ARMY MEDICINE
Serving To Heal...Honored To Serve

# Point of Care Testing: Examination of Urine Using the Clinitek Status ®

# Automation

- Automated readers automatically reads a urine dipstick and prints out results.
- Increases accuracy of results.

# Strip and Control Storage

All strips and controls should be ordered through DMLSS and be stored on the ward based on the following criteria:

Multistix 10SG

- DMLSS item# 08620216121
- Sensitive to moisture in atmosphere – ensure lid is replaced securely after each test.
- Make sure to date and initial when opening new strips.
- Keep the desiccant pack in container.
- Do not transport strips to another container

Quantimetrix Dropper Plus Dipstick Controls

- DMLSS item# 5283144004
- Date and initial when opening.
- Controls are stable for 30 days at room temperature once opened.
- Write 30 day expiration date on vial, also.
- Unopened controls are to be stored at 2-8°C, do not freeze.

# Potential Sources of Error

- Old specimen, Poor technique, Improper recording, Unclean containers, Incorrect storage, No routine Quality Control or Interfering substances.

- To combat these POCT ask that ward staff do **not** do any of the following:

  - **Touch the test pads.**
  - **Leave cap off the strips for prolonged periods of time.**
  - **Remove the desiccant packet from containers.**
  - **Take out more strips than required for each patient.**
  - **Use out of date strips.**

# Urine Color

- Normal urine color ranges from pale yellow to deep amber — the result of a pigment called urochrome

  – B-vitamins turn urine an eye-popping neon yellow BUT may also indicate liver disease.
  – porphyria, a disease that affects your skin and nervous system, turns urine the color of port wine.

# Urine Color

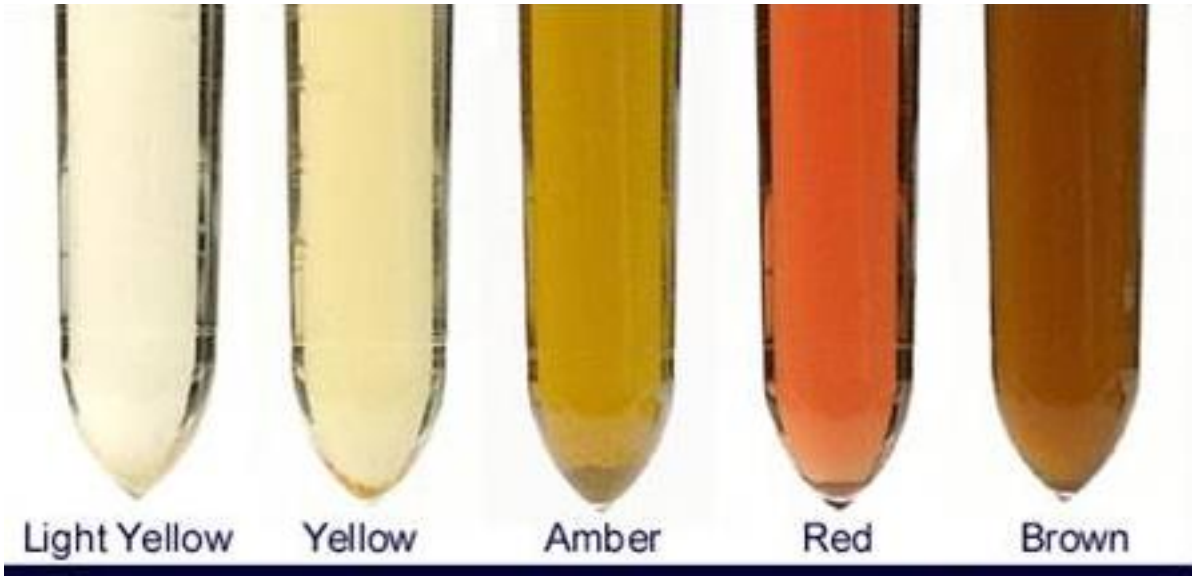
- Most changes in urine color are harmless and temporary and may be due to:
  - Certain foods – beets may turn urine red
  - Dyes in foods/drinks
  - Supplements – vitamins
  - Prescription drugs

- Unusual urine color can indicate an infection or serious illness.

