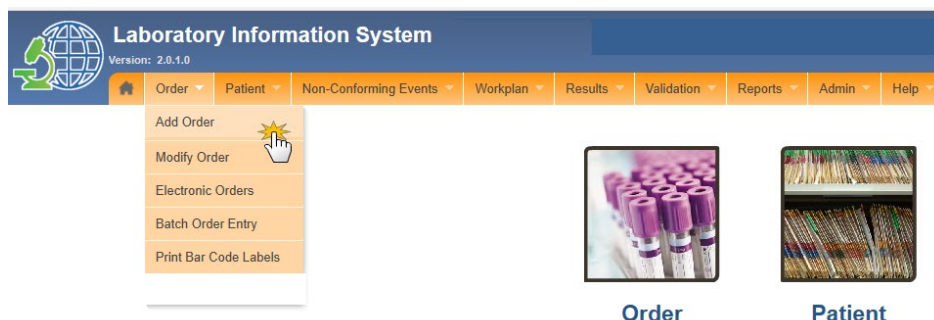
+ Patient: * **3**



By default, the Order section will be open. You must click on the  to open the other parts of the form. Required fields are indicated with a red asterisk *.

Laboratory Order Form: Part 1- ORDER

1. Hover the mouse over the tab "Order" and click "Add Order"



2. *Enter the lab number

- Order *
 Lab No : * Scan OR Enter Manually OR Generate

IF...
 You use a barcode scanner

THEN...
 Use the barcode reader to scan the label.
 The number is displayed directly in the **Lab No.** input field.



<p>You want to manually enter the number</p>	<p>Type in the number into the input field.</p> <p>Lab No : * <input type="text" value="demos19001292"/></p>
<p>You want to generate the number automatically</p>	<p>Click on "Generate". The number is displayed automatically in the input field.</p> <p>Scan OR Enter Manually OR Generate</p>
<p>3. *OpenELIS automatically fills the current date for the Request Date and the Received Date. Change, if needed, in the format dd/mm/yyyy (day/month/year) by typing over the numbers.</p> <p>Request Date : *(dd/mm/yyyy) <input type="text" value="24/10/2019"/></p> <p>Received Date : *(dd/mm/yyyy) <input type="text" value="24/10/2019"/> Reception Time (hh:mm): <input type="text" value="13:42"/></p> <p>Note: The reception date is the date on which the sample is received at the laboratory.</p> <p>You can also add the Reception Time in the format "hh:mm" (hours: minutes)</p>	
<p>4. Enter the Date of the client's Next Visit (clinic appointment), if applicable, in the format dd/mm/yyyy.</p> <p>Date of next visit (dd/mm/yyyy) : <input type="text"/></p>	
<p>5. *Enter the Site Name in the field. The site is the institution (hospital, clinic) that requested the analysis.</p> <p>Site Name : * <input type="text" value="a"/></p> <p>Program: <input type="text" value="BALLARD"/></p> <p>Requester's Last Name : * <input type="text"/></p> <p>Requester Phone: +225-xx-xx-xx-xx <input type="text"/></p> <p>Fax Number: <input type="text"/></p> <p>Email: <input type="text"/></p> <p>Patient payment status: <input type="text"/></p>	
<p>6. Enter the Program, if applicable to your version of OpenELIS Global. These are pre-defined.</p>	
<p>7. *Enter the Requester's Last Name and First Name. (Provider who ordered the laboratory analysis).</p> <p>Requester's Last Name : * <input type="text"/></p> <p>First Name: <input type="text"/></p>	

8. Enter the requester's contact information:

- Phone number
- Fax number
- E-mail

Requester Phone: +225-xx-xx-xx-xx

Fax Number:

Email:


9. If applicable to your version of OpenELIS Global and your laboratory program, select the **Payment Status**.

Patient payment status:
URAP Number
Sampling performed for analysis:

+ Sample *
+ Patient: *
Date of

Normal cash payment
Normal insurance payment
Reduced cash payment
Reduced insurance payment

Laboratory Order Form: Part 2- SAMPLE

10. *Click on the button  next to "Sample" to open the section relating to the sample(s) in the order. This section is required.

+ Sample *

11. *Select the **Sample Type** from the choices in the dropdown list.

- Sample *
Sample Type

Serum
Plasma
Urine
Whole blood
Dry blood spot
Dry Red Tube
EDTA Tube

A table will appear below. Each sample you add is listed in the table and attributed a sample **ID** number. The sample ID comes after the Laboratory Order number, e.g.

SENX20201000012-1
SENX20201000012-2
Lab Order Number
Sample Number

- Sample *

Sample Type

ID	Sample Type	Condition	Collection Date (dd/mm/yyyy)	Collection Time (hh:mm)	Collector	* Te
1	Serum	Multiple				

Specify the **Condition** of the sample by clicking on the relevant option from the choices in the drop down list.

ID	Sample Type	Condition	Da
1	Serum	Multiple	

Panels

Name
<input type="checkbox"/> Bilan Biochimique
<input type="checkbox"/> Serologie VIH

- Broken Tubes
- Coagulated
- Contaminated
- Form without Sample
- Frozen
- Hematolysis

You can select more than one condition. Select each condition separately.

ID	Sample Type	Condition
1	Serum	Multiple
		Broken Tubes X
		Coagulated X

If you select an error by mistake, click the "X" next to the condition to remove it.

ID	Sample Type	Condition
1	Serum	Multiple
		Broken Tubes X
		Coagulated X

12. Enter the **Date and Time of Collection** when the sample was collected from the patient.

Collection Date (dd/mm/yyyy)	Collection Time (hh:mm)
02/10/2019	13:15

Note: OpenELIS fills the date and time of collection automatically with the Lab order date. It is not always the case that the date and time of the order entry are the same as the date and time of collection.

13. Enter the name of the person who collected the sample: the **Collector**.

Collector

Areesha Tariq

14. *Select the first sample for which you want to add a laboratory analysis, or test, by marking the radio button on the left.

A menu of tests available for that sample type will appear. Check the box next to each **Panel** or **Test** that is included in the laboratory order.

As you select each analysis or panel, it will appear in the table.

	ID	Sample Type	Condition	Collection Date (dd/mm/yyyy)	Collection Time (hh:mm)	Collector	* Tests
<input checked="" type="radio"/>	1	Plasma	Multiple	23/04/2020	13.44	Areesha Tariq	<input type="checkbox"/> Remove
<input type="radio"/>	2	Serum	Multiple	23/04/2020	13.46	Areesha Tariq	<input type="checkbox"/> Remove <input type="checkbox"/> Remove All

Panels

Name
<input type="checkbox"/> Bilan Biochimique
<input type="checkbox"/> Serologie VIH

Available Tests

Name
<input type="checkbox"/> Glucose
<input type="checkbox"/> HIV rapid test HIV
<input type="checkbox"/> Western blot HIV
<input type="checkbox"/> Bioline
<input type="checkbox"/> Determine
<input type="checkbox"/> Murex
<input type="checkbox"/> Vironoska
<input type="checkbox"/> P24 Ag

To add a **Test**, check the box corresponding to the test. To add a **Panel**, check the box corresponding to the panel. Tests that make up that panel are automatically checked and added to the table. It is possible to remove tests by unchecking the corresponding box.

Panels

Name
<input checked="" type="checkbox"/> Bilan Biochimique
<input type="checkbox"/> Serologie VIH

Available Tests

Name
<input checked="" type="checkbox"/> GPT/ALAT
<input checked="" type="checkbox"/> GOT/ASAT
<input checked="" type="checkbox"/> Creatinine
<input checked="" type="checkbox"/> AmylaseENG
<input checked="" type="checkbox"/> Total cholesterol
<input type="checkbox"/> Tests
<input checked="" type="checkbox"/> HDL cholesterol
<input checked="" type="checkbox"/> Triglicerides
<input type="checkbox"/> HIV rapid test HIV

*** Tests**

GPT/ALAT,GOT/ASAT,Creatinine,AmylaseENG,Total cholesterol,HDL cholesterol,Triglicerides,santest

If you add a sample by mistake, click **Remove** to remove the sample.

	ID	Sample Type	Condition	Collection Date (dd/mm/yyyy)	Collection Time (hh:mm)	Collector	* Tests
<input checked="" type="radio"/>	1	Plasma	Multiple	23/04/2020	13:44	Areesha Tariq	<input type="text"/> Remove
<input type="radio"/>	2	Serum	Multiple	23/04/2020	13:46	Areesha Tariq	<input type="text"/> Remove

[Remove All](#)

If you remove a sample, the other samples in the order will retain their original sample number. For example, if you have order SENX2020100012 with two samples and you delete the first sample, the remaining sample will still be numbered SENX2020100012-2.

Laboratory Order Form: Part 3- PATIENT

15. *Open the section for the patient by clicking the button .



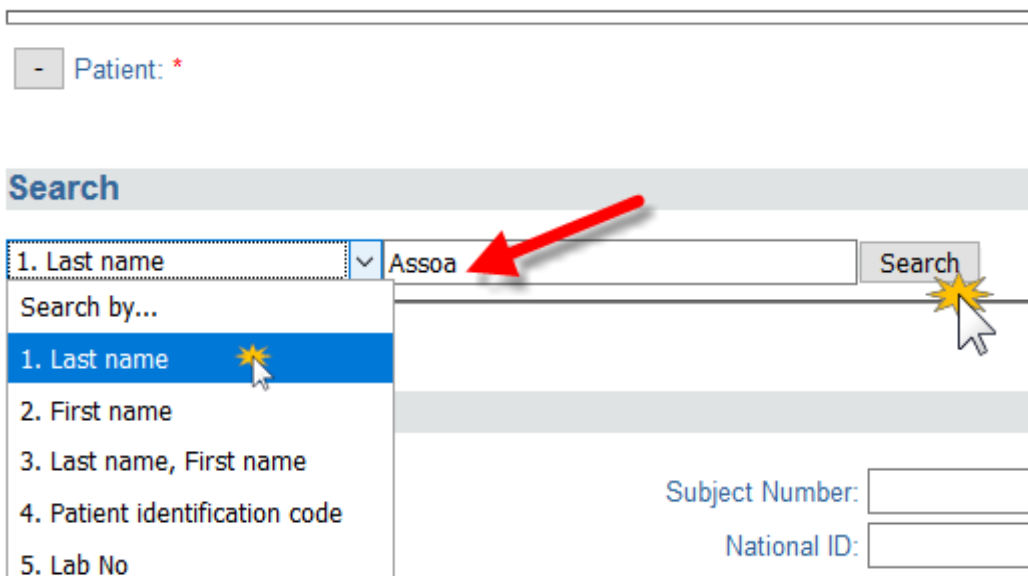
This opens two sections: Search and Patient Information.


16. It is best practice to first search the database for the patient record.

Select the search criterion from the dropdown list. You can search by:

- Patient's last name (surname or family name)
- Patient's first name (given name)
- Patient's last and first name, separated by a comma
- Patient's identification code
- A previous lab order number associated with that patient- you can scan a bar code or enter this manually

Type in the search term (the name or code number) into the search field and click **Search**.



 Patient: *

Search

1. Last name

Search by...

- 1. Last name
- 2. First name
- 3. Last name, First name
- 4. Patient identification code
- 5. Lab No

Subject Number:

National ID:

17. The search results appear in a table, listing the patient, their birth date, and identification code. Select the patient that matches the

one you want by clicking on the radio button next to that patient. The patient form will populate with that patient's information.

Search

5. Lab No [Scan or Enter Manually](#)

	Data source	Last Name	First Name	Gender	Date of Birth	Subject Number	National ID
<input checked="" type="radio"/>		Buttercup	Princess	M	15/05/1995	0002	02

You can update the patient information in this part of the form as needed. Skip to **Step 19**.

18. If no results match the desired patient, you will have to create a new patient record : click on **New Patient** button and the patient form will open.

Search

1. Last name

No patients found matching search terms

Patient Information

19. Enter the new or updated patient information:

Subject Number (Patient ID code) and National ID code

NOTE: These may be labelled differently in your local configuration.

