Antimony

Atomic number 51
Atomic weight 121.75

Collection

Blood	2 mL	Plastic tube Anticoagulant: EDTA
Urine	20 mL	Sterile Universal

Note: Contamination of specimens with antimony may occur from using non-validated tubes. Check with laboratory before collecting samples

Reference ranges

			Reference
Serum/plasma	nmol/L	Less than 1.8	1-3,9
Blood	nmol/L	Less than 1.1	2,4
Urine	nmol/L	Less than 2.3	5,6,7
	nmol/24 h	Less than 6.5	8
	nmol/mmol creatinine	Less than 0.26	5,6,7

References

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Clinical

Antimony is used in the manufacture of paints, ceramics, glass, solders, type-metal, explosives, batteries, bearing metals and semiconductors. Antimony compounds are also used for flame proofing and as abrasives. Exposure can take place in the mining and extraction industries.

Toxicity
Antimony has similar properties and biological activity to arsenic, although it is considerably less toxic. Acute exposure causes loss of hair, dry scaly skin and weight loss. Damage to the heart, liver and kidney can occur and death from myocardial failure may follow. With chronic exposure, there are effects on the skin (antimony spots), mucous membrane (irritation) and pneumoconiosis. Treatment of Leishmaniasis (Kala-azar) or Schistosomiasis (Bilharzia) with antimony compounds can also lead to toxicity. Inhalation of the highly toxic gas stibine (SbH_3) can result in headache, nausea and vomiting, jaundice and anaemia.

Laboratory Indices of Exposure
Occupational exposure is monitored by measurement of antimony in urine. In suspected toxicity or investigation of antimonial therapeutics, blood concentrations may also be determined.
It is important to ensure that the materials used to collect specimens to not introduce contamination with antimony. Check with the laboratory.

References:

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