

UMOYA
VOHE SOLUTIONS

Ventilation & Occupational
Hygiene Engineering

Laboratory Services

www.umoyavohe.co.za

About Us

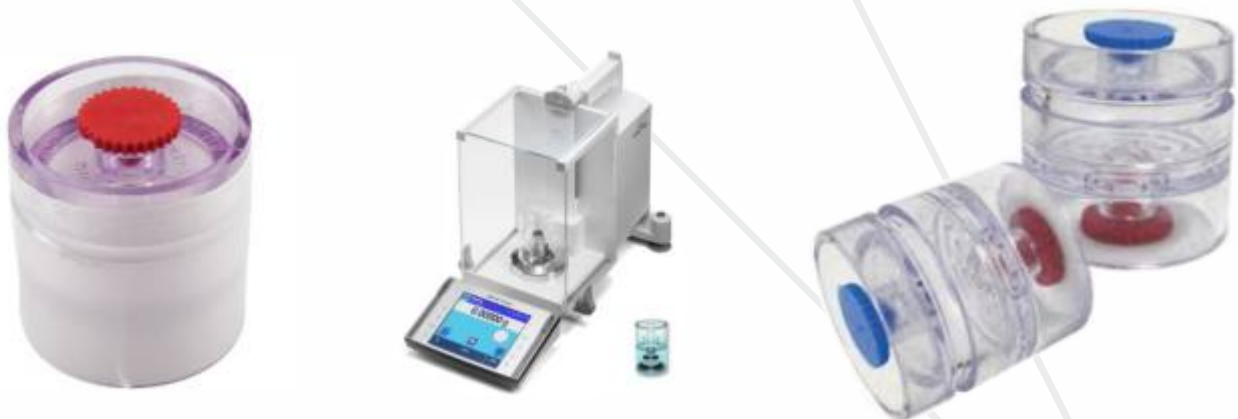
Umoya VOHE and its sister companies have SANAS accredited testing laboratories that operate in accordance with ISO 17025, which include structured proficiency testing programs and frequent internal and external assessments, ensuring consistent reliable laboratory results. “Temporary- or Site laboratories” are monitored by accredited branches and are also subjected to frequent internal and external assessments.

Tested. Trusted

Occupational Health and Safety Samples

1. Air Quality Testing

The Air Quality testing service is also routinely used to monitor the air quality of a workplace and is used as a useful technique for ensuring a healthy and safe environment for employees. The air quality laboratory analyses sample tubes, badges, filters and impinger solutions for a wide range of compounds of interest in OS&H monitoring. Examples of these compounds are metals (eg lead, mercury), hydrocarbon solvents, benzene (e.g. petrol station attendant monitoring), alcohols, ketones, chlorinated solvents, formaldehyde, etc.



Gravimetric weighing of filters	Act 78 of 1973/MDHS14/3
Alpha-quartz (analysis on 25 mm PVC filters using direct-on-filter X-ray diffraction)	MDHS101
Diesel particulate matter (DPM) (EC,OC and TC analysis of sampled DPM filters)	NIOSH5040
Particle size analysis(PSA) (analysis on respirable dust using laser light scattering)	ASTM C1070
Welding Fumes (analysis for 12 elements)	NIOSH 7300
Elemental analysis (Quantitative element analysis using ICP OES. Any number of elements)	NIOSH7300
We also have readymade pre-weighed filters for almost any sampling	Act 78 of 1973/MDHS14/3

