

0098830

Chromium, Serum

CR S

**Performed:** Sat-Sun  
**Reported:** 1-4 days

**Specimen Required:** Patient Prep: Diet, medication, and nutritional supplements may introduce interfering substances. Patients should be encouraged to discontinue nutritional supplements, vitamins, minerals, and non-essential over-the-counter medications (upon the advice of their physician).  
Collect: Royal Blue (No Additive).  
Specimen Preparation: **Separate from cells ASAP or within 2 hours of collection.** Transfer 2 mL serum to an ARUP Trace Element-Free Transport Tube (ARUP supply #43116) available online through eSupply using ARUP Connect™ or contact ARUP Client Services at (800) 522-2787. (Min: 0.5 mL)  
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated or frozen.  
Unacceptable Conditions: **Plasma. Royal Blue (EDTA) or separator tubes.** Specimens that are not separated from the clot within 2 hours. **Specimens transported in tubes other than specified.**  
Stability (collection to initiation of testing): **Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Indefinitely**

**Interpretive Data:** **Elevated results may be due to skin or collection-related contamination, including the use of a noncertified metal-free collection/transport tube. If contamination concerns exist due to elevated levels of serum chromium, confirmation with a second specimen collected in a certified metal-free tube is recommended.**

**Whole blood** is the preferred specimen type for evaluating **chromium** metal ion release from metal-on-metal joint arthroplasty. **Whole blood** chromium levels may be increased in asymptomatic patients with metal-on-metal prosthetics and should be considered in the context of the overall clinical scenario. The form of chromium greatly influences distribution. Trivalent chromium resides in the plasma and is usually not of clinical importance. Hexavalent chromium is considered highly toxic; however, chromium serum levels should not be used to assess toxic exposures to hexavalent chromium as it is predominately taken up and retained by red blood cells. Symptoms associated with chromium toxicity vary based on route of exposure and dose, and may include dermatitis, impairment of pulmonary function, gastroenteritis, hepatic necrosis, bleeding, and acute tubular necrosis.

See Compliance Statement B: [www.aruplab.com/CS](http://www.aruplab.com/CS)

**HOTLINE NOTE:** Remove information found in the Note field.