# Suggested Colors

- pale yellow (straw)
- light yellow
- yellow
- green-yellow (olive)
- red-yellow
- red
- red-brown
- brown-black
- black
- milky

# Examples of Urine Color



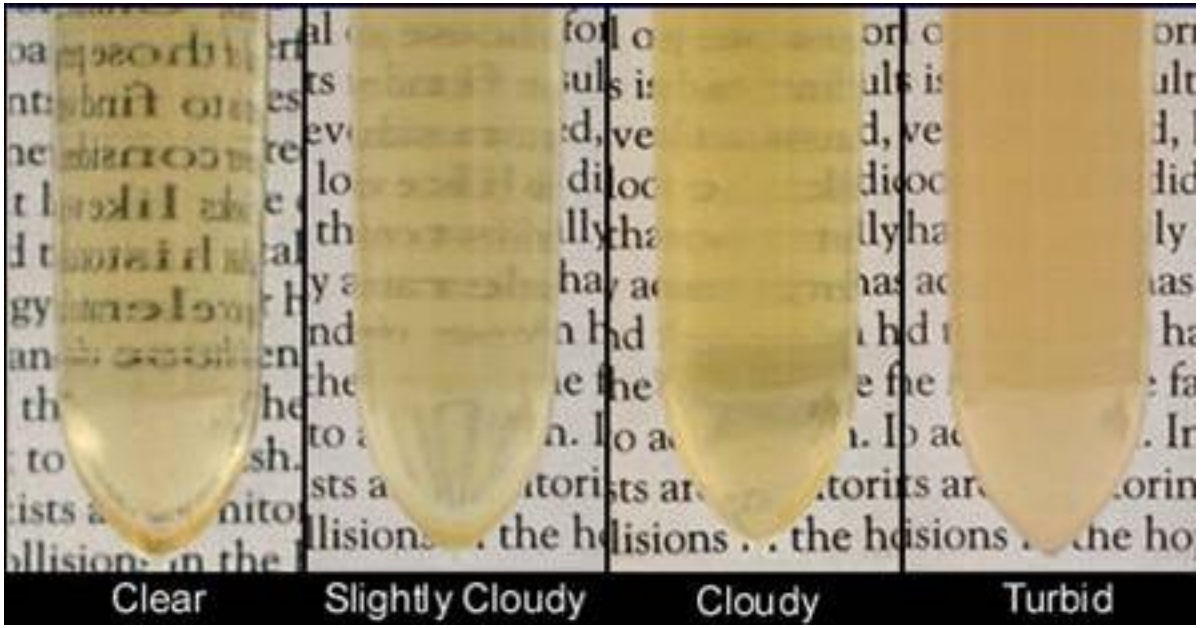
# Urine Clarity

- During the visual inspection, you will observe the urine and determine how clear it is (its clarity).
- Terms used:  clear, slightly cloudy, cloudy, or turbid.
- “Normal” urine can be clear or cloudy.
- The clarity of the urine is not as important as the substance that is causing the urine to be cloudy.

# Urine Clarity

- Substances that cause cloudiness but that are not considered unhealthy include:
  - mucous,
  - sperm and prostatic fluid,
  - cells from the skin,
  - normal urine crystals, and
  - contaminants (like body lotions and powders).
- Other substances that can make urine cloudy (such as red blood cells, white blood cells, or bacteria) indicate a condition that requires attention.

# Examples of Urine Clarity



# Urine Color and Clarity

- Urine color and clarity can indicate what substances may be present in urine.

- Confirmation of suspected substances is obtained during the chemical and microscopic examination.

# Chemical Examination

- Reagent strips are used only once and discarded.
- Testing:
  - Perform within 1 hour after collection
  - Allow refrigerated specimens to return to room temperature.

