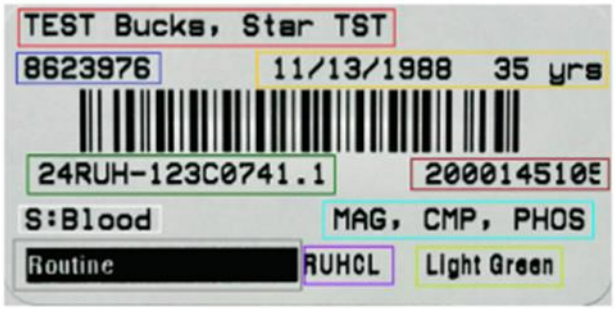
CLA Training
Receiving Samples

Overview Training on Lab Tests and Beaker

Agenda

- Beaker Label
- Color Guide
- Add-On Orders
- Priority
- CSF
- OCCULT BLOOD
- Beaker

Beaker Label



RUHS

Public Health

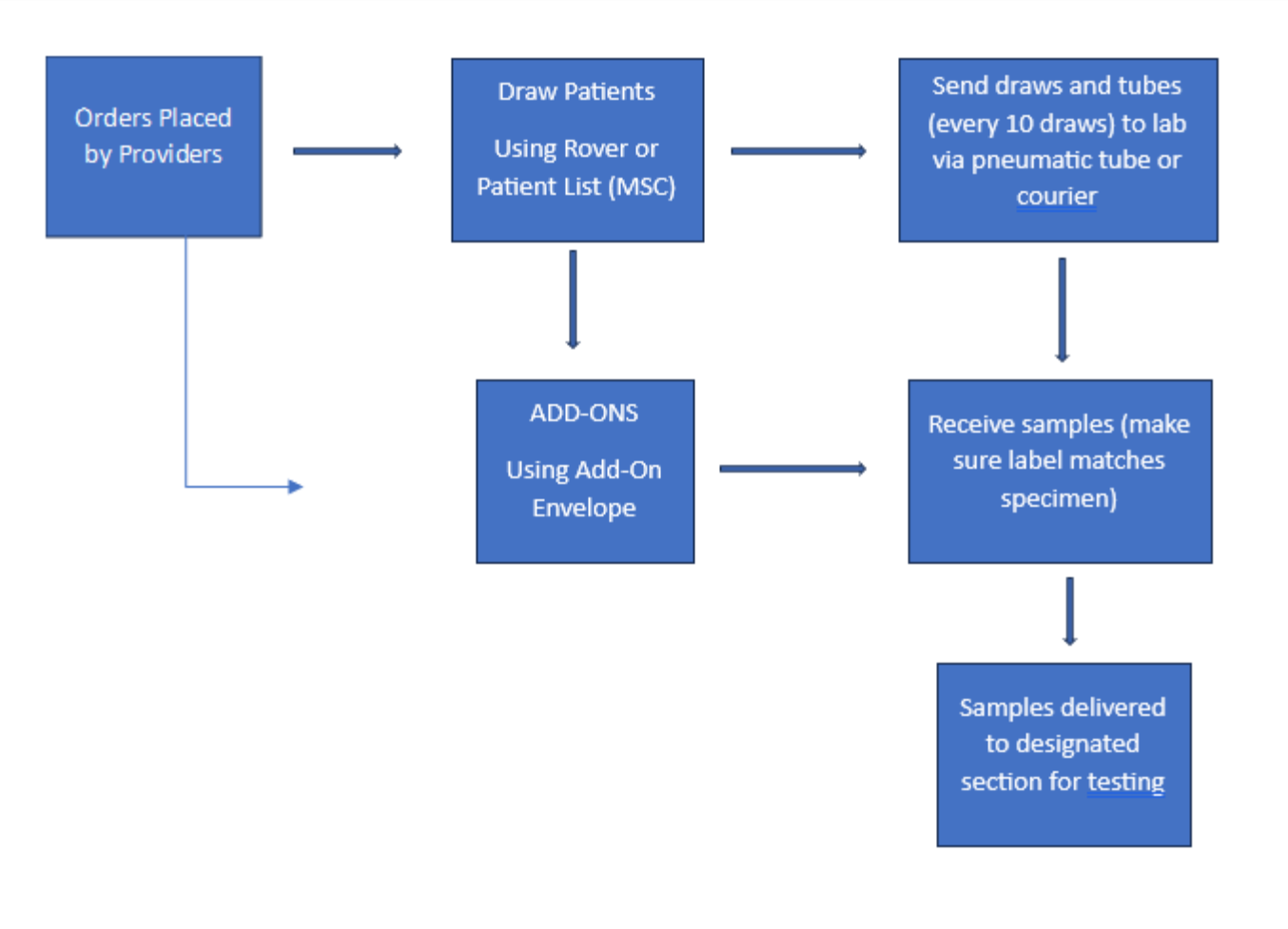
Quest

Tubes Order of Draw

Closure Color	Collection Tube	Mix by Inverting
BD Vacutainer® Blood Collection Tubes *(glass or plastic)*		
	• Blood Cultures - SPS	8 to 10 times
	• Citrate Tube*	3 to 4 times
or	• BD Vacutainer® SST™ Gel Separator Tube	5 times
	• Serum Tube *(glass or plastic)*	5 times (plastic) none (glass)
	• BD Vacutainer® Rapid Serum Tube (RST)	5 to 6 times
or	• BD Vacutainer® PST™ Gel Separator Tube With Heparin	8 to 10 times
	• Heparin Tube	8 to 10 times
or	• EDTA Tube	8 to 10 times
	• BD Vacutainer® PPT™ Separator Tube K_2EDTA with Gel	8 to 10 times
	• Fluoride (glucose) Tube	8 to 10 times

Riverside University HEALTH SYSTEM

GENERAL WORKFLOW



Color Guide for Tubes Pt. 1

PANELS
Electrolyte = Na, K, Cl & CO_2
Basic Metabolic Panel (BASIC) = Na, K, Cl, CO2, Glu, BUN, Creat, Ca
Comprehensive Metabolic Panel (CMP) = Na, K, Cl, CO2, Glu, BUN, Creat, Ca, TP, Alb, Alk Phos, AST, ALT, TBil
Hepatic Function Panel (HEPFUN) = TP, Alb, TBil, DBil, Alk Phos, ALT, AST
