

Trace Elements – Urine

Specimen Requirements and Mnemonic:

24 hour urine is preferable to random. Keep urine container in the refrigerator during collection. Collect away from suspected exposure site. If workplace exposure is suspected, collect during off-hours, away from work environment.

Urine Trace Elements may be sent to two different testing locations. A separate aliquot is required for each testing location. See the following table to determine which elements can be tested together.

Elements	Mnemonic	Specimen Requirements	Specimen Handling	Testing Location
Aluminum Antimony Arsenic (other than inorganic) Barium Beryllium Bismuth Cadmium* Chromium Cobalt Copper Lead Manganese Mercury Nickel Selenium Thallium Zinc	UTREL (and U24H for 24 hour urines) List trace elements in U Trace fields. If inadequate space or element not listed in U Trace fields, select "See Note" and list all remaining trace elements in an Order Comment attached to UTREL. Order a separate UTREL for each container	Separate 30 mL 24 hour or random urine in plastic screw cap Sarstedt2 urine aliquot tube. Do not fill beyond the 30 mL mark. For 24 hour urine, measure total urine volume and aliquot.	PSC & RRL: Transport to DSC on ice. Send specimen in a separate bag with a photocopy of the requisition. CRL and Extra-regional: Freeze aliquots and transport to DSC on dry ice. DSC: Freeze specimens upon receipt in lab; ensure frozen specimens do not thaw	U of A
Arsenic, inorganic Boron Iodine Molybdenum Silver Strontium Sulfur Tin Uranium Vanadium	MISCREFNON (and U24H for 24 hour urines) Misc Ref Non-Blood Test Name field: enter each element. If inadequate space list all remaining trace elements in an Order Comment attached to MISCREFNON. Order a separate MISCREFNON for each container.	Separate 30 mL 24 hour or random urine in plastic screw cap Sarstedt2 urine aliquot tube. Do not fill beyond the 30 mL mark. For 24 hour urine, measure total urine volume and aliquot.	PSC & RRL: Transport to DSC on ice. Send specimen in a separate bag with a photocopy of the requisition. CRL and Extra-regional: Freeze aliquots and transport to DSC on dry ice. DSC: Freeze specimens upon receipt in lab; ensure frozen specimens do not thaw	Dynacare

* Collection of urine specimens through a catheter frequently results in elevated Cadmium values because rubber contains trace amounts of cadmium that are extracted as urine passes through the catheter.