Patient Information

Subject Number:

National ID:

20. Enter the **Last Name** and **First Name** of the patient.

Patient Name Last Name:

First Name:

21. Physical Address and Phone Number :

NOTE: The elements of the physical address will depend on your local configuration.

Enter the patient's Street, Camp/Commune/Area, Town/City, and Phone Number.

Address

Street:

Camp/Commune:

Town:

Phone:

22. Physical Address continued:

Choose the patient's **Region/Province/County** and then the **District** from the drop-down list. The District drop-down list is activated once the County is selected.

NOTE: These may be labelled differently in your local configuration.

The screenshot shows a patient information form with a dropdown menu open. The dropdown menu lists several options: ABIDJAN 2, MARAHOUE, TONPKI, CAVALLY-GUEMON, N'ZI-IFOU, INDENIE-DJUABLIN, PORO-TCHOLOGO-BAGOUE, LOH-DJIBOUA, and SUB-COMOE. The form fields include: New Patient (button), Patient Information (header), Subject Number, National ID, Patient Name, Last Name, Address, Street, Camp/Commune, Town, Phone, County, and District.

23. *Enter the patient's **Date of Birth** in the format dd/mm/yyyy.

Example : January 4, 1973 becomes 01/04/1973

Date of Birth (dd/mm/yyyy): * Age:

NOTE: Once the date of birth is entered, age is automatically calculated and displayed by the system.

If the exact date (day and / or month) is not known but the year is known, type "x" in the place of unknown

Date of Birth (dd/mm/yyyy): *

Date of Birth (dd/mm/yyyy): *

Date of Birth (dd/mm/yyyy): *

If you know the age, enter the patient's age in the given field and the system automatically calculates the birth year.

Date of Birth (dd/mm/yyyy): * Age:

24. *Select patient's **Sex** (gender) by clicking the appropriate option in the dropdown list.

Gender: *

- 1 = Male
- 2 = Female

25. Select the most appropriate option from the dropdown list for patient's **Education**.

Education:

- None
- Post secondary
- Primary
- Secondary

26. Select patient's **Marital Status** from the drop-down list.

Education:

Marital Status:

- DNA
- Divorced
- Living with somebody
- Married
- Single
- Widowed

27. Select the most appropriate option from the drop-down list for the patient's **Nationality**.

Nationality:

- Ivoirian
- * Non African
- : Non West African
- : West African

If applicable, **Specify** the nationality in the field next to the drop-down list.

Specify:

28. Verify that all the information entered in all three parts of the lab order form are correct. Click the **Save** button.

Note: The **Save** button is only active once all required fields have been filled.

If the "Save" button

Becomes active

Click "Save"

Does not become active

Ensure all the fields on the page are correctly filled

A new page appears with a confirmation that the request was registered in the system.

Test Request

Save was successful

How to modify or update a laboratory order

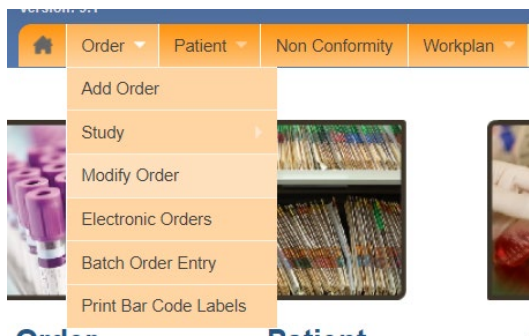
Use this function when you want to:

- Add another test or sample to the order
- Remove a test or sample from the order
- Change payment information
- Modify the lab number

Required fields are indicated with a red asterisk *.

The modify laboratory order form has three parts: **Modify Order**, **Modify Tests**, and **Add Order (Add Samples and Tests)**.

1. Hover the mouse over the **Order** tab and click **Modify Order**.



2. *Select the search criterion and then type in the number or name in order to find the lab order you wish to update.

Note: You can search for the order you wish to update using the laborator order number or the patient information (Name or ID). Using the patient information will only give the most recent order as a result. For additional, older orders, you must search by the lab order number.

A screenshot of a search interface. At the top, it says 'Search'. Below that, a red note reads: 'Search by patient information (name or ID) will display only the most recent order. For older orders, search by order number.' There is a search bar with a dropdown menu for 'Search by...' and a text input field 'Type search here...'. Below the search bar is a list of search criteria: '1. Last name', '2. First name' (highlighted in blue), '3. Last name, First name', '4. Patient identification code', and '5. Lab No'. There are 'Save' and 'Cancel' buttons.

Modify Laboratory Order Part 1—Modify Order

3. You can modify the lab order number. Enter a new number in the field **New Order Number**.

Current Order Number: TESTA20000042 New order number: TESTA 20000176



If this is the only update you wish to make, scroll down to the bottom of the form and click the **Save** button.

4. You can correct or update the following information about the order:
Request Date, Received Date, Date of Next Visit, Reception Time, Site Name, Program, Requester information, and Payment Status.

Request Date : *(dd/mm/yyyy)

Received Date : *(dd/mm/yyyy) Reception Time (hh:mm):

Date of next visit (dd/mm/yyyy) :

Site Name: *

Program:

Requester's Last Name: * First Name:

Requester Phone: +225-xx-xx-xx-xx

Fax Number:

Email:

Patient payment status:

Sampling performed for analysis:

NOTE: This function is usually used to correct mistakes made during order entry. If this is the only update you wish to make, scroll down to the bottom of the form and click the **Save** button.

Modify Laboratory Order Part 2—Modify Tests

The **Current Tests** table displays the samples and tests currently part of the order.

Current Tests

Lab No	Sample Type	Collection Date (dd/mm/yyyy)	Collection Time (hh:mm)	Remove Samples	Test Name	Results Recorded or In Progress	Delete (Cancel) test
TESTA20000176-1	Urines	<input type="text" value="15/05/2020"/>	<input type="text" value="14:45"/>	<input type="checkbox"/>	AlbuminEng		<input type="checkbox"/>
					Beta HCG		<input type="checkbox"/>
TESTA20000176-2	Plasma	<input type="text" value="15/05/2020"/>	<input type="text" value="14:45"/>	<input type="checkbox"/>	Glucose		<input type="checkbox"/>
					Western blot HIV		<input type="checkbox"/>
					Bioline		<input type="checkbox"/>
					Determine		<input type="checkbox"/>
TESTA20000176-3	Sang total	<input type="text" value="15/05/2020"/>	<input type="text" value="14:45"/>	<input type="checkbox"/>	White Blood Cells Count (WBC)		<input type="checkbox"/>
					Red Blood Cells Count (RBC)		<input type="checkbox"/>
					Hemoglobin		<input type="checkbox"/>
					Hematocrit		<input type="checkbox"/>
					Medium corpuscular volum		<input type="checkbox"/>
					TMCH		<input type="checkbox"/>
					CMCH		<input type="checkbox"/>

5. You can update the sample **Collection Date** and **Collection Time**. If this is the only update you wish to make, scroll down to the bottom of the form and click the **Save** button.

6. To remove a sample and its associated tests from the lab order, check the box in the sample's row under **Remove Samples**.
If this is the only update you wish to make, scroll down to the bottom of the form and click the **Save** button.

7. To remove a test from the lab order, check the box next to the test name under **Delete (Cancel) Test**.

NOTE: You can only delete a test if it has not yet been started. If it has been started (in progress) or completed, a **Y** will appear in the column **Results Recorded or In Progress**.

If this is the only update you wish to make, scroll down to the bottom of the form and click the **Save** button.

8. To add tests to samples that are currently in the order, go to the **Available Tests** table. Check the box next to the test you wish to add. Verify that you are adding the test to the correct sample.

Available Tests

Lab No	Sample Type	Assign	Test Name
TESTA20000176-1	Urines	<input type="checkbox"/>	AlbuminEng
		<input type="checkbox"/>	Beta HCG
		<input checked="" type="checkbox"/>	Urine pregnancy test
		<input type="checkbox"/>	Proteinuria dipstick
TESTA20000176-2	Plasma	<input type="checkbox"/>	Glucose
		<input type="checkbox"/>	HIV rapid test HIV
		<input type="checkbox"/>	Western blot HIV
		<input type="checkbox"/>	Bioline
		<input type="checkbox"/>	Murex
		<input checked="" type="checkbox"/>	Determine
		<input type="checkbox"/>	Vironostika
		<input type="checkbox"/>	P24 Ag
TESTA20000176-3	Sang total	<input type="checkbox"/>	White Blood Cells Count (WBC)
		<input type="checkbox"/>	Red Blood Cells Count (RBC)
		<input type="checkbox"/>	Hemoglobin
		<input type="checkbox"/>	Hematocrit

If this is the only update you wish to make, scroll down to the bottom of the form and click the **Save** button.

Modify Laboratory Order Part 3—Add Order (Add Samples and Tests)

9. To add a new sample with its associated tests to the lab order, go to the section **Add Order**.

10. Select the **Sample Type** and fill in the sample information (see New Lab Order Step 11-13 for more details).

11. Select the desired **Tests** (see New Lab Order Step 14 for more details).

If this is the only update you wish to make, scroll down to the bottom of the form and click the **Save** button.

Once you have made all the necessary updates to the lab order, click the **Save** button.

How to add or update a patient's information

To add a new patient or update an existing patient's information, follow these steps:

1. Select **Add/Edit Patient** from the **Patient** tab on the main menu.



2. Follow **Steps 16-28** of **How to create a laboratory analysis order**.

PART 5: ELECTRONIC ORDERS

Orders sent electronically to OpenELIS will appear here with their order, sample, and test information. Select a term from the dropdown menu to sort the list of electronic orders.



PART 6: BATCH ORDER ENTRY

When you receive a group or batch of orders with the same sample type, test and/or facility of origin, batch order entry can speed up the order entry process.

For example, if you receive a batch of 100 DBS samples for viral load testing from North Regional Hospital, you can use batch order entry to set the sample type, test and hospital for all the samples at once. Then, you can rapidly print barcode labels for each sample. You have the option to include patient information right away, or save that data entry for a later point in time.

- How to set up batch order entry without individual patient data
- How to set up batch order entry with individual patient data
- How to print bar code labels

How to set up batch order entry without individual patient data

1. Hover the mouse over the **Order** tab and select **Batch Order Entry**.



2. *In the Order section, verify the **Current Date** in the format dd/mm/yyyy and **Current Time** in the format hh:mm

Order

Current Date : * (dd/mm/yyyy) Current Time : (hh:mm)

3. *Change, if needed, the **Received Date** in the format dd/mm/yyyy and **Reception Time** in the format hh:mm.

Received Date : * (dd/mm/yyyy) Reception Time : (hh:mm)

4. Select the **Form**, if applicable. The selections will depend on your local configuration.

5. In the Sample Section, select the **Sample Type** from the dropdown menu. Check the box(es) corresponding to the desired panel(s) and test(s):

Panels		Available Tests	
	Name		Name
<input checked="" type="checkbox"/>	Bilan Biochimique	<input checked="" type="checkbox"/>	GPT/ALAT
<input type="checkbox"/>	Serologie VIH	<input checked="" type="checkbox"/>	GOT/ASAT
		<input checked="" type="checkbox"/>	Creatinine
		<input checked="" type="checkbox"/>	AmylaseENG
		<input checked="" type="checkbox"/>	Total cholesterol
		<input type="checkbox"/>	Tests
		<input checked="" type="checkbox"/>	HDL cholesterol
		<input checked="" type="checkbox"/>	Triglycerides
		<input type="checkbox"/>	HIV rapid test HIV

Note: The number of panels and tests available for a sample depends on the type of sample (serum, plasma, blood, urine). The sample type and test will be the same for the entire batch being entered.

6. In the Configure Barcode Entry section, select the **Barcode Method** from the dropdown list. Choose **Pre-Printed** if the barcodes you are using are already printed labels. Choose **On Demand** if you will print the entire barcode label from OpenELIS.

