**24-HOUR URINE COLLECTION PROTOCOL**

All testing for 24 hour urine samples requires that the specimen be collected in the appropriate container. Depending on the test to be performed, the collection jug should have either no additive, acid added or be acid washed. Note: If two 24 hour urine tests requiring differing additives are collected simultaneously, then a “split jug” kit must be used.

**Sample Collection**

1. To begin the collection, have the patient totally empty his/her bladder into the toilet. If there is a catheter collection bag, it should be changed and a fresh bag used. Note the start time on the requisition.
2. Hydrate the patient with at least 800 mL of water. Note that special orders may have been given by the attending physician of a patient with documented renal disease. These special orders may override recommendations made here with respect to water intake or withholding of medication. Withhold tea and coffee the day of the test. Some tests are susceptible to drug interference, thus depending on the test being collected, some medications should be halted prior to and during the 24 hour collection. Please refer to each individual test page for specific drug interactions. Prescription medications should not be halted without physician approval.
3. During the following 24 hours, every drop of urine must be placed (preferably directly) into the container as soon as possible.
4. 5 minutes before the 24 hour collection period is complete, the bladder or catheter collection bag is emptied into the collection container.
5. **IMPORTANT!**  If an error in timing occurs, or if some urine is lost, be sure to note the timing information accurately on the requisition. The physician and the clinical pathologist can then determine whether useful information can still be obtained.
6. Store the container in an ice slush bath with the ice level at least as high as the urine level at all times. Outpatients can store the container in the home refrigerator or portable cooler.
7. Deliver the specimen to LMC Lab or affiliated location immediately after collection.