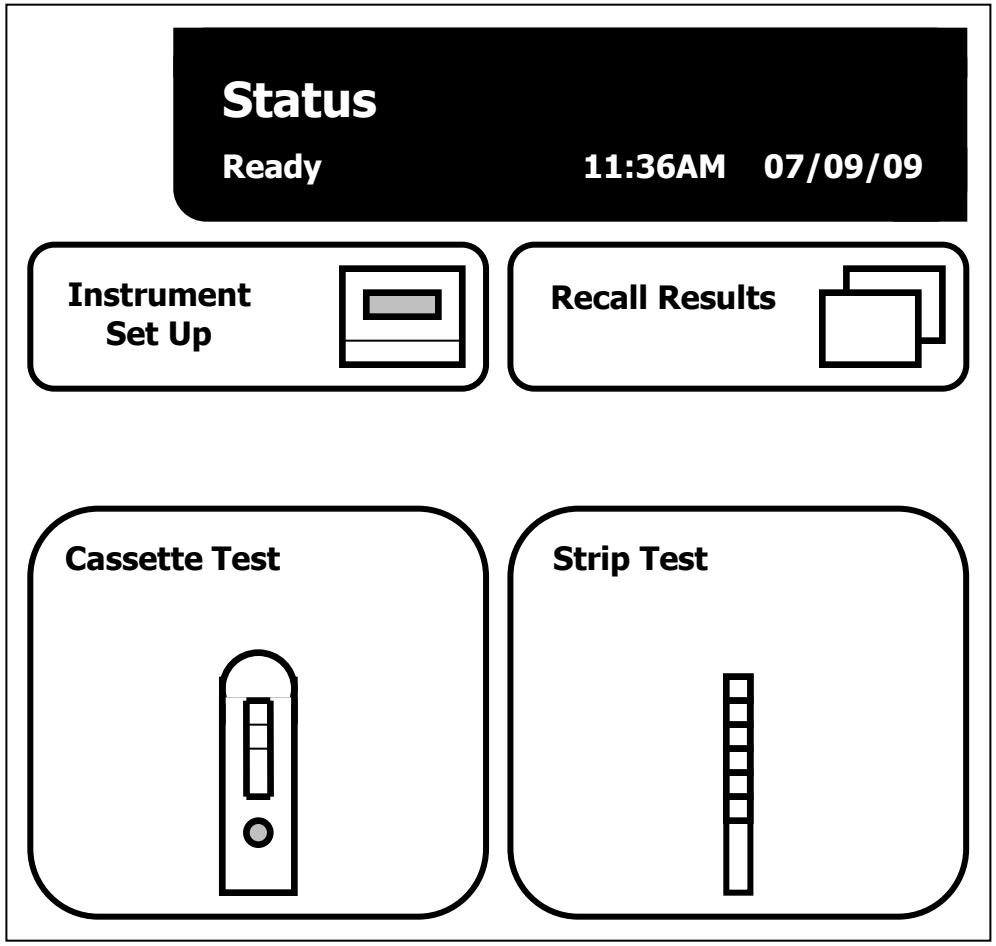
# Patient Sample

All urine samples should be checked before being analyzed.

Samples should be:
Labelled [with name, DOB and FMP/SSN or DOD ID#].