Renal Panel (RENAL) = Na, K, Cl, CO2, Glu, BUN, Creat, Ca, Alb
Comp Panel, Infant = Na, K, Cl, CO2, Glu, BUN, Creat, Ca, TP, Alb, Alk Phos, AST, ALT, NeoBili - includes DBil
Hep Panel, Infant = TP, Alb, NeoBili, Alk Phos, ALT,AST
Neonatal Bilirubin = Total Bilirubin, Direct Bilirubin, Indirect Bilirubin-Calculated
Hepatitis Acute Panel = Hepatitis A, Hepatitis B Surface Ag, Hepatitis B Core IgM, Hepatitis C
Lipid Panel = Cholesterol, HDL, LDL, Triglycerides, VLDL (Calculated)

CHEMISTRY
Amylase (AMY)
Lipase
CK-Total (CKT)
CK-MB (CKMB)
High Sensitivity Troponin I (TROPHS)
Random Glucose (GLURND)
Fasting Glucose (GLUFST)
2 Hr PP Glucose (GLU2PP)
1 Hr Glucose Challenge (GLUCHL)
CO2
Chloride

Sodium (Na)
Potassium (K)
BUN
Creatinine
Bilirubin, Total
Bilirubin, Direct
Bilirubin, Total **(Cord Blood)**
Bilirubin, Neonate
Alk Phos
AST (SGOT)
ALT (SGPT)
GGT
LDH
Calcium
Phosphorus
Magnesium
Uric Acid
Total Protein (TP)
Albumin
Alcohol, Ethyl (ETOH)
Ferritin
Vitamin D
Cortisol
Tacrolimus

TIBC (Include % Saturation)
Ammonia (on Ice)
Osmolality, Serum
Beta Hydroxybutyrate
Lactic Acid (on Ice)
Cholesterol, Total
Triglycerides
HDL Cholesterol
LDL Cholesterol
HCG QUANT
HCG QUAL (Serum)
CRP
Prealbumin
C3
C4
Vitamin B12
Folate
TSH
T4, Total
T4, Free
PSA, Total
Acetaminophen
Carbamazepine
Digoxin
Valproic Acid (Depekene)