Configure Barcode Entry

Barcode Method : On Demand ▼

Optional Fields: On Demand

Pre-Printed

Next Cancel

7. **Facility ID** and **Patient Information** are **Optional Fields**.

You can add **Facility ID** for the batch if they all have the same facility of origin. Check the box for **Facility ID** and enter the ID in the text field.

See the aid **How to set up batch order entry with individual patient data** for how to use the Patient Info field.

Configure Barcode Entry

Barcode Method : On Demand ▼

Optional Fields: Facility ID

Patient Info

8. Click the **Next** button at the bottom of the page. A new page appears which gives you the summary of the sample and the option to save and print.

Sample Specific Fields	Common Fields				
Generate Barcode and Save					
<input type="button" value="Save & Print"/> <input type="button" value="Next label"/>	Current Date: <input type="text" value="26/10/2019"/> Current Time: <input type="text" value="21:36"/> Received Date: <input type="text" value="26/10/2019"/> Received Time: <input type="text" value="21:36"/>				
Current Accession Number: <input type="text"/>	<table border="1"> <thead> <tr> <th>Sample Type</th> <th>Test Name</th> </tr> </thead> <tbody> <tr> <td>Plasma</td> <td>Glucose santest test 1</td> </tr> </tbody> </table>	Sample Type	Test Name	Plasma	Glucose santest test 1
Sample Type	Test Name				
Plasma	Glucose santest test 1				
Previously Used Accession Numbers: <input type="text"/>					

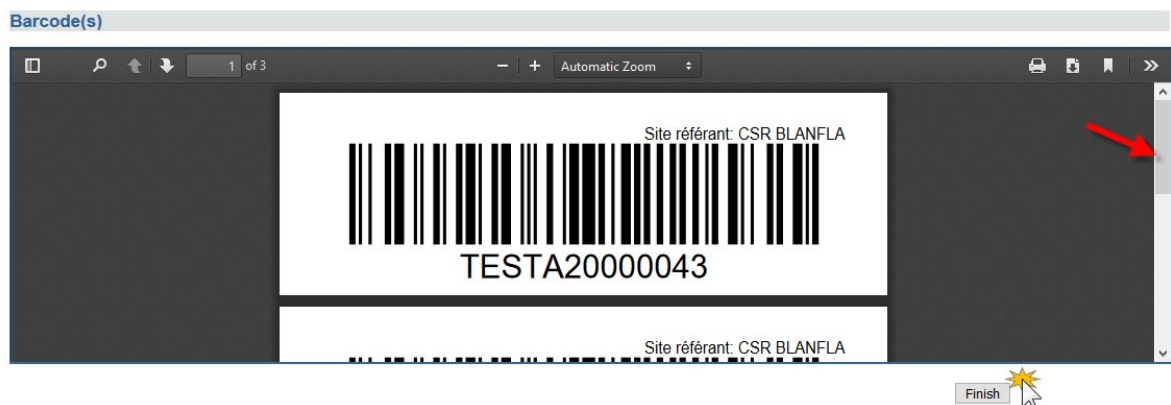
9. Update the **Current Date**, **Current Time**, **Received Date** and **Received Time** as needed.

10. Verify that the **Sample Type** and **Test Name** are correct.

11. Click **Save & Print**. The **Current Accession Number** for the first sample in the batch will be generated automatically and the barcode label will appear below.

You can enter any other accession/laboratory numbers associated with the sample (for example, the number assigned by the referring lab or facility) in the field **Previous Accession Numbers** to facilitate tracing.

12. Scroll within the barcode window to see all the labels: one for the paperwork and labels for the sample.



13. To go to the next sample in the batch, click the **Next Label** button. Repeat Steps 11-12.

14. When you have entered all the samples in the batch, scroll down and click the **Finish** button.

At a later point, go to **Order Entry** on the Order tab and scan the barcode to pull up the order and enter the patient data at that time.

How to set up batch order entry with individual patient data

1. Complete **Steps 1-6** of **How to set up batch order entry without individual patient data**.

2. Check the box next to **Patient Info** under **Optional Fields**. Click the **Next** button.

3. The Batch Entry page will appear with a section **Sample Specific Fields**.

Batch Order Entry

Sample Specific Fields	Common Fields				
Search Search by... <input type="text"/> Type search here... <input type="button" value="Search"/> <input type="button" value="New Patient"/>	Current Date: <input type="text" value="24/06/2020"/> Current Time: <input type="text" value="05:08"/> Received Date: <input type="text" value="24/06/2020"/> Received Time: <input type="text" value="05:08"/>				
Patient Information Subject Number: <input type="text"/> National ID: <input type="text"/> Patient Name: Last Name: <input type="text"/> First Name: <input type="text"/> Date of Birth (dd/mm/yyyy): <input type="text"/> Age: <input type="text"/> Gender: <input type="text"/>	<table border="1"><thead><tr><th>Sample Type</th><th>Test Name</th></tr></thead><tbody><tr><td>Plasma</td><td>HIV rapid test HIV</td></tr></tbody></table>	Sample Type	Test Name	Plasma	HIV rapid test HIV
Sample Type	Test Name				
Plasma	HIV rapid test HIV				
Generate Barcode and Save <input type="button" value="Save & Print"/> <input type="button" value="Next label"/> Current Accession Number: <input type="text"/> Previously Used Accession Numbers: <input type="text"/>					

4. Search for the patient in the database:

Select the search criterion from the dropdown list. You can search by:

- Patient's last name (surname or family name)
- Patient's first name (given name)
- Patient's last and first name, separated by a comma
- Patient's identification code
- A previous lab order number associated with that patient- you can scan a bar code or enter this manually

Type in the search term (the name or code number) into the search field and click **Search**.

- Patient: *

Search

1. Last name

Search by...

- 1. Last name
- 2. First name
- 3. Last name, First name
- 4. Patient identification code
- 5. Lab No

Subject Number:

National ID:

The search results appear in a table, listing the patient, their birth date, and identification code. Select the patient that matches the one you want by clicking on the radio button next to that patient. The patient form will populate with that patient's information.

Search

5. Lab No

	Data source	Last Name	First Name	Gender	Date of Birth	Subject Number	National ID
<input checked="" type="radio"/>		Buttercup	Princess	M	15/05/1995	0002	02

If no results match the desired patient, you will have to create a new patient record. Click on **New Patient** button to clear the form if needed.

Search

1. Last name

No patients found matching search terms

Patient Information

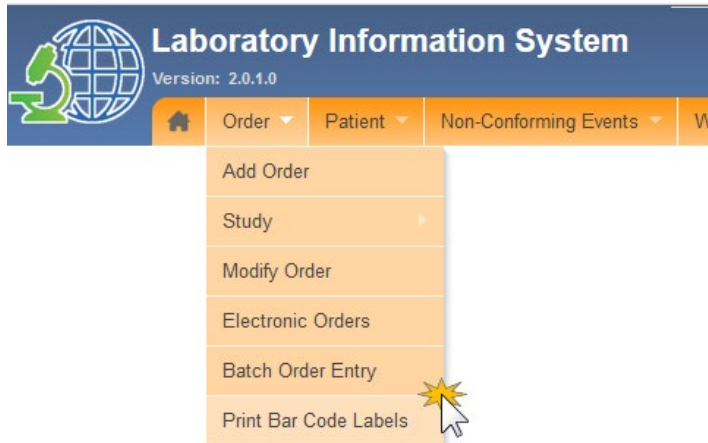
5. Enter the patient's **Patient ID, National ID, Last Name, First Names, Date of Birth or Age, and Sex (Gender)**.

NOTE: Age is calculated automatically from the date of birth. If date of birth is not available but age is known, enter age only and a proxy date of birth will be assigned.

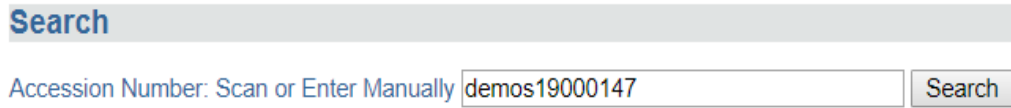
6. Complete **Steps 9-14** of **How to set up batch entry without individual patient data**.

How to print bar code labels

2. Hover the mouse over the **Order** tab, select **Print Bar Code Labels**.



3. A search field will appear on the new page. Enter or scan in the **Accession Number** and click **Search**.



- The patient's basic information will be displayed along with the options to:
- Print Individuals
- Print Sets

Choose **Print Set** to print all the associated barcode labels. Choose **Print Label** to print only that label.

Click **Print Set/ Print Label** button. The barcode will be displayed. You can also set the number of times the barcode has to be printed.

Print Bar Code Labels

Search

Accession Number: Scan or Enter Manually

Print Sets

Print set of labels (2 order labels + 1 label per specimen)

Print Individuals

Label Type	Accession number	Additional Info	Number to Print	
Order	TESTA20000044		<input type="text" value="1"/>	<input type="button" value="Print Label"/>
Specimen	TESTA20000044-1	Plasma	1	<input type="button" value="Print Label"/>

Brown, Casey 654433	14/04/1970 Site: FSU Attecoube
	
demos19000147	
Brown, Casey 654433	14/04/1970 Site: FSU Attecoube
	
demos19000147	

PART 7: WORKPLANS

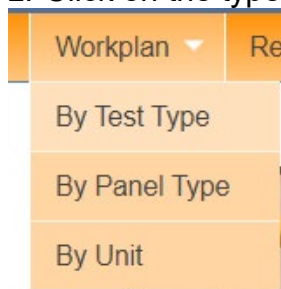
The laboratory can use workplans to facilitate work assignments for lab units, individual technicians, and dispatch of samples within the lab. Workplans list the samples and tests to be done. The workplan can be organized by a single test or a panel, or for an entire lab unit.

How to create a workplan by test, by panel or unit

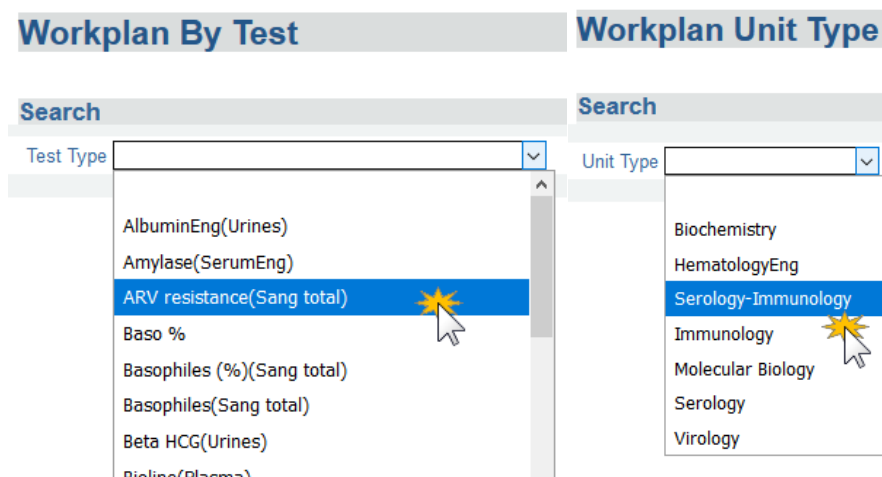
1. From the main menu, select the tab **Workplan**.



2. Click on the type of workplan you want: **By Test**, **By Panel**, or **By Unit**.



3. Select the **Test**, **Panel**, or lab **Unit Type** from the drop-down menu.



Click on your selection.


4. The workplan will appear.

The workplan lists all orders for that Test, Panel, or Unit that need to be done, along with the Patient ID (Subject Number), Received Date, Technician ID and other information depending on your local configuration. They are listed in order by lab number.

At the top of the page the number of **Total Tests** on the workplan.

A **Red Flag** next to an order indicates that either the sample or order has been reported for a non-conforming event.