 24 Hour Urine Testing – Acceptable Specimen Containers

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| Test | Order Code | Acceptable Specimen | Can NOT Use For Testing | Stability |
| 17 KETOSTEROIDS | 17KSTO | PLAIN JUG (keep refrigerated) | TRACE ELEMENT JUG | Ambient: 4 hoursRefrigerated: 2 weeksFrozen: 1 month |
| 5-HIAA (SEROTONIN) | 5HIAAU | PLAIN JUG (keep refrigerated)) | TRACE ELEMENT JUG | Ambient: UnacceptableRefrigerated: 1 weekFrozen: 2 months |
| ALDOSTERONE | ALDO24 | PLAIN JUG (keep refrigerated) | TRACE ELEMENT JUG | Ambient: 4 hoursRefrigerated (w/preservative): 5 daysFrozen: 1 month |
| ANTIMONY | ANTIM | TRACE ELEMENT JUG | ACID JUGPLAIN JUG | Ambient: 5 daysRefrigerated: 30 daysFrozen: 30 days |
| ARSENIC | MISC1 | PLAIN JUG (keep refrigerated) | ACID JUG | Ambient: 1 weekRefrigerated: 2 weeksFrozen: 1 year |
| BENCE JONES PROTEIN | IFXU24 | PLAIN JUG (keep refrigerated) | ACID JUGTRACE ELEMENT JUG | Refrigerated: 7 days |
|  |  |  |  |  |
| Test | **Order Code** | **Acceptable Specimen** | **Can NOT Use For Testing** | **Stability** |
| CALCIUM | CAUR | PLAIN JUG (keep refrigerated) | TRACE ELEMENT JUG | Ambient: 48 hoursRefrigerated: 4 daysFrozen: 3 weeks |
| CATECHOLAMINES | CATEFU | PLAIN JUG (keep refrigerated) | TRACE ELEMENT JUG | Ambient: UnacceptableRefrigerated: 1 week (unpreserved)1 month (preserved)Frozen: 6 months (preserved) |
| CHROMIUM | CR24 | PLAIN JUG (keep refrigerated) | ACID JUG | Ambient: 1 weekRefrigerated: 2 weeksFrozen: 1 year |
| CITRIC ACID | CITRIC | PLAIN JUG (keep refrigerated) | TRACE ELEMENT JUG | Ambient: 8 hoursRefrigerated: 1 weekFrozen: Indefinitely |
| CHLORIDE | CLU | PLAIN JUG (keep refrigerated) | ACID JUGTRACE ELEMENT JUG | Ambient: 24 hoursRefrigerated: 1 weekFrozen: 6 months |
| COPPER | CU24 | PLAIN JUG (keep refrigerated) | ACID JUG | Ambient: 1 weekRefrigerated: 2 weeksFrozen: 1 year |
| CORTISOL, FREE | CORT24 | PLAIN JUG (keep refrigerated) | ACID JUGTRACE ELEMENT JUG | Ambient: UnacceptableRefrigerated: 2 weeksFrozen: 6 months |
| Test | **Order Code** | **Acceptable Specimen** | **Can NOT Use For Testing** | **Stability** |
| CREATININE | CRE24 | PLAIN JUG (keep refrigerated) | ACID JUGTRACE ELEMENT JUG | Refrigerated: 5 days |
| CREATININE CLEARANCE | CREACL | PLAIN JUG Collect Gold Top or Lithium Heparin Plasma Tube(Please include height & weight of patient.) | ACID JUGTRACE ELEMENT JUG | Refrigerated: 5 days |
| DELTA AMINOLEVULINIC ACID | DELTAB | PLAIN JUG (keep refrigerated) | ACID JUGTRACE ELEMENT JUG | Refrigerated: 4 daysFrozen: 1 month |
| HEAVY METALS (Arsenic, Lead, Mercury and Cadmium) | HMPUR | TRACE ELEMENT JUG (patient should avoid seafood consumption for 48 hours) | ACID JUGPLAIN JUG | Ambient: 48 hoursRefrigerated: 5 daysFrozen: 14 days |
| IMMUNOFIXATION | IFXU24 | PLAIN JUG | ACID JUGTRACE ELEMENT JUG | Refrigerated: 7 days |
| MAGNESIUM | MAGU | PLAIN JUG (keep refrigerated) | TRACE ELEMENT JUG | Ambient: 1 week if preservedRefrigerated: 1 weekFrozen: 1 year |
| MERCURY | MISC1 | PLAIN JUG (keep refrigerated) | ACID JUG | Ambient: 1 weekRefrigerated: 2 weeksFrozen: 1 year |
| Test | **Order Code** | **Acceptable Specimen** | **Can NOT Use For Testing** | **Stability** |
| METANEPHRINES (normetanephrine, metanephrine, and total metanephrine) | METAFU | PLAIN JUG (keep refrigerated) | TRACE ELEMENT JUG | Ambient: UnacceptableRefrigerated: 2 weeks (unpreserved), 1 month (preserved)Frozen: 1 month |
| OSMOLALITY | MISC1 | PLAIN JUG | ACID JUGTRACE ELEMENT JUG | Ambient: 7 daysRefrigerated: 14 daysFrozen: 60 days |
| OXALATE | OXAL24 | ACID JUG (HCL must be added at start of collection. Give patient diet instructions.) | PLAIN JUGTRACE ELEMENT JUG | Ambient: 6 daysRefrigerated: 7 daysFrozen: 4 months |
| PHOSPHORUS | PHOSUB | PLAIN JUG (keep refrigerated) | TRACE ELEMENT JUG | Ambient: 8 hoursRefrigerated: 48 hoursFrozen: 6 months |
| PORPHOBILINOGEN | PORBIB | PLAIN JUG (Keep refrigerated - Must protect from light.) | ACID JUGTRACE ELEMENT JUG | Ambient: UnacceptableRefrigerated: 4 daysFrozen: 1 month |
| PORPHYRINS | POR24 | PLAIN JUG (Keep refrigerated - Must protect from light.) | ACID JUGTRACE ELEMENT JUG | Ambient: UnacceptableRefrigerated: 7 daysFrozen: 30 days |
| POTASSIUM | KU24 | PLAIN JUG (keep refrigerated) | ACID JUGTRACE ELEMENT JUG | Refrigerated: 2 days |
| Test | **Order Code** | **Acceptable Specimen** | **Can NOT Use For Testing** | **Stability** |
| PROTEIN ELECTROPHORESIS | PEU24 | PLAIN JUG (keep refrigerated) | ACID JUGTRACE ELEMENT JUG | Refrigerated: 2 days |
| PROTEIN, TOTAL | TPU24 | PLAIN JUG (keep refrigerated) | ACID JUGTRACE ELEMENT JUG | Refrigerated: 3 days |
| SODIUM | NAU24 | PLAIN JUG (keep refrigerated) | ACID JUGTRACE ELEMENT JUG | Refrigerated: 7 days |
| THALLIUM | MISC1 | PLAIN JUG (keep refrigerated) | ACID JUGPLAIN JUG | Ambient: 1 weekRefrigerated: 2 weeksFrozen: 1 year |
| URIC ACID | URIC24 |  PLAIN JUG (keep refrigerated) | ACID JUGTRACE ELEMENT JUG | Ambient: 13 daysRefrigerated: 13 daysFrozen: 25 days |
| UREA CLEARANCE, 12HR | UREA12 | PLAIN JUG | ACID JUGTRACE ELEMENT JUG | Refrigerated: 7 days |
| UREA CLEARANCE, 24HR | UREA24 | PLAIN JUG | ACID JUGTRACE ELEMENT JUG | Refrigerated: 7 days |
| Test | **Order Code** | **Acceptable Specimen** | **Can NOT Use For Testing** | **Stability** |
| UREA NITROGEN, 12 HR | UUN | PLAIN JUG | ACID JUGTRACE ELEMENT JUG | Refrigerated: 7 days |
| UREA NITROGEN, 24HR | UUN24 | PLAIN JUG | ACID JUGTRACE ELEMENT JUG | Refrigerated: 7 days |
| VANILLYLMANDELIC ACID | VMA | PLAIN JUG (keep refrigerated) | TRACE ELEMENT JUG | Ambient: UnacceptableRefrigerated: 1 weekFrozen: 2 weeks |
| ZINC | ZINCU | PLAIN JUG (keep refrigerated) | ACID JUG | Ambient: 1 weekRefrigerated: 2 weeksFrozen: 1 year |