Gentamicin, Peak
Gentamicin, Random
Gentamicin, Trough
Lithium
Phenobartital
Phenytoin (Dilantin)
Salicylate
Tobramycin, Peak
Tobramycin, Random
Tobramycin. Trough
Vancomycin, Peak
Vancomycin, Random
Vancomycin, Trough
MonoSpot
Rheumatoid Factor (RF)
RPR
Hemoglobin A1c
Procalcitonin (PCT)
Hepatitis A
Hepatitis C
Hepatitis B, Surface Ag
Hepatitis B, Surface Ab
Hepatitis B Core, IgM
CHIV
Syphilis, Total (>=18 Years)
CEA
CA19-9
CA-125
AFP
3 Hr Glucose Tolerance
5 Hr Glucose Tolerance

Color Guide for Tubes Pt. 2

HEMATOLOGY

- CBC
- Hemogram
- H & H
- Platelet Count
- Reticulocyte Count
- Sedimentation Rate (ESR)
- Malaria Smear
- Kleihauer-Betke
- Blood Smear Path Review
- Citrated Platelet Count

COAGULATION

- PT, Protime and INR
- PTT
- Fibrinogen
- D-Dimer, Quant
- Mixing Study – PT and/or PTT
- LYSIS TEG
- PLATELET MAPPING TEG

URINALYSIS

- UA Screen
- Myoglobulin Screen
- Specific Gravity only, Urine
- Specific Gravity only, Body Fluid
- Eosinophils, Microscopy (Urine)
- pH only, Body Fluid (if Stool is sent then the criteria is as follows: Stool must not be formed; loose/liquid only)

URINE CHEM

- Drug Screen Panel, EIA (UDS) = Amph, Barb, Benzo, Coc, Opi, PCP, THC, FENT
- HCG QUAL (Urine)
- Osmolality, Urine
- Total Protein (Urine) - Random
- Urine Sodium - Random
- Urine Potassium - Random
- Urine Chloride - Random
- Total Protein (Urine) - 24 Hours
- Urine Sodium - 24 Hours
- Urine Potassium - 24 Hours
- Urine Chloride - 24 Hours

Blood Bank

- Type and Screen
- Type and Cross
- DAT Mono
- DAT Poly
- Rhogam Screen
- Cord Blood

“What color tube do I use?”

The most common and frequent calls we get in the Lab are finding out what color tube do I use to collect for certain tests.

Light Blue Top Tube Contains Sodium Citrate

PTINR (Protime and INR)
PTT
Fibrinogen
D-Dimer, Quant
Mixing Study – PT and/or PTT

Gray Top Tube
Contains Sodium Fluoride and Potassium Oxalate

- 3 Hr Glucose Tolerance
- 5 Hr Glucose Tolerance
- 2 Hr PP Glucose
- 1 Hr Glucose Challenge

Lactic Acid (on Ice)

Lavender Top Tube Contains EDTA

Hemoglobin A1c

- CBC w/Diff
- CBC w/o Diff (Hemogram)
- H & H
- Platelet Count
- Reticulocyte Count
- Sedimentation Rate (ESR)
- Malaria Smear
- Kleihauer-Betke
- Sickle Cell Screen
- Blood Smear Path Review
- Cord Blood

Rapid HIV

Light Green Top Tube Contains Heparin

- Amylase
- Lipase
- CK-Total
- CK-MB
- Troponin I
- Random Glucose
- Fasting Glucose
- CO_2
- Chloride
- Sodium (Na)
- Potassium (K)
- BUN
- Creatinine
- Bilirubin, Total
- Bilirubin, Direct
- Bilirubin, Neonate
- Alk Phos
- AST (SGOT)
- ALT (SGPT)
- GGT
- LDH
- Calcium
- Phosphorus
- Magnesium
- Uric Acid
- Total Protein (TP)
- Albumin
- Alcohol, Ethyl
- Ferritin
- Iron, Total (Fe)
- TIBC (Include % Saturation)
- Ammonia (on Ice)
- Osmolality, Serum
- Acetone, Qualitative
- Beta Hydroxybutyrate
- Cholesterol, Total
- Triglycerides
- HDL Cholesterol
- LDL Cholesterol