Creatinine


Total tests = 12  = Sample or order is nonconforming OR test has been rejected

Remove	Lab No	Subject Number	Received Date
<input type="checkbox"/>	demos19000038	98765	02/05/2019 00:00
<input type="checkbox"/>	demos19000097	654433	08/06/2019 12:07
<input type="checkbox"/>	demos19000111		12/06/2019 16:10
<input type="checkbox"/>	demos19000147	654433	11/07/2019 21:59
<input type="checkbox"/>	demos19001200		15/07/2019 16:55
<input type="checkbox"/>	demos19001223	PVVIH12345	25/07/2019 10:33
<input type="checkbox"/>	demos19001224	123ABC	30/07/2019 16:40
<input type="checkbox"/>	demos19001241	1025589	15/08/2019 22:10
<input type="checkbox"/>	demos19001244		16/08/2019 14:32
<input type="checkbox"/>	demos19001254	1221	06/09/2019 17:13
<input type="checkbox"/>	demos19001255		06/09/2019 17:30
<input type="checkbox"/>	demos19001281	1092019	14/10/2019 10:05

Workplan Biochemistry

Search

Unit Type

Total tests = 130  = Sample or order is nonconforming OR test has been rejected

Remove	Lab No	Subject Number	Test Name	Received Date
<input type="checkbox"/>	demos19000020	1234567	Proteinuria dipstick(Urines)	29/04/2019 00:00
<input type="checkbox"/>			Urine pregnancy test(Urines)	29/04/2019 00:00
<input type="checkbox"/>			albumin(Urines)	29/04/2019 00:00
<input type="checkbox"/>	demos19000030	534	Proteinuria dipstick(Urines)	01/05/2019 15:50
<input type="checkbox"/>			albumin(Urines)	01/05/2019 15:50
<input type="checkbox"/>	demos19000036	987654321	Glucose(Plasma)	02/05/2019 00:00

5. Check the box **Remove** next to the lab number to remove a test from the workplan. This can be used to create different workplans for different technicians, for example.

Remove	Lab No	Subject Number	Test Name	Received Date
<input type="checkbox"/>	demos19000016	321	CMCH(Sang total)	26/04/2019 00:00
<input type="checkbox"/>			Eosinophiles %(Sang total)	26/04/2019 00:00
<input checked="" type="checkbox"/>			Lymphocytes (Abs)(Sang total)	26/04/2019 00:00
<input checked="" type="checkbox"/>			Monocytes %(Sang total)	26/04/2019 00:00
<input type="checkbox"/>			Monocytes (Abs)(Sang total)	26/04/2019 00:00
<input type="checkbox"/>			Neutrophiles %(Sang total)	26/04/2019 00:00
<input type="checkbox"/>			Neutrophiles(Sang total)	26/04/2019 00:00
<input type="checkbox"/>	demos19000021	1234567	Platelets(Sang total)	26/04/2019 00:00
<input type="checkbox"/>			Eosinophiles(Sang total)	11/04/2019 00:00
<input checked="" type="checkbox"/>			Lymphocytes %(Sang total)	11/04/2019 00:00
<input type="checkbox"/>			Lymphocytes (Abs)(Sang total)	11/04/2019 00:00

6. To print the workplan, verify that all the tests that you want in the workplan appear. Click the **Print Workplan** button.

A new window will open with a PDF version of the workplan. This can be printed from your browser application.

PART 8: NON-CONFORMING EVENTS

A non-conforming event (NCE) or non-conformity is defined as a non-fulfillment of a requirement. An NCE occurs when there is a deviation from established policies and procedures. In the laboratory, examples of NCEs may include:

- Unlabeled/mislabeled specimens
- Missing specimens
- Specimen preparation errors
- Delay in turnaround times
- Incorrect delivery of reports
- Corrected reports

It is essential for quality assurance in the lab that staff and managers log all NCEs and their follow-up.

Non-Conforming Event management consists of four steps with the following guides:

- Reporting a NCE
- Creating a Corrective Action Plan
- Monitoring the Corrective Action Plan
- Closing an NCE Report

How to report a non-conforming event (NCE)

1. Hover the mouse over the Non-Conforming Events tab and select Report Non-Conforming Event.



2. Search for the lab number associated with the non-conforming event by selecting your search term from the drop-down menu and entering the number or name in the search field. Then click **Search**.

Report Non-Conforming Event (NCE)

Search by... TESTA200000015 Search

Search by...

1. Last name
2. First name
3. Last name, First name
4. Patient identification code
5. Lab No

3. The order and its samples will display. Check the box next to the sample implicated in the NCE. If the NCE is not associated with a specific sample, check all the samples. Click the **Go to NCE Reporting Form** button.

Report Non-Conforming Event (NCE)

5. Lab No TESTA200000033 Search

Lab Order Number TESTA200000033

	Specimen number	Specimen type
Select affected specimens	<input type="checkbox"/> TESTA200000033-3	Urines
	<input type="checkbox"/> TESTA200000033-2	Urines
	<input checked="" type="checkbox"/> TESTA200000033-1	Serum

Go to NCE reporting Form

4. Verify the details that are automatically displayed: NCE report date (should be the current date), Name, and the lab order number, and specimen number.

5. Fill in the Name of person reporting if different, if needed.

NOTE: Name refers to the person filling this form. The staff member filling out the NCE reporting form may not be the same person who noticed or observed the NCE and reported it. Use the **Name of person reporting (if different)** for the person who first observed the NCE.

OpenELIS will automatically assign an **NCE Number** to the report.

6. Fill in the date of the NCE (this may be different from the report date).

Report Date	17/06/2020
Name	Open ELIS
Name of person reporting NCE (if different)	Charles Deneige
NCE Number	1592413969900
Date of event	13/05/2020
Lab Order Number	TESTA20000033
Specimen(s)	TESTA20000033 - 1
Prescriber Name and Site	Requestorson, Requesty MARS
Reporting unit	Serology-Immunology
Description of NCE	The tube was cracked
Suspected Cause of NCE	Mishandling at reception or during transport
Proposed action	Re-training of transport staff regarding handling of specimens

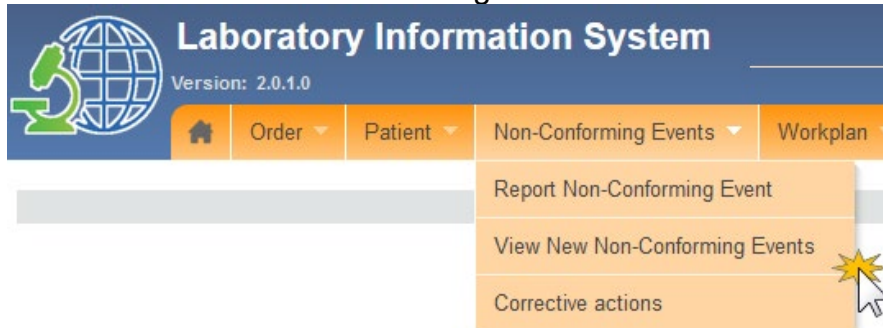
7. Select the Reporting Unit.
8. Enter a Description of the NCE.
9. Enter the Suspected Cause of the NCE.
10. Enter the Proposed Action.
11. Click the **Submit** button.
A message will show that the form has been saved.

Save was successful

Report Non-Conforming Event (NCE)

How to create a NCE Corrective Action Plan

1. After the NCE reporting form has been filled, the next step is to fill the NCE Follow-Up Form. This may be done at a later date, per laboratory procedures. Select **View New Non-Conforming Event** from the menu.



2. Select **Lab Number** or **NCE Number** as your search term and enter the number in the search field. Click the **Search** button.

The NCE Follow-up Form has two parts: The NCE description section and the Corrective Action Plan.

NCE Follow-up Form: Part 1- NCE Description

3. Verify the details of the NCE in the form. Fill in the remaining elements of the form using the dropdown lists.

4. Select the **Laboratory Component** (the NCE concerns which component of the lab).

5. Select the NCE Category.

6. Select the **CE Type**

7. Select the **Severity**

8. Select the Likely recurrence

The **Severity Score** is automated calculated.

Nonconforming Event Followup-Form

NCE Number	1592413969900	Report Date	17/06/2020
NCE Date	13/05/2020	Reporting Person	Charles Deneige
Lab Order Number	TESTA20000033	Reporting unit	Serology-Immunology
Specimen(s)	Serum		
Prescriber Name and Site	Requestorson, Requesty - MARS	Laboratory Component	Personnel

Description of Event	NCE Type
The tube was cracked	NCE Category: Sample
	NCE Type: Broken Tube/Container
Suspected Cause	Severity
Mishandling at reception or during transport	How severe are the consequences or impact of the NC: 2- moderate severe consequences
	How likely is the NCE to recur?: 2- Somewhat likely
Proposed Action	
Re-training of transport staff regarding handling of specimens	1 = very low severity-- no immediate action is required 9 = very high severity-- immediate action is required
	Severity Score: 4

NCE Follow-up Form: Part 2- Corrective Action Plan

4. Enter the Description of the Corrective Action, the Preventive Action or Concurrent Control Action, and any Comments in the designated text boxes of the form.

Corrective Action plan

Description of corrective action to take

Staff at dispatch will be retrained on safe specimen handling and observed for one week.

If applicable, description of preventive or concurrent control action

N/A

Comments

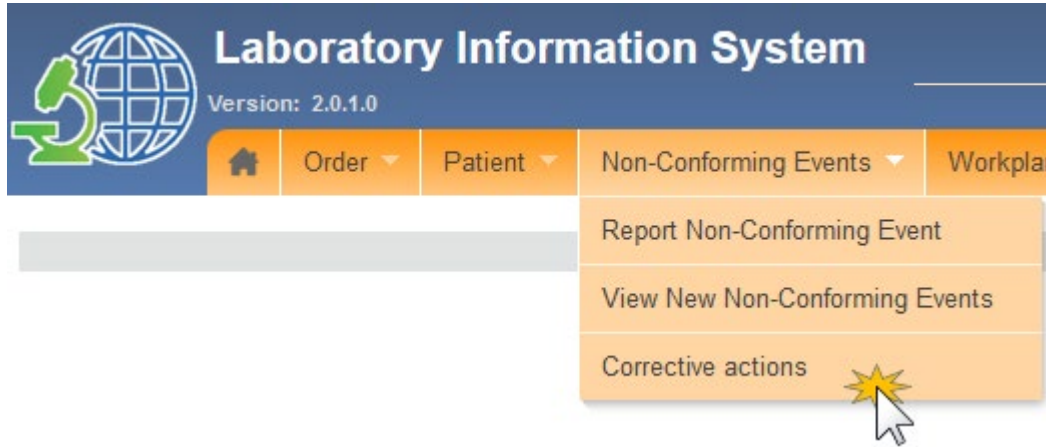
None

5. Click the **Submit** button.

How to monitor an NCE Corrective Action Plan

1. After the NCE follow-up form has been filled, activities related to corrective action or closing the NCE report should be logged in the Corrective Actions form, per laboratory procedures.

Select **Corrective Actions** from the menu.



2. Select **Lab Number** or **NCE Number** as your search term and enter the number in the search field. Click the **Search** button.

Nonconforming Events Corrective Action

Lab Order Number

Lab Order Number

NCE Number

The NCE Corrective Action form has three parts: the NCE description; the corrective action log section; and the NCE Resolution section.

Nonconforming Events Corrective Action

Lab Order Number

Nonconforming Events Corrective Action 1

NCE Number	1592413969900	Planned or recommended corrective action:
NCE Date	13/05/2020	Staff at dispatch will be retrained on safe specimen handling and observed for one week.
Severity	2- moderate severe consequences	Planned or recommended corrective preventive action or concurrent controls:
Reporting Person	Open ELIS	N/A
Reporting Date	17/06/2020	Comments
Reporting unit	Serology-Immunology	None
Lab Order Number	TESTA20000033	
Specimen(s)		
Laboratory Component where NCE took place	Personnel	
NCE Category	Sample	
NCE Type	Broken Tube/Container	

Corrective action log 2

Date of discussion with NCE Staff

Corrective action	Action Type	Person responsible	Date Completed	Turnaround time
	<input type="checkbox"/> Corrective Action <input type="checkbox"/> Preventive Action <input type="checkbox"/> Concurrent Control Action	<input type="text"/>	<input type="text" value="dd/MM/yyyy"/>	

NCE Resolution 3

Were the corrective actions and preventive/concurrent controls effective in solving the nonconforming event and preventing it from recurring? Yes No

Signature Date Completed

NCE Corrective Action form: Part 1- NCE Description

This section is view only. Verify that the information is correct.

