

Dust & Metals Analysis

Airborne particles can be associated with respiratory disease. Many industries monitor the airborne dust produced in the workplace to minimise the risk of harmful effects.



Overview

Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the response that it elicits depend on the nature and size of the particle.

For dusts that may have toxic effects if absorbed in the nasopharyngeal (nose and throat) region, it is appropriate to measure "inhalable" dust. This applies whether or not these dusts also have a toxic effect on the lungs or are toxic if absorbed in the lungs or are swallowed after clearance from the lungs. Highly soluble materials which can quickly enter the blood and exhibit their toxicity, such as soluble salts, and materials which can exhibit toxicity after dissolving in the gastrointestinal tract, such as metals, are vital measures in planning to mitigate workplace risk.

Accreditation

Eurofins | ARL holds NATA accreditation for inhalable dust in accordance with AS 3640, and a vast array of metals in air.



Laboratory Analysis

Samples are collected by drawing a known volume of workplace air through pre-weighed filters housed in a suitable sampling head in accordance with AS 3640. The Inhalable Dust can be analysed gravimetrically, comparing the weight of the filter paper before and after sampling.

As the inhalable dust analysis is a non-destructive technique, the filter paper can be prepared for additional analysis to further characterise the dust. Eurofins offers a vast array of metals analysis on the filter paper, via AAS, ICP-OES or ICP-MS.