Freshly expelled from the body.
Room temperature [Do not refrigerate].

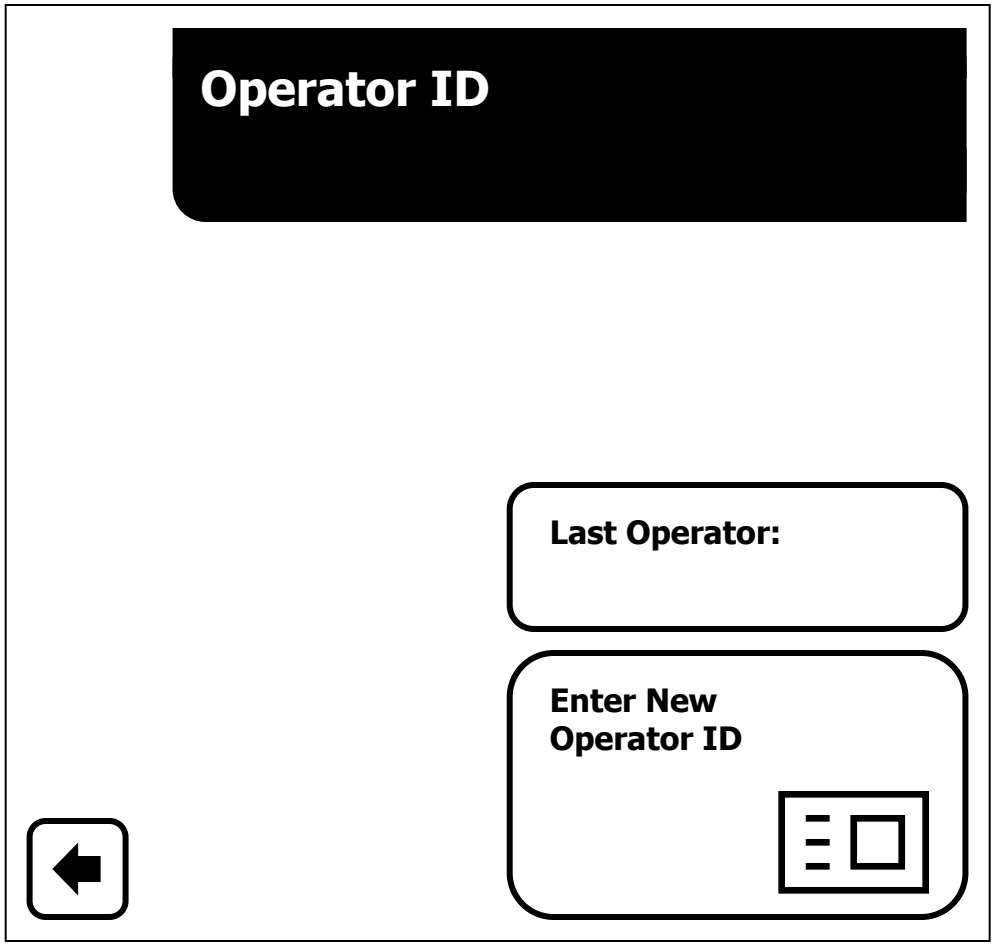
Samples should not be:
Very pale/dilute.
Heavily blood stained [<1g/dl Hb]