Electrolyte = Na, K, Cl & CO_2

Basic Metabolic Panel (BMP) = Na, K, Cl, CO_2, Glu, BUN, Creat, Ca

Comprehensive Metabolic Panel (CMP) = Na, K, Cl, CO2, Glu, BUN, Creat, Ca, TP, Alb, Alk Phos, AST, ALT, TBil

Hepatic Function Panel = TP, Alb, TBil, DBil, Alk Phos, ALT, AST

Renal Panel = Na, K, Cl, CO2, Glu, BUN, Creat, Ca, Alb

Lipid Panel = Cholesterol, Triglycerides, HDL, LDL, VLDL 14 Hrs Fasting

Comp Panel, Infant = Na, K, Cl, CO2, Glu, BUN, Creat, Ca, TP, Alb, Alk Phos, AST, ALT, NeoBili - includes DBil

Hep Panel, Infant = TP, Alb, NeoBili, Alk Phos, ALT,AST

Neonatal Bilirubin = Total Bilirubin, Direct Bilirubin, Indirect Bilirubin-Calculated

- Acetaminophen
- Carbamazepine
- Digoxin
- Valproic Acid (Depekene)
- Gentamicin, Peak
- Gentamicin, Random
- Gentamicin, Trough
- Phenobartital
- Phenytoin (Dilantin)
- Theophylline
- Tobramycin, Peak
- Tobramycin, Random
- Tobramycin. Trough
- Vancomycin, Peak
- Vancomycin, Random
- Vancomycin, Trough
- Beta HCG, Quantitative
- PSA, Total
- T4, Total
- T4, Free
- TSH (Ultra-Sensitive)
- CRP (C-Reactive Protein)
- Prealbumin
- Vitamin B12
- Folate
- Procalcitonin

Tests that require Clotting Tubes

Bilirubin, Total (Cord Blood)
MonoSpot
Rheumatoid Factor
RPR
Lithium
Salicylate

Hepatitis A	
Hepatitis C	
Hepatitis B, Surface Ag	
Hepatitis B, Surface Ab	
Hepatitis B Core, IgM	
CHIV	
Syphilis, Total (>=18 Years)	

These tubes do not contain additives or anticoagulants.

The Gold Top has a Serum Separator Gel.

Pink Top Tube
Contains EDTA
BLOOD BANK ONLY

Type and Screen
Type and Crossmatch
DAT

Anti-Clotting Tubes

REMEMBER!!!

1) Make sure your patient specimen has a barcode printed or/and must be attached to the tube itself.

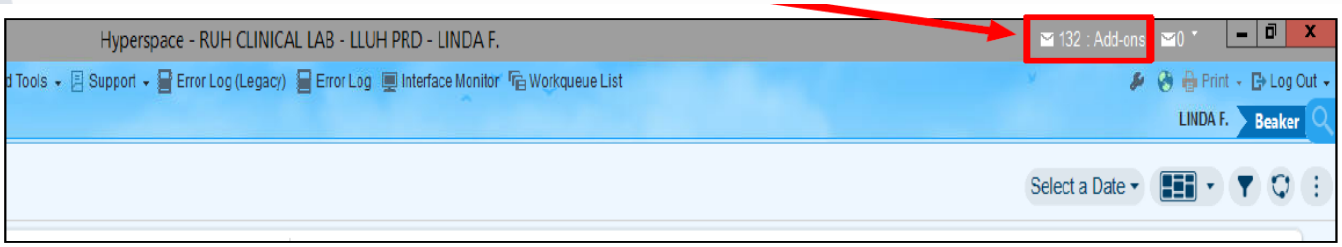
2.) For some patients with Ammonia test (Chemistry) please double check for additional Chemistry test ordered for patients. Usually, CMP and Basic are also ordered for the same patient. Use CSN to check on patient’s orders so that nothing is missed. Then print CMP, Basic or other Chemistry test label and put "SHARE with Ammonia. So that testing techs are aware of it.

When we say “On Ice”

We DO NOT mean INSIDE the ice, water, or ice/water mixture!