Nonconforming Events Corrective Action		
Lab Order Number <input type="text"/>		<input type="button" value="Search"/>
Nonconforming Events Corrective Action		
NCE Number	1592413969900	Planned or recommended corrective action:
NCE Date	13/05/2020	Staff at dispatch will be retrained on safe specimen handling and observed for one week.
Severity	2- moderate severe consequences	Planned or recommended corrective preventive action or concurrent controls:
Reporting Person	Open ELIS	N/A
Reporting Date	17/06/2020	Comments
Reporting unit	Serology-Immunology	None
Lab Order Number	TESTA20000033	
Specimen(s)		
Laboratory Component where NCE took place	Personnel	
NCE Category	Sample	
NCE Type	Broken Tube/Container	

NCE Corrective Action Form: Part 2- Corrective Action Log

- For each discussion with staff regarding the NCE, enter the **Date of Discussion** and click **Add New Date** button. The date will appear above the entry field. You may enter more than one date of discussion.
- Enter text describing any **Corrective Action** taken and check the box next to the **Action Type**.
- Enter the name of the **Person Responsible** for the corrective action and the **Date Completed** (the date the corrective action took place).
- Turnaround Time** is automatically calculated.
- Click the **Submit** button to record the corrective action in the log.

Corrective action log

Date of discussion with NCE Staff 14/05/2020

Corrective action	Action Type
Conducted 2 hour training for staff on safe handling of specimens	<input type="checkbox"/> Corrective Action <input checked="" type="checkbox"/> Preventive Action <input type="checkbox"/> Concurrent Control Action

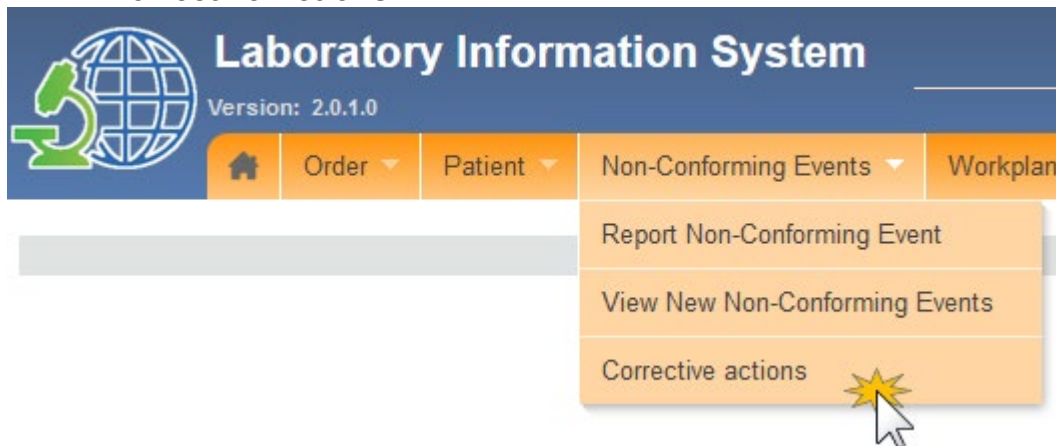
Person responsible	Date Completed	Turnaround time
<input type="text" value="Dr. Gujara"/>	<input type="text" value="17/052020"/>	4 days

- You may now navigate to a new page.
- When you need to add additional corrective actions to the log, repeat steps 1-7.

How to close a resolved NCE

1. When all corrective action has been completed and the lab manager considers the NCE to be resolved, the NCE report should be closed, per laboratory procedures.

Select **Corrective Actions** from the menu.



2. Select **Lab Number** or **NCE Number** as your search term and enter the number in the search field. Click the **Search** button.

Nonconforming Events Corrective Action

Lab Order Number	<input type="text" value="1592413969899"/>	<input type="button" value="Search"/>
Lab Order Number		
NCE Number		

4. Scroll down to the **NCE Resolution** section.

5. If the corrective actions were sufficient to resolve the NCE, click **Yes** and enter the **Date Completed** (the date the NCE was considered resolved).

6. Click the **Submit Resolved NCE** button to close the NCE report.

NCE Resolution

Were the corrective actions and preventive/concurrent controls effective in solving the nonconforming event and preventing it from recurring? Yes No

Signature

Date Completed

The resolved NCE will no longer appear in the NCE reporting forms. To see details, use the **Reports** menu to select NCE related reports.

PART 9: ENTERING LAB TEST RESULTS

Once the samples and patient exist in the system, it is possible to record the results of analyzes made from the samples. It is at this stage that the lab technician plays an important role in the functioning of the information system. There are several ways to capture the results of laboratory tests for a patient: enter results by type of laboratory analysis, or search results by patient, lab number or the status of the analysis (conducted or not made).

This section includes the following guides:

- How to get to the results entry page
- How to enter results
- How to refer tests to an external laboratory for additional analysis
- How to enter the results of tests referred to an external laboratory

All samples reported as non-compliant will have a red flag side of their results.

How to get to the results entry page

1. From the main menu, select the **Results** tab.

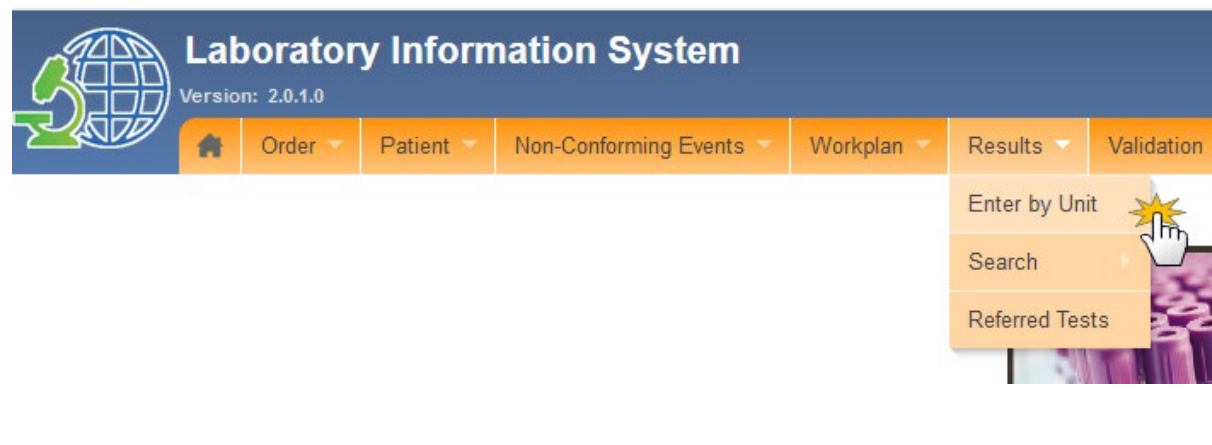
Results can be entered by

- Lab Unit
- Patient
- Laboratory Order Number.
- Test
- Date sample was collected
- Date sample was received
- Test status
- Sample status

IMPORTANT:

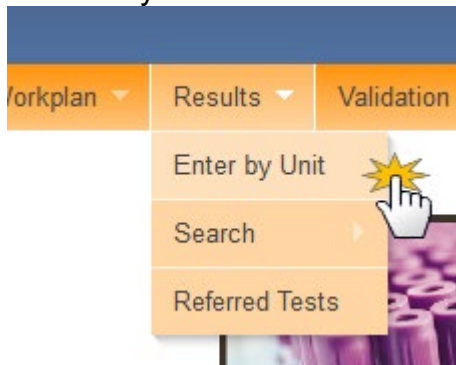
If you select **Lab Unit**, all tests not yet resulted in that unit are displayed.

If you select by **Patient** or by **Lab Number**, all tests for that patient or laboratory order will be displayed, including tests that already have results entered.



To enter results by Unit

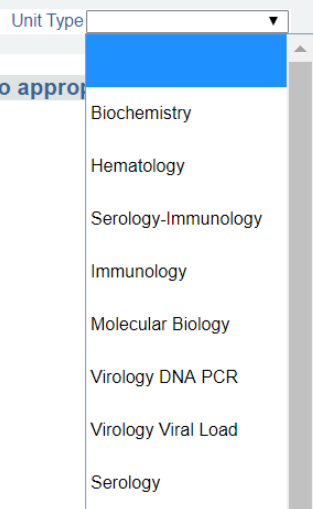
2. Click “Enter by Unit”.



Click the laboratory unit for which you want to enter results.

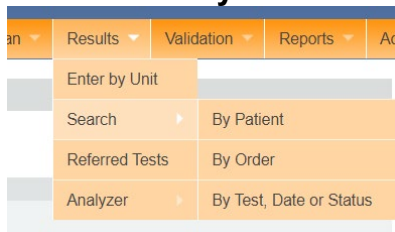
Results Unit Type

Search



To enter results by Patient

3. Select **Search... By Patient** from the Results tab.



4. Click on **Search by...** drop-down list and select one of the following options:

- Last name
- First name
- Last and first name
- Patient identification code
- Lab No (any order associated with that patient)

If you are looking for a patient by his first name, William, select search by “first name”, type “William” in the search field and click on Search button.

Search

2. First name ▼ William Search

5. Click the radio button to the left of the patient you wish to select.

Note: For this, use the other data you have at your disposal to verify the correct patient name.

Search

2. First name ▼ Areesha Search

	Last Name	First Name	Gender	Date of Birth
<input checked="" type="radio"/>		Areesha	F	02/10/1997
<input type="radio"/>	Tariq	Areesha	F	08/04/1995

6. Click Get Tests For Patient.

Search

2. First name ▼ areesha Search

	Last Name	First Name	Gender	Date of Birth	Subject Number	National ID
<input type="radio"/>		Areesha	F	02/10/1997		
<input checked="" type="radio"/>	Tariq	Areesha	F	08/04/1995	0012	001234

Get Tests For Patient

Save Cancel

To enter results by Order

7. Click on **Search....By Order** from the Results tab.

Results ▾ Validation ▾ Reports ▾ Ac

Enter by Unit

Search ▸ By Patient

Referred Tests By Order

Analyzer ▸ By Test, Date or Status

8. A search field will appear. Enter the lab number in that field.

Search

Lab No

Scan or Enter Manually

Get Tests For Accession Number

Save Cancel

9. Click on Get Tests for Accession Number.

The screenshot shows a search interface with a header 'Search' in blue. Below it, there is a text input field labeled 'Lab No' containing the value 'demos19000147'. Underneath the input field is a link that says 'Scan or Enter Manually'. At the bottom of the search area is a button labeled 'Get Tests For Accession Number'. To the right of this button are two smaller buttons: 'Save' and 'Cancel'.

To enter results by Test, Date, or Status

10. Select Search....By Test, Date or Status from the Results tab.

The screenshot shows a navigation menu with several tabs: 'Results', 'Validation', 'Reports', and 'Adm'. The 'Results' tab is selected and expanded, showing a sub-menu with the following options: 'Enter by Unit', 'Search', 'Referred Tests', and 'Analyzer'. The 'Search' option is further expanded to show three sub-options: 'By Patient', 'By Order', and 'By Test, Date or Status'.

11. Enter any of the parameters in order to limit your search.

NOTE:

Collection date and received date should be in the format dd/mm/yyyy.

Select the **Test (Analysis)Status** or **Sample Status** from the respective drop-down lists.