# Performing a Patient Test




**To begin testing select the type of test you wish to carry out from the two selections available.**

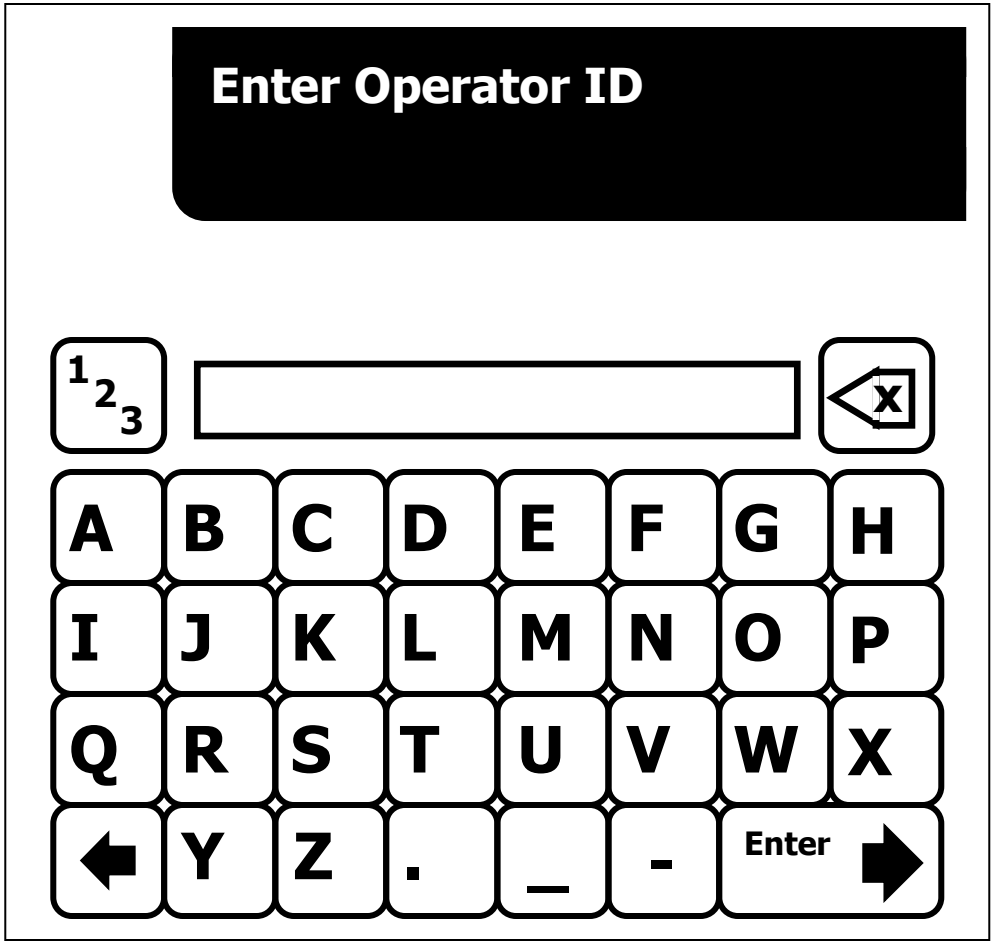
# Performing a Patient Test




**Press Enter New Operator ID to enter your initials as operator ID.**

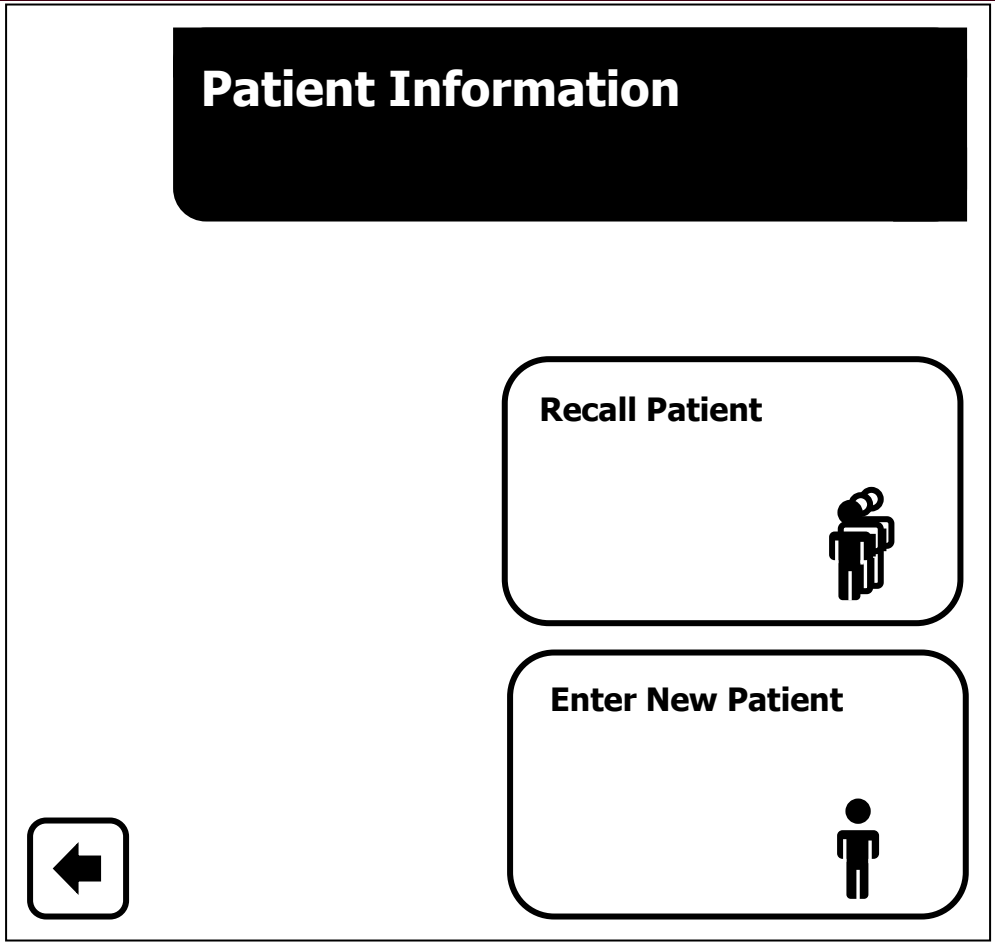
**The last operator will be displayed in the Last Operator box.**
**Repeated Operator ID input will not be required during a clinic.**