DPM ANALYSIS

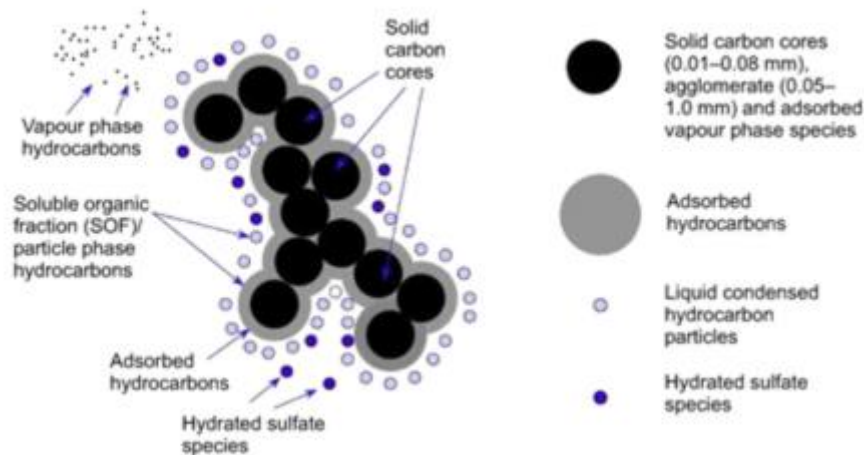
We can help!

As a result of the growing awareness of the health risks associated with DPM, many mine operators are faced with a long list of questions: Am I in compliance? How can I tell? What can I do to reduce DPM levels at my mine? Who can I turn to for help? Because of the wide variation in underground environments, and the many factors that affect DPM exposure, each mine is unique and requires a specialized strategy and approach to DPM control. MVS is equipped to assist mine operators in evaluating where they stand, and developing a strategy for compliance, now and in the future.

Mine Ventilation Services offers a wide range of services in the areas of DPM sampling and analysis. MVS can provide assistance in establishing a baseline of DPM exposure, analyze samples taken by mine operators in our state of the art laboratory facility, assist in the development of a comprehensive compliance strategy and perform periodic checks to ensure continued compliance. MVS is equipped with the latest technology and is abreast of current DPM measurement and analysis techniques.

We can put a sampling/compliance program together for you, analyze your samples with our laboratory equipment, or simply answer any technical questions you might have. With MVS, you can be assured that your concerns will be addressed by someone who understands the unique challenges and requirements of underground operations.

Please contact us for further information regarding our qualifications and/or capabilities in this field.



How do I know if I have a problem?

There is no way to tell if you have a problem with DPM from a visual inspection, equipment list or ventilation survey. Many factors are involved in both the production and mitigation of DPM and the only reliable method for determining exposure levels at your facility is by conducting an in-depth baseline study. This consists of a mine-wide survey of DPM levels for all areas and activities where miners normally work or travel underground. Comprehensive analysis of the sample values, along with various other parameters such as equipment maintenance and airflow quantity and velocity will alert the mine operator to any areas of concern.

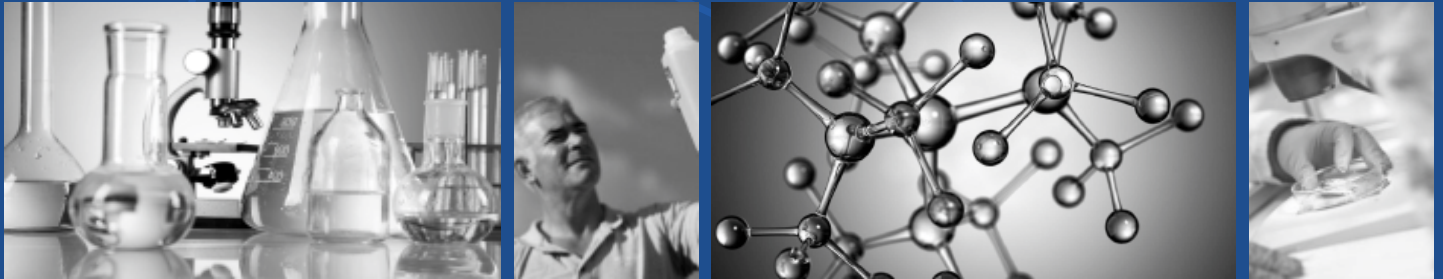
What can I do about DPM?

If high levels of DPM are detected, there are a variety of ways to lower them to within acceptable levels. Fuel, ventilation, equipment inventory and maintenance, after treatment products and a variety of other means exist for the reduction of diesel emissions. Each method of DPM reduction is somewhat unique and will have different results in different applications. With so many available options, all with unique properties and results, choosing the correct method for your specific application becomes especially important.

