

## Scientists in Australia develop tool to identify dust lung disease risk

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**To more accurately identify the risk factors for workers and tailor effective controls**



A new dust testing methodology developed by Australia-based University of Queensland researchers offers workers better protection from diseases such as black lung and silicosis.

Leader of the Dust and Respiratory Health Program at the Sustainable Minerals Institute Nikky LaBranche said the escalating prevalence of dust lung diseases, especially among young Australians, made the scientific community realise a new approach was needed.

Exposure monitoring for dust and silica is currently based on the weight of particles but this overlooks many details that the scientists are beginning to understand have significant health effects.

The methodology thus developed takes an in-depth look at particle characteristics such as size, shape, and mineral makeup, along with their potential to group together.

The scientists have used a Mineral Liberation Analyser which is a specialised type of scanning electron microscope. It can measure the size and shape of individual particles and create a mineral map across them.

The new methodology could contribute to research into the connection between the characteristics of particulates and the development of respirable dust diseases.