

Arsenic (inorganic)

Australia | Safework Australia

Manufacturing, Mining and Quarrying

Arsenic is an element commonly found in our natural surroundings. There are traces of Arsenic found in rock, soil, water and air and most mineral ores.



There are various occupational settings where workers can be exposed to arsenic. The primary route of exposure is via inhalation of airborne arsenic fumes or dusts. Work activities where they may be a risk of arsenic exposure include:

- smelting of non-ferrous metals
- arsenic refining and production
- making semiconductors.
- making arsenic compounds, the most important being the trioxide (As₂O₃).
- making pigments (arsenic trisulfide and trioxide), ceramic enamels and anti-fouling paints (arsenic trioxide)
- tanning in the leather industry (arsenic trioxide)
- hardening copper, lead and other alloys
- copper, zinc and lead smelting.

Arsenic also used in making and applying weed killers, rat poison, wood preservatives and previously used in cattle dip (arsenic trioxide) and sheep dip (sodium arsenite).



Baseline Testing

A baseline arsenic health monitoring medical contains the following tests:

- Demographic, medical and occupational history
- Past exposure questionnaire
- Urinalysis – Blood Protein and Sugar
- Medical Examination with particular focus on the nervous system and skin
- Pathology – Urinary inorganic arsenic (MMAv +



Post Exposure

Periodic monitoring includes the following tests:

- Pathology – Urinary inorganic arsenic (MMAv + DMAv + As(iii) + As (V)
- KINNECT Dr Sign off

* Results may trigger an early periodic health assessment

DMAv + As(iii) + As (V) KINNECT Dr Review and Sign-off.



Periodic Testing

Periodic monitoring includes the following tests:

- Pathology – Urinary inorganic arsenic (MMAv + DMAv + As(iii) + As (V))
- KINNECT Dr Sign off

* Results may trigger an early periodic health assessment



Biological Exposure Windows

Please note the following information regarding the biological exposure windows relevant for monitoring arsenic exposure. This information should be taken into consideration by those planning and administering the health monitoring programs.

- Urine samples should be collected at the end of shift at the end of the work week. The results are reflective of exposure over the previous few days.
- Precautions should be taken to prevent contamination during sampling (e.g. collect samples in an uncontaminated area and avoid contamination from exposed skin or clothes).



Exit Testing

A final arsenic health monitoring medical contains the following tests:

- Demographic, medical and occupational history
- Past exposure questionnaire
- Urinalysis – Blood Protein and Sugar
- Medical Examination with particular focus on the

nervous system and skin

- Pathology – Urinary inorganic arsenic (MMAv + DMAv + As(iii) + As (V) KINNECT Dr Review and Sign-off.

A urine sample should be collected on the last day of the worker's final shift, and a final medical examination should be carried out at the same time or as soon as possible thereafter. This medical examination must include skin and neurological checks.



Further Information

Safework Australia Guidance for Arsenic:

<https://www.safeworkaustralia.gov.au/resources-and-publications/guidance-materials/health-monitoring-arsenic>

Book & Pay

Book and Pay for your Health Surveillance Medical now.

[Request a Service](#)

Set up your Program

Book a discovery session to discuss scoping requirements.

[Contact us](#)