The screenshot shows the 'Results' search interface. It has a header 'Results' in blue. Below it is a 'Search' section with five input fields: 'Collection Date (dd/mm/yyyy)', 'Received Date (dd/mm/yyyy)', 'Test Name', 'Analysis Status', and 'Sample Status'. Below these fields is a button 'Get Tests For Status' and two buttons 'Save' and 'Cancel'. A dropdown menu is open for the 'Sample Status' field, showing two options: 'No tests have been run for this sample' and 'Some tests have been run on this sample'.

12. Click the Get Tests For Status button.

The screenshot shows the 'Search' interface with the 'Collection Date' field set to '02/11/2019' and the 'Received Date' field set to '03/11/2019'. The 'Get Tests For Status' button is visible at the bottom.

13. On any results entry page with multiple lab orders, you can go to a particular lab order by entering the lab number in the search field at top right of the page.

tem

Reports Admin Help

! = Validation Failed

Lab No. : TESTA20000042 Search

Performed By *
Autofill:

Reject Notes

Open ELIS

Open ELIS

The lab order will be highlighted in yellow.

Lab No. : TESTA20000038 - 2 Condition: Sample Type: SérúmFr		
Patient : test, test , M, 11/11/1977		
24/06/2020	<input type="checkbox"/>	GPT/ALAT(SerumEng) 7 - 40 UI/L
24/06/2020	<input type="checkbox"/>	GOT/ASAT(SerumEng) 3 - 40 UI/L
24/06/2020	<input type="checkbox"/>	Creatinine(SerumEng) 6 - 13 mg/l
24/06/2020	<input type="checkbox"/>	Amylase(SerumEng) 1 - 486 UI/L
24/06/2020	<input type="checkbox"/>	Total cholesterol(SerumEng) 1.50 - 2.60 g/l
24/06/2020	<input type="checkbox"/>	HDL cholesterol(SerumEng) 0.35 - 0.70 g/l
24/06/2020	<input type="checkbox"/>	Triglycerides(SerumEng) 0.4 - 1.7 g/l
Lab No. : TESTA20000042 - 1 Condition: Sample Type: Urines		
Patient : Latif, Miriama 12345, F, 31/10/1985		
24/06/2020	<input type="checkbox"/>	AlbuminEng(Urines) 36 - 50 g/l
24/06/2020	<input type="checkbox"/>	Beta HCG(Urines) 0.05 - 0.20 g/l
Lab No. : TESTA20000042 - 2 Condition: Sample Type: Plasma		
Patient : Latif, Miriama 12345, F, 31/10/1985		
24/06/2020	<input type="checkbox"/>	Glucose(Plasma) 0.70 - 1.10 g/l

How to enter laboratory test results

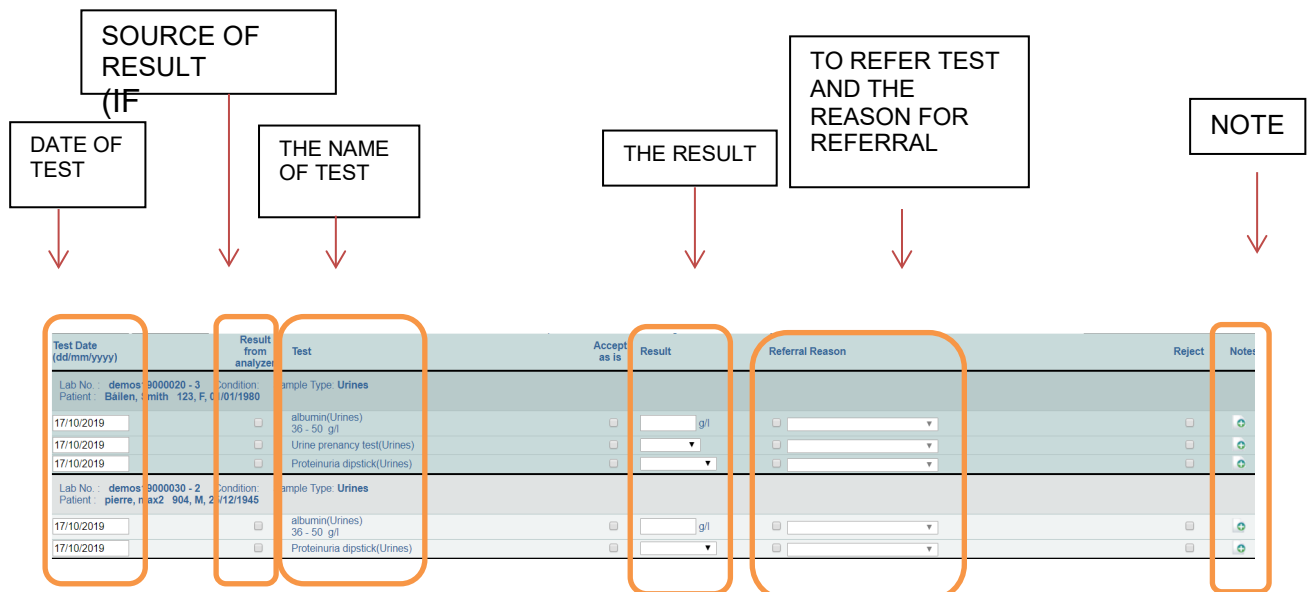
The results are displayed in order of the date of receipt and subsequently by laboratory number.

Each test displays the following information:
 Lab Order/Sample Number, Sample Type, Sample Condition
 Patient Name, Patient ID Number, Sex, Date of Birth

Lab No. : TESTA20000033 - 2	Condition: Broken Tubes, Frozen	Sample Type: Urines
Patient : DeKaal, Petra	01, F, 20/02/2000	
23/06/2020	<input type="checkbox"/>	AlbuminEng(Urines) 36 - 50 g/l
23/06/2020	<input type="checkbox"/>	Urine pregnancy test(Urines)
23/06/2020	<input type="checkbox"/>	Urine pregnancy test(Urines)
23/06/2020	<input type="checkbox"/>	Proteinuria dipstick(Urines)

The results entry columns from left to right include:
 Test Date, Name of Test, Result, Referral and Reason, Technician, Notes field

There are tickboxes for whether the result comes from an analyser, to confirm the result, whether the test must be referred for additional testing at another laboratory, and for rejecting a test for reason of non-conformity.



1. This field auto-populates with the current date. If the test was performed on a different date, update the **Test Date** field in format dd/mm/yyyy.

Received Date 11/07/2019
Lab No. : demos19000147 - 1
19/10/2019
19/10/2019
19/10/2019
19/10/2019

2. If the result is from an analyser machine, check the box **Result from Analyzer**.

3. Enter the result in the column **Result**. For numerical results, type in the result. For other types, select the result from the drop-down list.

Test Date (dd/mm/yyyy)	Result from analyzer	Test	Accept as is	Result
Received Date 11/07/2019		Lab Number demos19000147		
Lab No. : demos19000147 - 1		Condition: Sample Type: Serum		
19/10/2019	<input checked="" type="checkbox"/>	GPT/ALAT(Serum) 7 - 40 UI/L	<input type="checkbox"/>	6 UI/L
19/10/2019	<input checked="" type="checkbox"/>	GOT/ASAT(Serum) 3 - 40 UI/L	<input type="checkbox"/>	5 UI/L
19/10/2019	<input type="checkbox"/>	Creatinine(Serum) Any value mg/l	<input type="checkbox"/>	30 mg/l
19/10/2019	<input type="checkbox"/>	AmylaseENG(Serum) 1 - 486 UI/L	<input type="checkbox"/>	500 UI/L
19/10/2019	<input type="checkbox"/>	Total cholesterol(Serum) 1.50 - 2.60 g/l	<input type="checkbox"/>	10000.00 g/l
19/10/2019	<input type="checkbox"/>	HDL cholesterol(Serum) 0.35 - 0.70 g/l	<input type="checkbox"/>	2.80 g/l

IMPORTANT:

- If the result is high or low (outside the normal range), the result field turns yellow.
- If the result is too high or too low (outside the valid range), the result field turns red to indicate an alert.
- If the result is in normal range, the result field remains white.

4. If the technician identifies a reason for referring the sample to another laboratory for confirmatory or other additional testing, they must check the box in the column **Referral Reason** and select a reason from the dropdown list.

Result	Referral Reason
8 UI/L	<input type="checkbox"/> [Dropdown]
2 UI/L	<input checked="" type="checkbox"/> [Dropdown]

Received Date	Lab Number					
11/07/2019	demos19000147					
Lab No. : demos19000147 - 1 Condition: Sample Type: Serum						
19/10/2019	GPT/ALAT(Serum) 7 - 40 UI/L	<input type="checkbox"/>	6	UI/L	<input checked="" type="checkbox"/>	
19/10/2019	GOT/ASAT(Serum) 3 - 40 UI/L	<input type="checkbox"/>		UI/L	<input type="checkbox"/>	Test not performed
19/10/2019	Creatinine(Serum) Any value mg/l	<input type="checkbox"/>		mg/l	<input type="checkbox"/>	Confirmation requested
19/10/2019	AmylaseENG(Serum) 1 - 486 UI/L	<input type="checkbox"/>		UI/L	<input type="checkbox"/>	Further testing required
19/10/2019	Total cholesterol(Serum) 1.50 - 2.60 g/l	<input type="checkbox"/>		g/l	<input type="checkbox"/>	Reagent expired
19/10/2019	HDL cholesterol(Serum) 0.35 - 0.70 g/l	<input type="checkbox"/>		g/l	<input type="checkbox"/>	Reagents unavailable
						Equipment failure
						Verification of EQA
						Specimen sent for serotyping
						EQA by Repeat Testing
						Other

5. Depending on your local configuration, indicate the name of the technician who ran the test. This field may be autofilled and can be updated if the person entering the results is not the technician who ran the test.

Performed By *


Autofill: Manuel Essa

Vivienne Duba

Manuel Essa

Manuel Essa


Manuel Essa

6. Click the icon  to open the text box for **Notes**.

e Type: Serum

6 UI/L

If you want to mention any important information, you can type in the text box.

Click the icon  to close the "Note" text box after you have typed your comments.

7. Use the **Previous** and **Next** buttons at the bottom of the page to navigate between pages of results.

23/06/2020 0.70 - 1.10

Lab No. : TESTA20000045 - 1 Condition: Sample Ty

Patient : , ,

23/06/2020 Glucose(Pl

0.70 - 1.10

Previous Next 1 of 2

8. Once you have entered all the results, go to the bottom of the page and click the **Save** button.

PART 10: REFERRED TESTS

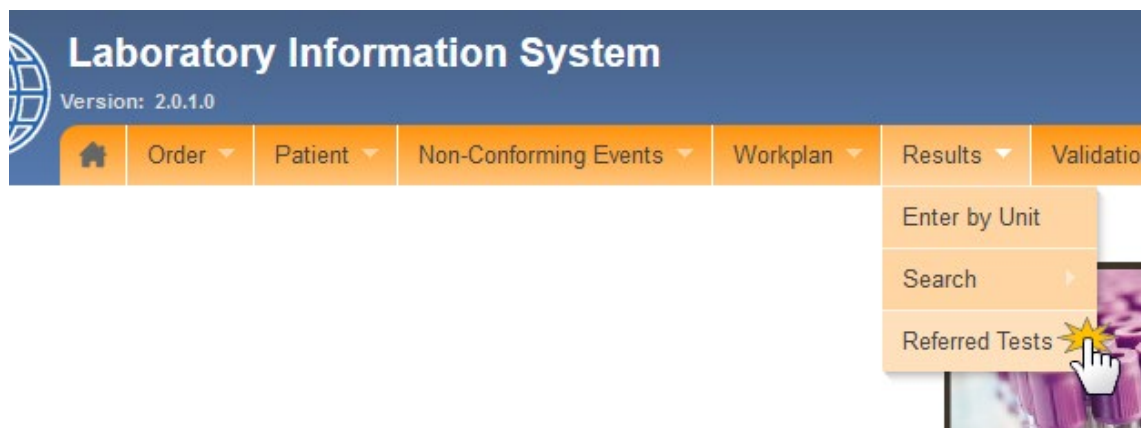
This section includes the guides:

- How to complete a referral of a test to another lab
- How to cancel a referral
- How to enter results from a referred test

How to complete a referral of a test to another lab

If, during results entry, you checked the box for referral to another lab for confirmatory or other additional testing, you must complete the referral. Only then will you be able to enter the results from the other lab, once they are returned.