# Performing a Patient Test



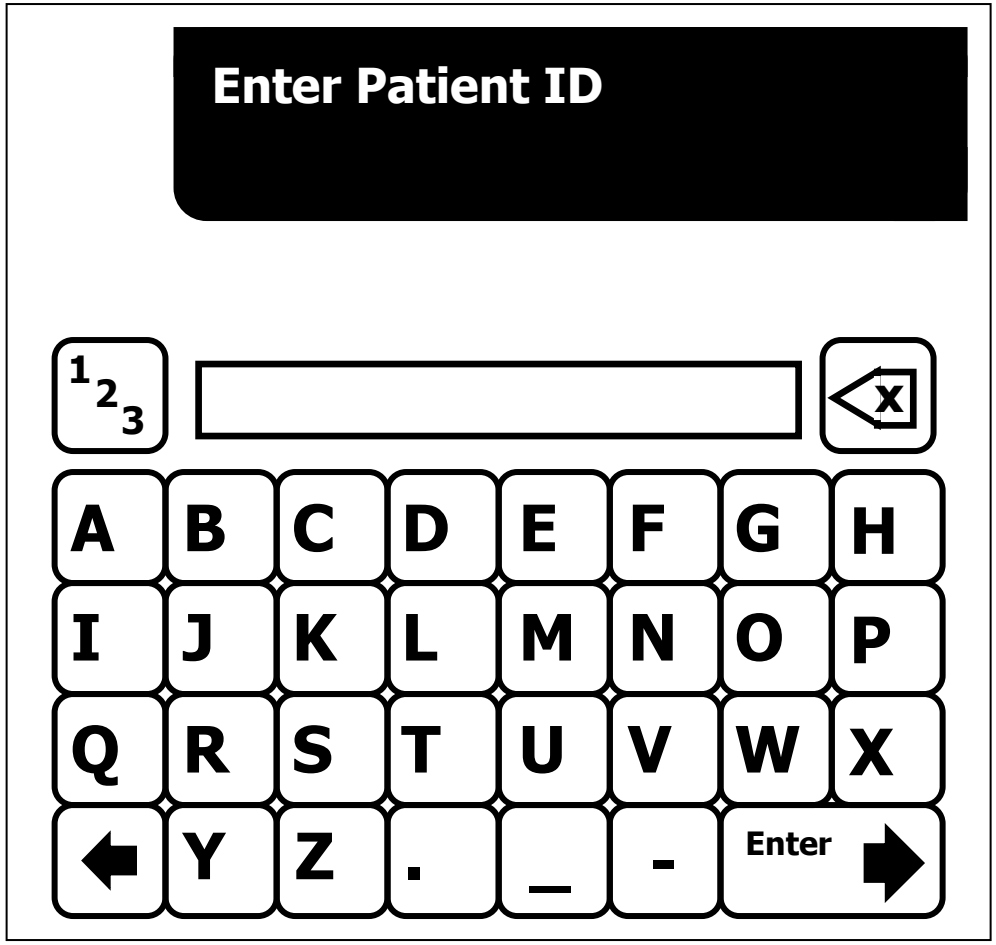

**Type in your Operator ID using the onscreen keyboard.**

# Performing a Patient Test



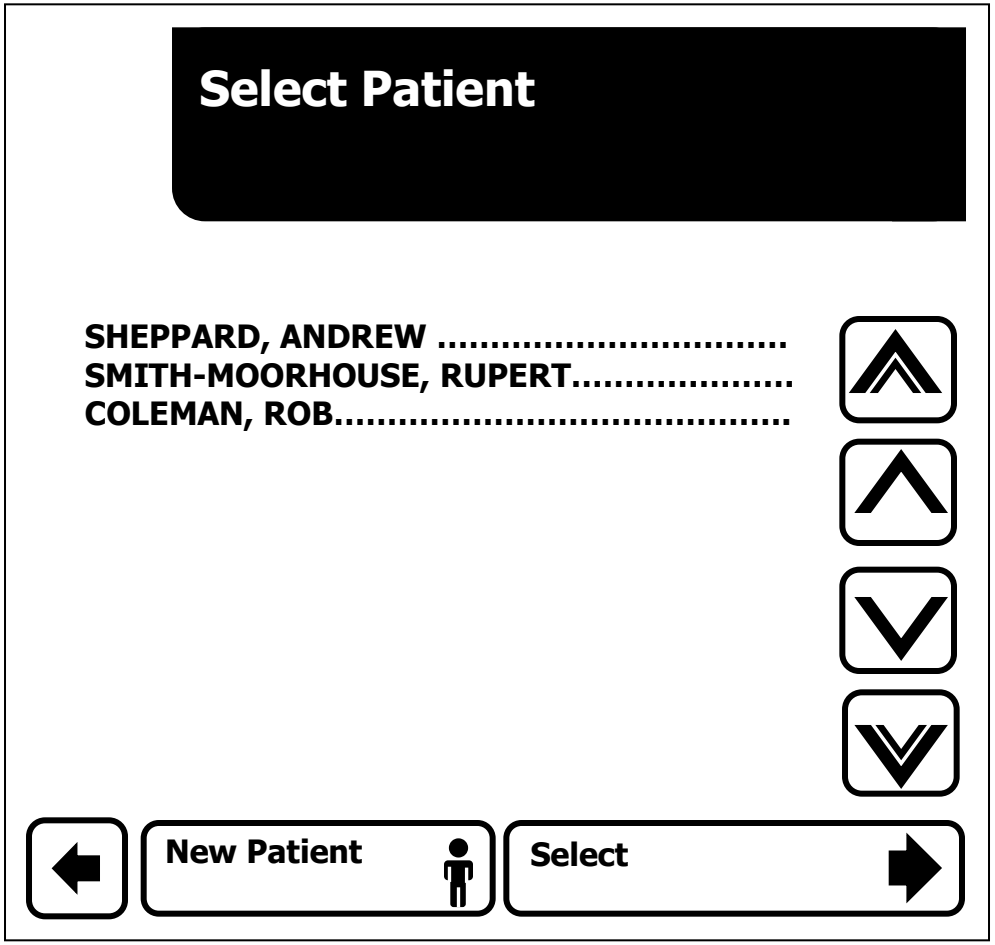

**Enter patient ID by either pressing Enter New Patient or Recall Patient to use the information input on that patient's last result.**