*above are just a sample of the analysis we can offer

2. Water Testing

- Drinking (Potable) Water Testing
- Agricultural Water Testing
- Other Water Testing



ENVIRONMENTAL TESTING

General Environmental Tests

Umoya VOHE Laboratories can test: pH, alkalinity, conductivity, turbidity, suspended solids, total solids, ash, chloride, sulphate, fluoride, calcium, magnesium, hardness, sodium, potassium, silica, cyanide, sulphide, tannins, MBAS, volatile fatty acids, Dust Gauge analyses, total phenols, TCLP extraction/testing.

Nutrients

Ammonium-N (NH_4N), total Kjeldahl nitrogen (TKN), total N, nitrate-N/nitrite-N, dissolved reactive phosphate (DRP), total phosphate (TP)

Oxygen demand

Chemical oxygen demand (COD), biochemical oxygen demand (BOD), total organic carbon (TOC/DOC/NPOC)

Metals

Umoya VOHE Laboratories' well equipped laboratory for metals and others elements routinely analyses for; aluminium, antimony, arsenic, boron, barium, beryllium, bismuth, cadmium, chromium, hexavalent chromium, cobalt, caesium, copper, iron, lithium, manganese, mercury, molybdenum, nickel, lead, selenium, silver, strontium, tin, thallium, uranium, vanadium, zinc, and others. Metals may be analysed as the total, total recoverable, acid soluble or dissolved (soluble) fraction.

Matrices

Soils, sediments, sludges, potable waters, ground and surface waters, effluents, leachates, trade wastes

Other

- Anions – F, Cl, SO_4 , Br, NO_2N , NO_3N , oxyhalides
- Cations – Ca, Mg, Na, K, hardness

Organics – hydrocarbons (TPH, BTEX, PAH), VOC, SVOC, PCB, organochlorine, organonitrogen and organophosphate pesticides, acidic herbicides, PCP, TBT, HVDB, HVAA

3. Swab & Surface Sample Testing

Our Air Quality laboratory regularly tests swab and surface samples. A wide variety of compounds can be tested for chemical and microbiological contaminants. If you are evaluating spraying, wanting to understand the nature of deposits or monitor cleaning processes we'll have a swab and surface sample test to meet your requirements.

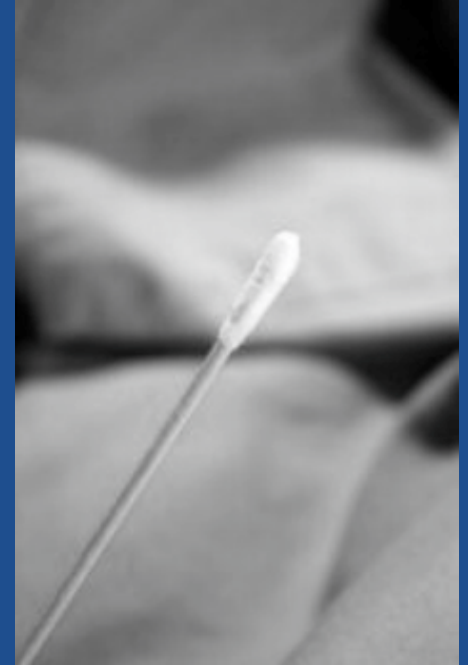
About this Testing

Swab and surface sample testing is routinely used for:

- Surface contamination monitoring
- Evaluating spray drift
- Understanding the nature of particulate deposition
- Monitoring cleaning efficiency
- Answering a range of other monitoring questions

Analysis is routinely performed on a range of organic and inorganic air contaminants and a wide variety of microbiological contaminants.

We are always developing new tests in this area. If you can't immediately find a surface test to meet your needs call us on the number below and we'll discuss a development option with you.



4. Flammable Gas Detection

Mine Gases

Flammable gas constituents

Oxygen and nitrogen

Hydrogen and methane

Carbon monoxide and carbon dioxide

Hydrogen sulphide and nitrous fumes



Please contact us for any further information.

Physical Address:

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Contact us: Craig Maree - 062 484 5244

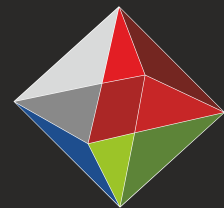
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