1. From the **Results** tab on the main menu, click on **Referred Tests**.



A list of all samples referred when entering the results will be displayed.

Referrals							
Referral Request						Referral Results	
Reason*	Referrer	Institute*	Sent Date (dd/mm/yyyy)	Test Name*	Cancel Referral	Result	Report Date (dd/mm/yyyy)
Lab Number: demos19000017 Sample Type: Urines Reagent expired ▼		Request Date: 26/08/2019 Test Name: albumin	19/10/2019	Original Result: 6 g/l	<input type="checkbox"/>		
Add Test Request							
Lab Number: demos19000021 Sample Type: Sang total Reagent expired ▼		Request Date: 02/05/2019 Test Name: Basophiles	02/05/2019	Original Result: ARV resistance ▼	<input type="checkbox"/>		
Add Test Request							
Lab Number: demos19000021 Sample Type: Sang total Reagent expired ▼		Request Date: 02/05/2019 Test Name: Eosinophiles (%)	02/05/2019	Original Result: Red Blood Cells Count (RBC) ▼	<input type="checkbox"/>		
Add Test Request							
Lab Number: demos19000021 Sample Type: Sang total Equipment failure ▼		Request Date: 02/05/2019 Test Name: Hematocrit	02/05/2019	Original Result: Basophiles ▼	<input type="checkbox"/>		

2. Find the desired laboratory order number in the list and verify the information. This information came from what was entered during results entry.

- Lab number

- Date of referral request
- Type of sample
- Name of test
- Original result

Referrals

Referral Request

Reason* Referrer Institute* Sent Date (dd/mm/yyyy) Test Name* Cancel Referral

Lab Number: TESTA20000008 Request Date: 06/06/2020 Original Result: 32 g/dl

Sample Type: Sang total Test Name: Hemoglobin

Confirmation requested Manuel Essa 23/06/2020

[Add Test Request](#)

3. Confirm the reason for the reference that appears in the text box under the column “Reason”. If applicable, use the dropdown menu to select a new reason.

Reason*

Lab Number: TESTA20000008

Sample Type: Sang total

Test not performed

Test not performed

Confirmation requested

Further testing required

Reagent expired

Reagents unavailable

Equipment failure

4. Type the name of the technician who referred the sample in the text box under the column “Referrer”

Referrer

Areesha Tariq

5. *Select the laboratory to which you are sending the sample for additional testing using the dropdown menu under **Institute**.

Institute*

Request Date: 26/08/2019

Test Name: albumin

Casey's Awesome Lab

CEDRES

CIRBA

PROJECT RETROCI

x99 Test

6. Confirm or change the date in the text box under the column “Sent Date” in the format dd/mm/yyyy. This should be the date that the sample is referred and sent to the external lab.

Sent Date (dd/mm/yyyy)
19/10/2019

7. Select the test that the external laboratory is asked to do from the dropdown menu.

Test Name*

Original Result:

ARV resistance

Basophiles

Basophiles (%)


Bioline

CD4 Absolute count (mm3)

You can add additional tests for that sample by clicking on **Add Test Request**.


Sent Date (dd/mm/yyyy)	Test Name*
24/06/2020	ARV resistance
Remove	
Add Test Request	

To remove an added test, click **Remove**.

8. Click the icon  to open the text box for **Notes**.

e Type: Serum

6 UI/L

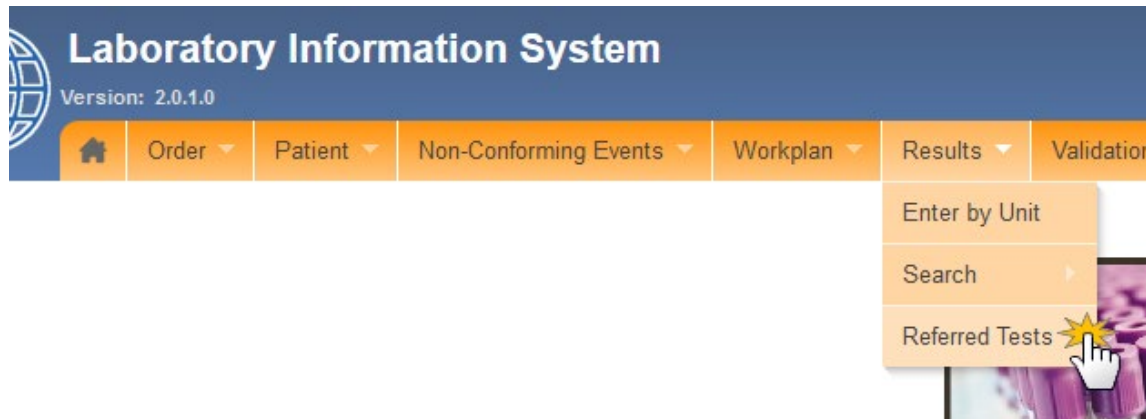
If you want to mention any important information, you can type in the text box. Click the icon  to close the "Note" text box after you have typed your comments.

9. Once you have completed all the information, scroll down to the bottom of the page and click on the **Save** button to save the referral.

How to cancel a referral

If you have indicated on the Results page that a sample should be sent for additional testing at another laboratory, and then must cancel the referral, follow these steps.

1. From the **Results** tab on the main menu, click on **Referred Tests**.



2. Find the desired laboratory order number in the list and verify the information. This information came from what was entered during results entry.

- Lab number
- Date of referral request
- Type of sample
- Name of test
- Original result

Referrals

Reason*	Referrer	Institute*	Sent Date (dd/mm/yyyy)	Test Name*	Cancel Referral
Lab Number: TESTA20000008		Request Date: 06/06/2020			
Sample Type: Sang total		Test Name: Hemoglobin		Original Result: 32 g/dl	
Confirmation requested	Manuel Essa		23/06/2020		<input type="checkbox"/>
Add Test Request					

3. Check the box in column **Cancel Referral**.

Cancel Referral
<input checked="" type="checkbox"/>

4. Once you have completed all the information, scroll down to the bottom of the page and click on the **Save** button to save the referral.

How to enter results from a referred test

1. From the Results tab on the main menu, click on **Referred Tests**.



2. Find your desired sample in the list.

Referrals

Referral Request						Referral Results	
Reason*	Referrer	Institute*	Sent Date (dd/mm/yyyy)	Test Name*	Cancel Referral	Result	Report Date (dd/mm/yyyy)
Lab Number: demo19000017 Sample Type: Uribes		Request Date: 28/08/2019 Test Name: albumin		Original Result: 6 g/l	<input type="checkbox"/>		
Reagent expired			19/10/2019		<input type="checkbox"/>		
Add Test Request							
Lab Number: demo19000021 Sample Type: Sang total		Request Date: 02/05/2019 Test Name: Basophiles		Original Result:	<input type="checkbox"/>		
Reagent expired		CEDRES	02/05/2019	ARV resistance	<input type="checkbox"/>		
Add Test Request							
Lab Number: demo19000021 Sample Type: Sang total		Request Date: 02/05/2019 Test Name: Eosinophiles (%)		Original Result:	<input type="checkbox"/>		
Reagent expired		CEDRES	02/05/2019	Red Blood Cells Count (RBC)	<input type="checkbox"/>		
Add Test Request							
Lab Number: demo19000021 Sample Type: Sang total		Request Date: 02/05/2019 Test Name: Hematocrit		Original Result:	<input type="checkbox"/>		
Equipment failure		CEDRES	02/05/2019	Basophiles	<input type="checkbox"/>		

NOTE: You cannot change the requested test asked for a sample that has already been referred to the external laboratory. To redo the analysis request to the external laboratory, add a new test or tests by clicking the underlined words **Add Test Request**. Go to the aid "How To Complete a Referral" for specific instructions.

3. Under **Result**, enter the results received from the external laboratory.

Cancel Referral	Referral Results	
	Result	Report Date (dd/mm/yyyy)
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		

4. Enter the **Report Date** in the format (dd/mm/yyyy). This is the date you received the report from the external laboratory.

Referral Results	
Result	Report Date (dd/mm/yyyy)
Negative	20/10/2019

5. Scroll down to the bottom of the page and click the **Save** button.

PART 11: RESULTS VALIDATION (BIOLOGICAL VALIDATION)

After results are entered by the lab technician, the biologist must review and validate the results.

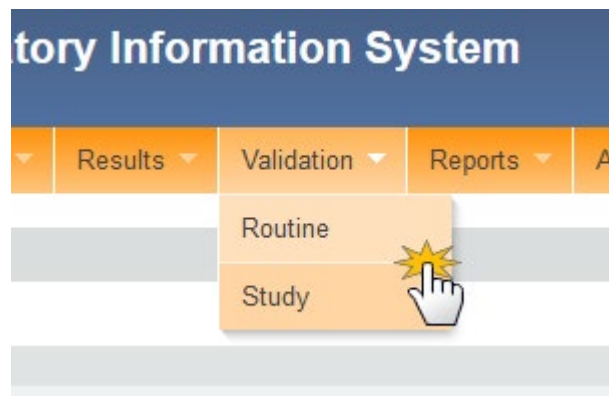
OpenELIS Global displays all results by laboratory unit, listed by laboratory number order. The biologist can then accept or reject the result.

Accepted results appear on the patient report. Rejected results return to the lab unit for re-testing or other verification. The guides in this section include:

- How to validate results
- Follow-up on rejected results

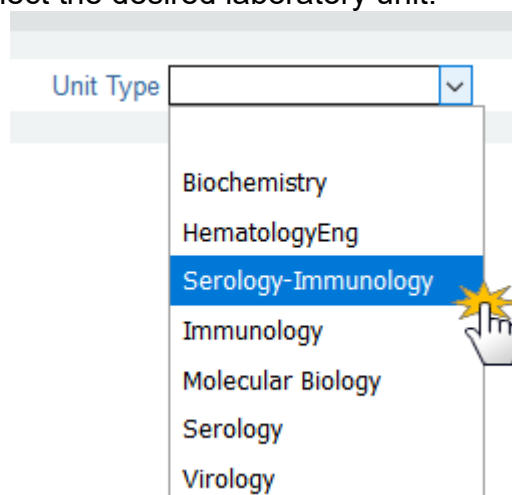
How to validate results

1. Select **Routine** from the **Validation** tab on the main menu.



A new page will open displaying a dropdown menu to search for the laboratory unit.

2. Select the desired laboratory unit.



A list of all the results ready for validation in the laboratory is displayed.

