KAISER PERMANENTE®
COLORADO LABORATORY

PROCESSING OF TIMED URINE SAMPLES

PRINCIPLE

Analysis of random or timed urine specimens provides information necessary for the diagnosis and management of many pathological disease states. Since substances such as hormones, proteins, and electrolytes are variably excreted during a 24-hour period, a better comparison of day-to-day values can be made with 24-hour collections than with random specimens.

SPECIMEN: 24 HOUR

- To ensure accuracy, all urine that is passed in a 24 hour period must be collected
- Written instructions must be given to the patient to ensure accuracy of collection method
- Dietary restrictions are required for VMA, 5-HIAA and Oxalate
- Preservation of 24-hour urine samples is necessary for many analytes. In-house testing no longer requires preservation, however referral labs still require that testing referred to their lab be preserved. Refer to the Catalog Viewer for requirements.
- See the Quest website for tests not listed in Catalog Viewer: www.Questdiagnostics.com

REAGENTS AND SUPPLIES

The following supplies are purchased and stocked by the facility buyer:

24 hour urine container	Sterile urine cups
Plastic transfer tubes	Plastic transfer pipets
Plastic Yellow Caps	Parafilm
Graduated cylinder	

The following supplies are special ordered:

Acid washed 24 hour urine container	Quest 9001585
Acetic Acid, 50% aqueous	Quest 123551
6N Hydrochloric Acid	Quest 123550
Sodium Carbonate	Quest 123555
pH paper, or pH indicator strips	Fisher – see catalog for item#

Boric Acid - each MOL hub (AR, EA, FR, LK, RC, WM) and HL will supply the smaller clinics

PROCEDURE FOR PROCESSING TIMED URINE SAMPLES

NOTE: All analytes performed at RRL can be collected in a preservative free 24 hour urine container.

1. Read the volume from the collection container or measure the volume in a graduated cylinder
2. Record the volume on the specimen label
3. Enter the total urine volume into the laboratory computer system as an order comment. For specimens sent to Quest, record the volume on the label and then enter the total volume and hours of collection, if it is not specifically implicated in the test order, into the laboratory computer system as an order comment. The volume must be entered into Cerner Millennium before the specimen is transferred, or it will not cross the interface.
4. Vigorously mix the entire specimen to assure all particulate matter is suspended. If more than one container is submitted, mix the contents together before aliquoting the specimen.
5. Before there is any settling out of particulate matter do the following:

For Regional Reference Lab tests:

- Pour off one un-preserved 15 ml aliquot in a plastic tube with a yellow cap and date written on it, freeze and hold for a minimum of 30 days.
- Regardless of the number of tests ordered for the Regional Reference Laboratory, only 1 aliquot is needed. Pour off an aliquot, into a 15 ml transport tube with yellow cap
- Fill each pour off container approximately 2/3 full, do not overfill

For Quest tests:

- Freeze one 15 ml un-preserved aliquot in a plastic tube with yellow cap and date written on it, and hold for a minimum of 30 days
- Depending upon the number of tests requested, pour off an aliquot for each test into a 15 ml transport tube. Fill each pour off container approximately 2/3 full, do not overfill
- Add preservative as required by Quest, refer to Catalog Viewer or Quest website for details

6. Make sure that each aliquot is labeled with the long barcode, record the total volume on each aliquot label.
7. Enter volume in the LIS as an order comment
    - Go to ORV, click on the test
    - Click on the Comments icon, click on Order Comments tab
    - Click on Edit, enter the 24 hour urine volume
    - If a 12 hour collection enter “12 hour collection” along with the volume, click OK
8. Creatinine Clearance Test:
    - Enter total volume as an order comment in the LIS
    - **Draw a serum creatinine when the urine specimen is returned**
    - Send the serum and urine samples together to Regional Reference Laboratory

PROCEDURE NOTES

Specimens must be recollected if the following occurs:

- An un-preserved specimen was not refrigerated during the entire collection
- The entire sample was not collected during the collection period.

- For Creatinine Clearance, the serum was not collected when the urine was returned
- Incorrect container was used for collection