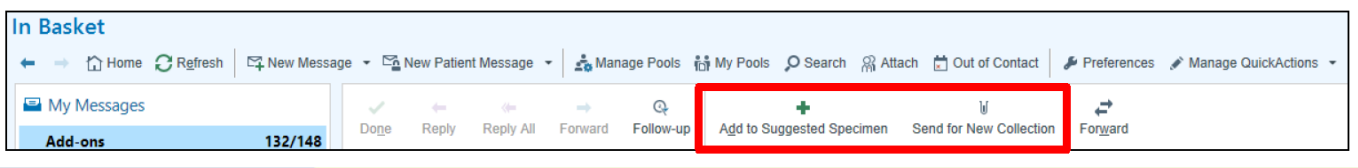
Add-On Orders

1. Click the Add-ons Envelope



2. Review specimens in the pool and choose to Add to Suggested Specimen if it is viable for the requested test.

3. Select Sent for New Collection if it not viable for add-on.



Add-On Orders

1. If a specimen has been collected and received. Print the Label, highlight the Add-on Test, and document the storage location. Place in the Add-on box for the department.
2. If specimen has been collected and received but no storage location. Print the Label, highlight the Add-on Test and hand to CLS.
3. If a specimen has been collected but not received. Do not process until the specimen has been received into the Lab.
4. Make sure all Labs are accounted for and then distribute to the department.

Unit Priority

TRAUMA DEPARTMENT WILL ALWAYS TAKE PRIORITY OVERALL

ER > OR > L&D > ICU (Adults, Peds, NeoNatal) > 2500 > Med Surg Units > Outpatient Labs

SAMPLE PRIORITY

CSF > Blood > Body Fluids > Urine

CSF Receiving Protocol

CSF Samples are considered STAT **Always**

TUBE #1: CHEMISTRY – Total Protein, Glucose, and Lactate (Optional)
TUBE #2: MICROBIOLOGY – CSF Culture, Meningitis Panel (MEBIO)
TUBE #3: HEMATOLOGY – CSF Cell Count
TUBE #4: CYTOLOGY

PM/GRAVEYARD: FOR TUBE #2 MICROBIOLOGY SEND TO HEMATOLOGY CLS STAT if NO MICRO CLS on PM Shift

IF ONLY 1 SPECIMEN SEND TO MICROBIOLOGY FIRST!