Validation Hematology

Search

Unit Type

Previous Next 1 of 1

Lab No. : Scan or Enter Manually

= Sample or order is nonconforming

Save all results Retest all results

Accession Number	Test Name	Result	Save	Retest	Notes
demos19000016	TMCH(Sang total)	<input type="text"/> pg (27.00-31.00)	<input type="checkbox"/>	<input type="checkbox"/>	
	Neutrophiles (%)(Sang total)	<input type="text"/> % (45.0-70.0)	<input type="checkbox"/>	<input type="checkbox"/>	
	Prior Notes: Reject reason 06/09/2019 17.26 : L'échantillon reçu est coagulé. Prière de soumettre un autre échantillon.				
	Eosinophiles(Sang total)	765.00 /mm3 (0.00-400.00)	<input type="checkbox"/>	<input type="checkbox"/>	
	Basophiles (%)(Sang total)	76.0 % (0.0-0.5)	<input type="checkbox"/>	<input type="checkbox"/>	
demos19001244	Basophiles(Sang total)	99.00 /mm3 (0.00-50.00)	<input type="checkbox"/>	<input type="checkbox"/>	
	Lymphocytes (%)(Sang total)	108.0 % (20.0-40.0)	<input type="checkbox"/>	<input type="checkbox"/>	
	White Blood Cells Count (WBC)(Sang total)	<input type="text"/> mille/mm3 (4.00-10.00)	<input type="checkbox"/>	<input type="checkbox"/>	
	Red Blood Cells Count (RBC)(Sang total)	<input type="text"/> million/mm3 (4.50-6.00)	<input type="checkbox"/>	<input type="checkbox"/>	
	Hemoglobin(Sang total)	<input type="text"/> g/dl (13.00-18.00)	<input type="checkbox"/>	<input type="checkbox"/>	
	Hematocrit(Sang total)	<input type="text"/> % (40.0-52.0)	<input type="checkbox"/>	<input type="checkbox"/>	
	Medium corpuscular volum(Sang total)	<input type="text"/> fl (85.00-95.00)	<input type="checkbox"/>	<input type="checkbox"/>	
	TMCH(Sang total)	<input type="text"/> pg (27.00-31.00)	<input type="checkbox"/>	<input type="checkbox"/>	
	Platelets(Sang total)	<input type="text"/> mille/mm3 (150.0-400.0)	<input type="checkbox"/>	<input type="checkbox"/>	

3. If all results are valid, you can check the box **Save All Results** to validate all results on the page at once.

Lab No. : Scan or Enter Manually

Save all results Retest all results

Result	Save	Retest	Notes
<input type="text"/> mille/mm3 (4.00-10.00)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Internal 05/06/2020 08:56 : adding notes!			
<input type="text"/> million/mm3 (4.50-6.00)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="text"/> g/dl (13.00-18.00)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="text"/> fl (85.00-95.00)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Internal 05/06/2020 08:56 : Adding MORE notes! :D			
22.00 pg (27.00-31.00)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
30.00 g/dL (32.00-36.00)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
160.0 mille/mm3 (150.0-400.0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
50.0 % (45.0-70.0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1800.00 /mm3 (1500.00-7000.00)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.0 % (0.0-4.0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
200.00 /mm3 (0.00-400.00)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
0.3 % (0.0-0.5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
25.00 /mm3 (0.00-50.00)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

If none of the results are valid, use the checkbox **Retest All Results** to reject all of the results at once.

Otherwise, check the box under the appropriate column—**Save** for validate, **Retest** for reject—next to each test result.

You can go to a particular lab order by entering the lab number in the search field at top right of the page.


Retest all results



Lab No. :

	Save	Retest	Notes
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	

The lab order will be highlighted in yellow.


	Lymphocytes (Abs)(Sang total)
	Monocytes (%)(Sang total)
	Monocytes (Abs)(Sang total)
TESTA20000010	
	White Blood Cells Count (WBC)(Sang total)
	Red Blood Cells Count (RBC)(Sang total)
	Hemoglobin(Sang total)
	Hematocrit(Sang total)
	Medium corpuscular volum(Sang total)
	TMCH(Sang total)
	CMCH(Sang total)
	Platelets(Sang total)

4. Click the icon  to open the **Note** text box.

Retest	Notes
<input type="checkbox"/>	
<input checked="" type="checkbox"/>	
<input type="checkbox"/>	

For valid results, enter any comments for the patient or provider that should accompany the test results. These comments will appear on the patient report.

For invalid results, enter any comments for the lab technician regarding the validation of results and any required follow-up. These comments appear only for the lab and do not appear on the patient report.

Click the icon  to close the Note text box.

TMCH(Sang total) 22.00 pg (27.00-31.00)

Note: The patient's result is below normal, indicating a possible condition

5. Use the **Previous** and **Next** buttons at the top or bottom left of the page to navigate between pages of results.

TESTA20000035 Red Blood Cells Cour

Previous Next 1 of 1

6. Once you have entered all the results, go to the bottom of the page and click the **Save** button.

Save Cancel

Follow-up by Technician

Results that are rejected during biological validation get sent back to the Results Entry stage. At that point, the lab technician can refer to any notes entered by the biologist. These appear below the result.

The technician may choose to indicate that the original result entered was correct. In that case, follow these steps. they must check the box un the column **Accept As Is**.

1. On the Results Entry page, go to the result that you wish to signal as correct. Check the box under the column **Accept As Is**.

Accept as is	Result
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input checked="" type="checkbox"/>	6 U/L

Sample Type: Serum

A pop-up warning message requires you to confirm that you wish to make this assertion to accept the result. Click **OK**.

total

Redo test

Redo test This result

total

BC(Sang tot

Checking this box will indicate that you accept the results unconditionally.

Expected uses:

1. The test has been redone and the result is the same.
2. There is no result for the test but you do not want to cancel it
3. The result was changed and the technician wants to give the biologist the option to add a note during the validation step explaining the reason of the change.

In either case, leave a note explaining why you are taking this action.

OK

g/dl

Enter explanatory comments. This is required and you will not be able to save the result without entering comments.

TMCH(Sang total)
27.00 - 31.00 pg

Prior Notes: Internal 24/06/2020 06:02 : Redo test
Internal 24/06/2020 06:02 : This result is abnormally low. Please run test again to confirm

22.00 pg [dropdown]

Note required when result changed : I re-ran this test and the result was again 22.0 pg. |

00015 - 4 Condition: Sample Type: Sang total
** 4414414077

Scroll down to the bottom of the page and click **Save** to save the result and send it back to biological validation.

PART 12: REPORTS

Various reports are available in OpenELIS Global. They are grouped into three categories:

- Individual Patient Report
- Aggregate Reports
- Management Reports

The reports available depend on your local configuration.

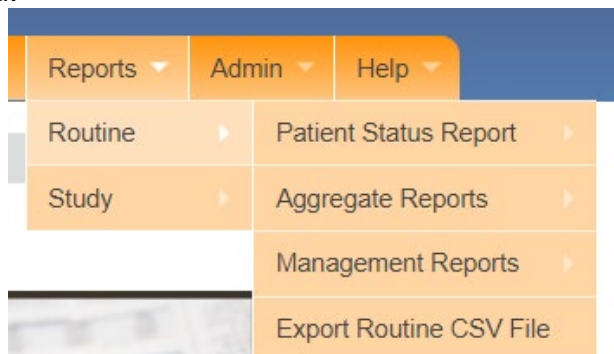
CATEGORY	REPORT
Individual Patient Report	Patient Test Results Report "Patient Status Report"
Aggregate Reports	Summary of All Tests
	Summary of HIV tests
Management Reports	Activity Reports
	Referred Tests Report
	Non-Conforming Events Reports
	Delayed Validation Report Audit Trail Report

There are two guides to producing reports:

- How to generate the Patient Results Report
- How to generate all other reports

How to generate the Patient Results Report

1. Select **Routine....Patient Status Report** from the **Reports** tab on the main menu.



2. For *a single laboratory order*: Enter or scan the laboratory number in the **From** field. Click the **Generate printable version** button.

Select Report Values

Patient Status Report

By Order Number/ Lab Number

From To Scan or Enter Manually

For a single lab, leave the right box empty.

By Subject Number

Generate printable version



3. For *a contiguous range of laboratory orders by number*: Enter or scan the starting laboratory number in the **From** field and enter or scan the ending laboratory number in the **To** field. Click the **Generate printable version** button.

Select Report Values

Patient Status Report

By Order Number/ Lab Number

From To Scan or Enter Manually

For a single lab, leave the right box empty.

By Subject Number

Generate printable version



4. For a *single patient's entire order history*: Enter the **Patient ID** in the **From** field. Click the **Generate printable version** button.

Select Report Values

Patient Status Report

By Order Number/ Lab Number

From To Scan or Enter Manually

For a single lab, leave the right box empty.

By Subject Number

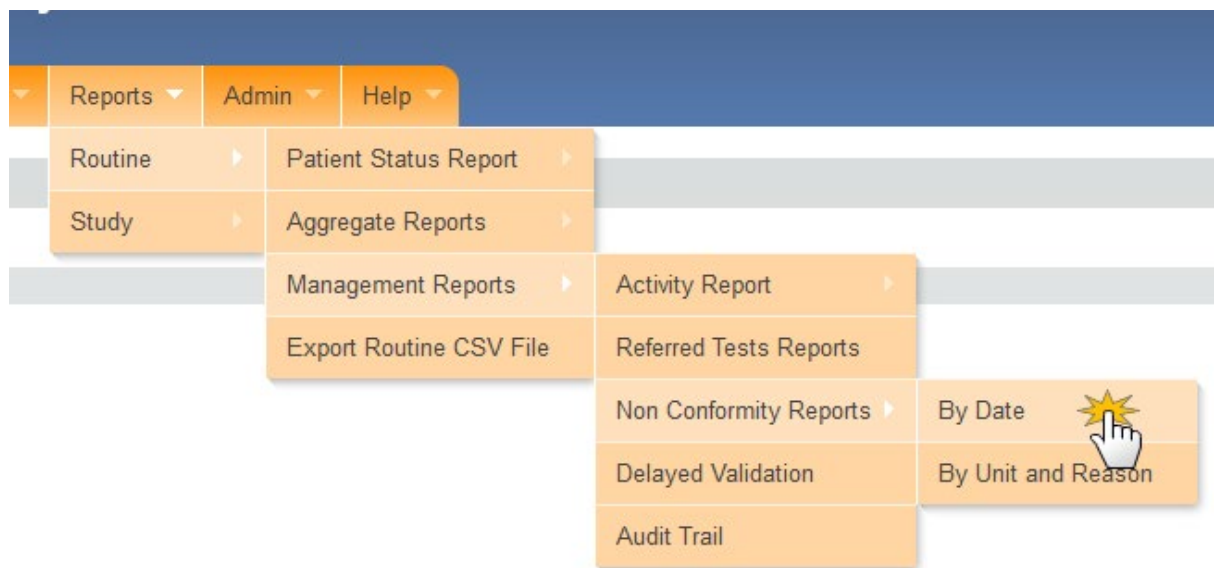
Generate printable version 

A PDF version of the report will appear in a new browser window:

Patient code		654433	National ID		IT	Age	49 Y <th>Sex</th> <td>M </td>	Sex	M
Nom, Prenom(s)		Brown, Casey		URAP Number					
Prescriber		Brown, John		Referring site		JANS SITE			
Ordinance no		demos19000023		Program		Routine Testing			
Date of order		29/04/2019 00:00		Date and time of receipt		29/04/2019 00:00			
Specimen number - Collection date and time: Serum demos19000023-2 -- not available, Whole blood demos19000023-1 -- not available									
Biochemistry									
Test	Spec	Result	Status	Alert	Reference value	Unit			
Creatinine	2	8			6-13	mg/l			
Hematology									
Test	Spec	Result	Status	Alert	Reference value	Unit			
White Blood Cells Count (WBC)	1	5.05			4.00-10.00	mille/mm3			
Red Blood Cells Count (RBC)	1	5.02			4.50-6.00	million/mm3			
Hemoglobin	1	15.60			13.00-18.00	g/dl			
Hematocrit	1	48.5			40.0-52.0	%			

How to generate all other reports

1. Select the desired report from the Reports tab.



2. Enter the desired date range for the report by entering the **Start Date** and the **End Date** in the format dd/mm/yyyy.

Select Report Values

Non Conformity Report by Date

Start Date (dd/mm/yyyy) End Date (dd/mm/yyyy)

3. Select other parameters, if applicable, from the dropdown lists.

Select Report Values

Report of Referred Out Analysis

Start Date (dd/mm/yyyy) End Date (dd/mm/yyyy)

Select Service Location

Date range is for when the federal center or laboratory is required

CEDRES
CIRBA
PROJECT RETROCI

Select Report Values

Activity report By unit

Start Date (dd/mm/yyyy)

End Date (dd/mm/yyyy)

Unit Type

All fields are required

- Biochemistry
- HematologyEng
- Serology-Immunology**
- Immunology
- Molecular Biology
- Serology
- Virology

3. Click the **Generate printable version** button.

All fields are required



A PDF version of the report will appear in a new browser window.