

National Metrology Institute of South Africa (NMISA)

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Final and for immediate release

South African essential oils industry receives a boost with globally recognised testing services.

The first accredited testing service for essential oils in Southern Africa has been launched. It's a welcome development that's expected to fuel the growth of this emerging industry in the region.

The National Metrology Institute of South Africa (NMISA) has announced that it has received accreditation to the international standard ISO/IEC 17025 from the South African National Accreditation System (SANAS). Being accredited to this standard means that test reports and certificates of analysis for essential oils issued by NMISA's laboratories can now be accepted internationally without the need for further testing.

"What positioned us well is that we have the state-of-the-art infrastructure, and we have the expertise. NMISA is essentially the apex laboratory for the country. To produce a measurement standard, you need to be able to do that measurement better than everybody else," says Dr Maria Fernandes-Whaley, senior manager for analytical and material sciences at NMISA.

Essential oils are highly concentrated compounds extracted from plants. They are used widely in the cosmetics and fragrance industries, as well as in the food and beverage industries, to create flavours.

Negotiating power for local producers

Fernandes-Whaley says this is a significant milestone for essential oil producers in Southern Africa. Without internationally recognised testing and analyses for the physical and chemical

profile, producers lack credibility in the quality of the oils produced, affecting their negotiating power.

“The international community is prepared to pay more for these oils, but our producers don’t have any negotiating power for their products without a credible certificate of analysis that tells you what the components are in the oil and that it’s a high-purity oil,” says Fernandes-Whaley.

Many local producers can’t get their oils tested internationally due to the prohibitive cost.

"Essential oils are classified as hazardous chemical substances, which results in higher shipping costs. They must be packaged according to specific regulations, and obtaining the necessary permits for customs clearance is mandatory. Additionally, duties may be imposed upon arrival, even if the oils are intended for analysis. “

“Sometimes the samples are withheld and what you thought was going to take three weeks will end up taking three months.”

NMISA’s testing is expected to provide a significant saving in costs for the local industry.

Growing the essential oils industry

According to the Southern African Essential Oil Producers’ Association (SAEOPA), the global market in essential oils is expected to be worth US\$ 14 billion by 2026.

Fernandes-Whaley says the move towards getting the accreditation was driven by the Department of Trade, Industry and Competition as well as by SAEOPA, which identified the testing gap in South Africa.

NMISA was selected as one of three test laboratories to work with the Global Quality Standards Programme (GQSP-SA) to strengthen the quality of essential and vegetable oil exports from South Africa. The programme was initiated by the United Nations Industrial Development Organization (UNIDO) and funded by Switzerland’s State Secretariat for Economic Affairs.

Setting the standard for indigenous oils

Fernandes-Whaley says SAEOPA also identified the lack of national standards for oils produced from indigenous South African plants as being a barrier to growth. A national standard provides a breakdown of the components and characteristics that an oil produced in a country must have to be regarded as a high-quality product.

“So, if people wanted to buy Cape chamomile (an aromatic oil used in perfumes) produced in South Africa, they don’t actually know what it’s supposed to have in it because there is no national standard,” says Fernandes-Whaley. A lack of national standards for indigenous essential oils means that oils from South African plants have been compared against standards for oils produced from plants grown elsewhere in the world. This can lead to South African oils being marked inferior simply because their composition is different. NMISA scientists also serve on the technical committee working on developing national standards for key indigenous oils.

Fernandes-Whaley says five indigenous oils have been prioritised for the development of these standards: Cape chamomile, *Lippia javanica*, *Helichrysum*, buchu and rose geranium. There has been progress, with a national standard for Rose Geranium having been released in 2021.

Setting a national standard is a rigorous process that requires a large number of about 80 separate samples of each oil from different regions, over years, to be analysed to identify its essential components.

To move more quickly towards the establishment of national standards, the GQSP-SA project has introduced a support scheme for SMMEs and emerging producers, managed through the National Laboratory Association, to partially cover the cost of testing. This will allow the programme to gather the data needed to compile national standards for indigenous oils, while also providing farmers with their first essential oil test certificates.

Essential oil producers can contact [NMISA](#) to find out about these new, accredited testing services.

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For more information or media inquiries, please contact:

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The National Metrology Institute of South Africa (NMISA) provides quality assurance to the nation's trading partners through holding, developing, maintaining, and disseminating national measurement standards, linked to the International System of Units (SI). It's a government-established entity, essential in negating technical barriers to trade by providing assurance that measurement standards in South Africa are globally compliant.

NMISA conducts its work at various stages of the value chains of different commodities and manufactured products for local and export markets.

NMISA holds the Secretariat for both the Sub-Regional Metrology Programme (SADCMET) and the Intra-Africa Metrology System (AFRIMETS) and serves as part of the board of directors on the AOAC INTERNATIONAL (AOACI) that is dedicated to promoting and advancing knowledge and best practices in analytical sciences in Africa.

NMISA occupies premises at the CSIR campus in Building 5, Brummeria, Pretoria.

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