OCCULT BLOOD STOOL & GASTRIC

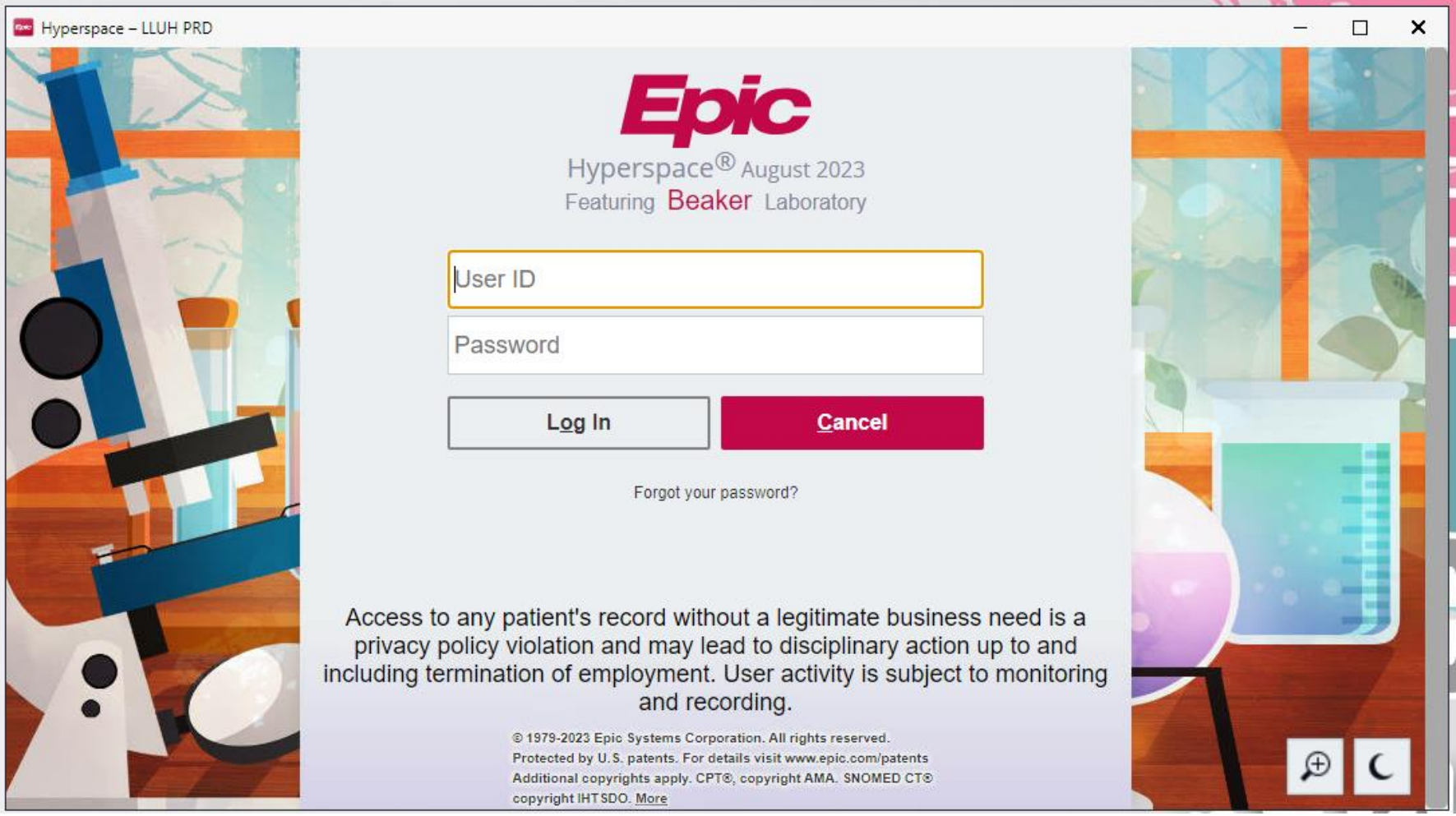
STAT!

OCCULT BLOOD STOOL – OCBLSTL

OCCULT BLOOD GASTRIC - OCBLGAST

**PM/GRAVEYARD – PLEASE SEND TO HEMATOLOGY CLS STAT if NO MICRO CLS **

EPIC BEAKER



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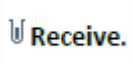
RECEIVING SPECIMENS

Record that a specimen has arrived at the lab

1. Open the Receiving Activity.
2. Scan the label for each specimen you are receiving into the Lab.
   - The collection information entered by other staff appears, and the specimen is automatically marked as received.
   - The tests for the specimens you received now appear on the Outstanding List.

RECEIVING SPECIMENS

Update collection information from Receiving

1. Scan the specimen and review the collection details.
2. Enter the missing information.
3. You can use the speed buttons on the right where appropriate.
4. Click 

RECEIVING SPECIMENS

See expected and recently received specimens

1. In the Receiving activity, select the view you want to open: Recent or Expected.
2. The Recent view shows all specimens received in the last hour.
3. The Expected view shows all collected specimens that are accessioned into your lab.

RECEIVING SPECIMENS

Cancel or redraw a specimen

1. In the Receiving activity, find and select the specimen that needs to be cancelled or redrawn.
2. Click  to see the actions you can take on this specimen.
3. Click  Cancel or  **Redraw** as appropriate.
   - Cancel a test if it is no longer needed or was entered in error. For example, this may be the case if the wrong order was released. Always make a comment with who was notifed for cancelled tests
   - Redraw a specimen if the original is unusable. For example, if specimen was contaminated or spilled in transit.
4. In the window that appears, select a reason and click  Yes.

Collect a Specimen Using Rover

What do the icons mean?

Icon	What it indicates
	Active Infection - Tap to see what the infection is
	Allergy - Tap to see what the allergy is
	Deferred draw - Tap to see the reason for the deferred draw
	STAT draw
	Timed draw

Collect a Specimen Using Rover

Print labels and collect a specimen

1. When you go the patient's room to collect the specimens, scan the patient's armband to open the chart.
2. To view the orders that need to be collected for the selected patient, tap the Collection Sequence header.
3. Scan the patient label to print labels and achieve positive patient identification.
4. If needed, you can:
   - Tap **Skip** to skip collecting an order at this time.
   - Tap **Show Printed** to see the list of orders for which you've already printed labels. You can reprint labels from this screen and choose a printer.
5. Collect the specimens in the order shown by scanning each container's barcode.
6. Review the information that appears in the Collection screen. If you need to make updates, tap the specimen you want to update, make your changes, and tap Accept to save your work.