# Performing a Patient Test



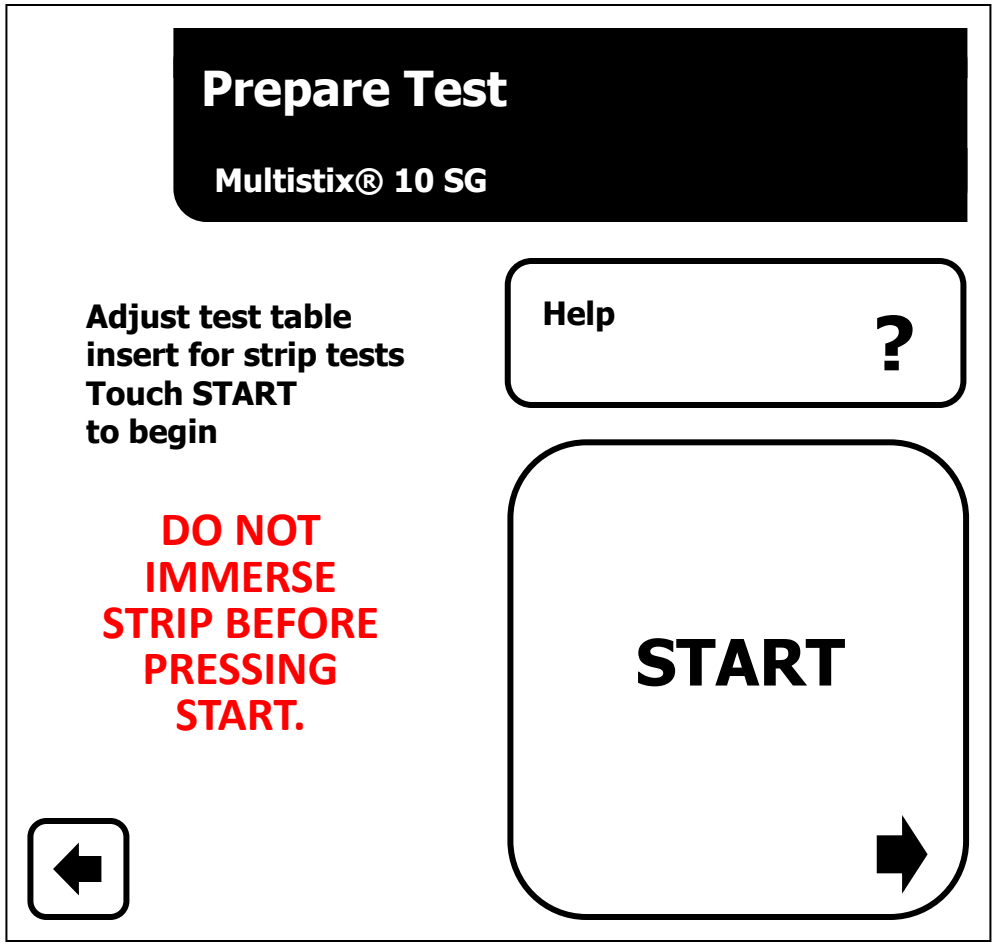

**If Enter New Patient was pressed type in your Patient ID using the onscreen keyboard.**

# Performing a Patient Test




**If Recall Patient was pressed use the up and down arrows on the right of the screen to highlight your patient from their last result and press Select.**

# Performing a Patient Test




**AFTER you press start!!!**

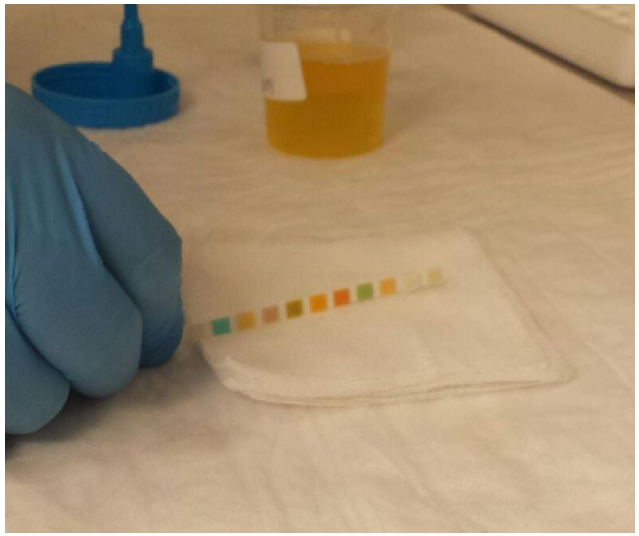
- **Perform the steps on next slide.**
- **Place the strip along the center of the table all the way up to the white line.**
- **The instrument will pull the sample tray in automatically.**
- **Follow on screen instructions for color and clarity.**

