

Arsenic As

General:

Present in insecticides and pesticides;

Physiology: Most arsenic substances are absorbed quickly, also through the skin in toxic concentrations. Arsenic is normally stored in insignificant levels in the liver and primarily bound to sulfhydryl groups in the keratin of the skin. Elimination via kidney. Arsenic blocks sulfhydryl groups. It has an acute effect as a capillary poison (dilatation of vessels), chronic intoxication: skin problems (black skin) and neuritis.

Clinical pictures: **Acute:** edema, nausea, possibly with vomiting, severe gastric enteritis with rice-water-like diarrheas, shock by water-, electrolyte- and protein loss, kidney complications (oliguria, anuria). **Chronic:** arsenic melanosis, hyperkeratosis (precancerosis) in form of warty lesions mostly on palms and soles of the feet; hair loss and whitish stripes of the nails (Mees' stripes); nasopharyngeal catarrh ("arsenic cold"), salivation, diarrhea, weariness, apathy; polyneuropathy; latent hepatopathy.

- **Arsenic in serum**

Indication: Suspicion of intoxication, occupational medical examinations

Material: 1 ml serum

TAT: 7-10 days*

Method: IPMS

Units: µg/l

Ref.- range: <2.1

- **Arsenic in urine**

Indication: Suspicion of intoxication

Material: 20 ml urine

TAT: 7-10 days*

Method: IPMS

Units: µg/l

Ref.- range: up to 25.0

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit <http://www.fml-dubai.com/parameter-listings/>