Collect a Specimen Using Rover

Redraw a specimen

1. In Order Inquiry, tap the order for the specimen you need to redraw
2. Tap Redraw
3. Select a reason and tap **Accept**

Add orders on to a specimen

1. In Order Inquiry, tap the order to which you are adding a specimen.
2. Tap **Add-On**
3. Tap **Continue**

Reprint a label

1. In Order Inquiry, tap the orders you want to reprint labels for.
2. Select **Reprint Labels**
3. In the Print screen, select the number of copies and the printer
4. Tap **Print**

Defer a draw

1. In Order Inquiry, tap the orders you want to defer
2. Select **Defer Draw**
3. On the menu that appears, tap the reason for deferring the draw.

Collect an Outpatient Specimen

Identify which specimens to collect for a patient

1. Select  the tab to open the Schedule.
2. Find and select the patient and double-click the patient's name.
3. Review the Lab Status column to verify which orders need to be collected.

Collect a Specimen

1. In Order Inquiry, select an order.
2. Click  Collect Specimens.
3. Review the specimen information and answer any collection questions.
4. Click  **Print Labels**
5. Collect the specimens.
   - **Scan each specimen's barcode to add collection information automatically.**
6. Receive the specimens or close the activity and click **Accept** to save your work.

Collect an Outpatient Specimen

Document a redraw

1. To redraw a received specimen, open the Receiving activity and select the specimen.
2. Click  and select  Redraw.
3. In the window that appears, enter a reason for the redraw.
4. Click  Yes.
5. Collect the redraw specimen.

Reprint specimen labels

1. In the Collection activity, click  Reprint Labels.
2. If you've left the Collection activity, open the specimen in Specimen Inquiry and click  **Labels.**
3. Select the printer you want to use.
4. Click  **Print Labels**

Send Out Specimens

Verify Quest Packing Lists

When packing tests for Quest, it is important to verify that the correct label has been scanned and the test code is listed for EVERY test on the packing list.
Quest will reject any specimen without a test code.

If a test code is missing, you must find the Quest test code and write it with the appropriate test. Quest does not accept anything except the test code.

Send Out Specimens

Create a packing list

1. Open the Packlist List Editor and click **Create New.**
2. Select an appropriate Packing List Type.
3. The Packing List ID is created automatically.
4. Click **Create New**
5. Scan the specimen barcodes to add specimens to the packing list.
6. In the Details report, select the test(s) to ship for the specimen.
7. Select the destination of your packing list if appropriate one does not default into the destination field.

Add missing specimens to a packing list

1. To find any specimens that need to be added to a certain packing list, click Sendout Bench and confirm that your list is selected.
2. Select the test(s) that need to be added and click **Add Tests to Packing List.**
3. Confirm that all containers you selected are listing on the packing list and are no longer included on the list of specimens to send out.

Send Out Specimens

Send a packing list to another lab

To indicate that your packing list is ready for pickup, click ✔ Ready. With this step, a few things happen:

1. The packing list is locked in the system, no more containers can be added.
2. The packing list's status changes to Ready.
3. The packing list prints.

> If you need to add more tests to a locked packing list, you can unlock the packing list again by clicking ✔ **Unready**.

When the package is picked up, click ➡ Picked Up. the packing list is closed and can no longer be unlocked for editing.

> Packing List Editor – Used to scan or manually type in specimens onto a new or already opened/readied packing list
>
> Sendout Bench – Used to check your lab's list of specimens that are to be sent out. You can add tests from this list to a new or already opened/readied packing list.

Send Out Specimens

Sendout Bench – Pending List

1. Review the Sendout Bench to ensure all specimens are on a packing list.

2. Locate specimens that are on the Sendout Bench that are not on a packing list.

3. Specimens may need to be redrawn if left on the Sendout Bench

THANK YOU!