# Performing a Patient Test

**ALL OF THE FOLLOWING ARE PERFORMED WITHIN 8 SECONDS**

- **DO NOT IMMERSE STRIP BEFORE PRESSING START.**
- Completely immerse the reagent strip into the urine.
- As you withdraw the sample run the edge against the rim of container to remove any excess urine.
- Holding strip horizontally blot the edge on a tissue. **Do not** draw the strip across the tissue as this may damage the pads and give incorrect results.

- **Do not to bend the strip while sampling. A bend in the strip may cause it to get lodged inside the analyzer and prevent it from working.**



# Normal Values

- Negative results for glucose, ketones, bilirubin, nitrites, leukocyte esterase and blood.
- Protein negative or trace.
- pH 5.5-8.0
- Urobilinogen 0.2-1.0 Ehrlich units
- Any other values are NOT normal and require action.

# Results Reporting

- Test rest are to ordered and resulted using OSO in CHCS.  Test name POC Urinalysis
- A patient log must be maintained.  Document all results on the patient log.  Normal values must be indicated on the form.
- Date, patient ID, test results, and ID of person running test must be recorded.
- Patient results, as well as  normal range values must be entered in the patient's chart when test is completed along with the date and initials of testing personnel.
- All logs must be maintained for a minimum of two years.

# Waste Disposal

- Urine samples should be discarded down the drain and any containers are to be disposed of according to hospital guidelines.

- Multistix strips and controls should be disposed in a clinical waste bin.

# Troubleshooting & Maintenance

# Troubleshooting

- The majority of the trouble shooting and maintenance is carried out by POCT, but there are a couple of things you can do to help us out.

# Maintenance - Cleaning the table

- It is recommended that you clean the test table daily by putting it under a running tap, ensuring that the whole table is wet.
- Using a tissue thoroughly dry the table ensuring that you don't touch the white section with your bare hands as this may affect calibrations.
- The test table should be wiped with a dry tissue between each patient.
- Check that the calibration strip on the instrument is clean EVERY day.
- If the calibration strip is not clean then it should be cleaned using a soft cloth ensuring that you do not scratch it.

# Maintenance - Changing the paper roll

- From the back of the analyzer, lift the white lid at the top up and lower the grey lid just below it down.
- Under the white lid there is a grey lever which needs turning upwards through 90° to release the printer head, with the lever released remove the old roll from the grey section.
- The ink is only on one side of the paper, not in the printer and installing the paper incorrectly will result in nothing being printed.
- To check which side of the paper the ink is on scratch it with your fingernail. If grey marks are left behind then you've scratched the side with the ink on and this side needs to be facing the front of the analyzer.
- Drop the new roll into the grey section of the analyzer and with the loose end follow the back of the analyzer and push the paper through the slot at the top. After flicking the lever back down feed the paper through the slot in the white lid and close everything up.

# Results Reporting

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- Patient results, as well as  normal range values must be entered in the patient's chart when test is completed along with the date and initials of testing personnel.

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# Contacting POCT Staff

For any other problems regarding the Clinitek Status

please contact POCT Staff on:

**787-8359/0227 or 706-830-1621**

Or e-mail us brenda.z.arnett.civ@mail.mil, kevin.t.mansfield.mil@mail.mil or timothy.c.donald2.mil@mail.mil

# Quality Control

- QC is run on a daily basis, this consists of a Positive and Negative solution being run through the analyzer.
- Document QC results on the QC log sheet.

# Training Competency

Step One

• Print out the documentation showing you have passed the test.

Step Two

• Let your Unit POCT Trainer know you have completed this portion of your training and present him/her with documentation.

Step Three

• Demonstrate your performance for your trainer. Have the training documented on your glucose competency sheet and have your Unit POCT Trainer submit a memorandum to the POCT Staff so your information can be updated in the system.

Step Four

Place all certificates and training records in your CAF Folder.


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