CHEMSTRIP 10
Urine Test Strips

* READ POLICY PRIOR TO STARTING TUTORIAL
Before Testing a Patient

◊ Orient yourself to your working area:

♦ Locate the test strips.

♦ Locate testing supplies:
  • Specimen cup
  • Absorbent paper or gauze
  • KOVA Liqua-Trol Control Solutions
  • Timer
  • Gloves
  • Gauze or paper towel
  • IDA page for your testing location
Qualified Personnel

- Testing personnel are required to take the Initial Orientation and Training, Competency Exam, and a second Competency Exam within the first year of certification for this POCT.

- Competency exams are then required annually thereafter.
Qualified Personnel

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- Staff approved to perform this POCT must first pass a Color Discrimination Test provided by Occupational Health or the Clinical Laboratory.

(You may arrange to take this exam with the POCT Service Team.)
Using the Chemstrip 10 Urine Test Strips are considered **Waived** in complexity by the FDA

**Purpose:** used for rapid, semi-quantitative measurement of multiple urine chemistry parameters at the point of care.
Equipment for Testing

- Chemstrip 10 Urine Test Strips – store at room temperature (18-30°C); good until expiration date on bottle.
- Preservative Free Specimen Cup
Equipment for Testing

KOVA Liqua-Trol Control Solutions

- Store controls at 2-8°C
- Controls are stable until expiration date on vial
Equipment for Testing

- Absorbent Paper or Gauze
- Timer (or clock)
- Gloves
- Daily Temperature Log.
Run both levels (Normal and Abnormal) of QC solutions on Test Strips **DAILY – PRIOR** to patient testing

Remove KOVA Liqua-Trol Solutions from refrigerator and warm for 15 minutes to room temperature (18-30°C).
Make sure the lot numbers and expiration dates on the bottles match the lot number and expiration date on the record form.
Quality Control Procedure

- Put on gloves.
- Gently swirl the control to ensure good mixing.
Quality Control Procedure

- Remove a test strip from the vial.
- Open the control vial and apply the solution directly on the reagent strip.
- Hold the strip horizontally and ensure good pad saturation.
Quality Control Procedure

- Remove excess solution by tilting the strip on its edge and gently tapping it onto gauze or paper towel.
Quality Control Procedure

- Results are to be read at 60 seconds.
- Hold the strip close to the color blocks on Chemstrip 10 container.
- The strip handle should be held toward the top of the container.
- Match the color of each pad to the color on the container to read results.
- Discard used test strips in regular garbage.
Quality Control Procedure

- Document results for each level on the corresponding QC log sheet.
Patient Testing Procedure

❖ To perform patient testing, first verify the correct patient using two forms of identification (full name and date of birth).
❖ Explain the procedure to the patient and/or family.
❖ Observe universal precautions and wear gloves and other PPE as needed.
Patient Testing Procedure

- Urine specimens should be in a container that permits full immersion of the test strip.
- Ensure that the urine is mixed (swirled, not shaken) well prior to testing.
- Freshly voided urine is required.
Patient Testing Procedure

✧ Perform testing **within one hour** of collection.

✧ Label specimen cup with patient’s name and MRN **in front of the patient** if not testing specimen **immediately** or when there is potential for specimen mix-up.
Remove a Test Strip from the container.

Ensure the expiration date and lot # of the Test Strip is not expired and matches the QC log.

Close cap immediately as prolonged exposure of Test Strips to the air can cause false positives.
Patient Testing Procedure

- Dip the test strip into the urine no longer than 1 second.
- Ensure the entire reagents strip area is immersed.
Patient Testing Procedure

- Draw the edge of the strip along the rim of the specimen cup to remove excess urine.
Patient Testing Procedure

- Remove excess urine by tilting the strip on its edge and gently tapping it onto gauze or paper towel.
Patient Testing Procedure

- Results are to be read at 60 seconds.
- Hold the strip close to the color blocks on Chemstrip 10 container.
- The strip handle should be held toward the top of the container.
- Match the color of each pad to the color on the container to read results.
Patient Testing Procedure

- If a result is outside of normal range, or if you mistrust a result for any reason, repeat test.

- Document all patient results.
Limitations

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◇ Glucose:

♦ False positive results may be produced by strong oxidizing cleaning agent residues in the urine container. False negative results may occur due to high concentrations of ascorbic acid from ingestion of vitamins, antibiotics or fruit juices. At glucose concentrations of 100 mg/dL and above, this effect has been eliminated, so that false negative readings should be rare, even at high concentrations of ascorbic acid.

◇ Protein:

♦ The following may cause false positives:

• Strongly basic urine (pH 9 or higher).
• Therapy with phenazopyridine.
• Infusion of polyvinylpyrrolidone (found in blood substitutes)
• Residues of disinfectants containing quaternary ammonium. groups or chlorhexidine in the urine container.

MSDS – Located on the SFGH-POCT.org website under “Chem 10”.
For Further Questions or Information
Contact POCT Services

SFGH-POCT.org