

DOST-ITDI now offers sulfite testing for dried mangoes

Natural. Organic. Healthy. These are the products that are getting the most attention nowadays worldwide.



Trends in consumer preference show that demand for these products has been increasing in recent years. The popularity and market demand for dried fruit products, dried mangoes, in particular, continue to increase especially in the export market. Considering this scenario, it is a must that local dried mangoes pass the quality and standard of the stringent international market.

To do this, a method to test and determine the level of sulfite in locally produced dried mangoes and other food products for export should be made available.

Thus, the Industrial Technology Development Institute's (DOST-ITDI) Standards and Testing Division (STD) and the National Metrology Laboratory (NML) through its Metrology in Chemistry (MiC), worked together and validated the Optimized Monier-Williams method, a standard testing method for sulfite presence in foods that is generally accepted worldwide. From that validation, a Reference Material (RM) for sulfite testing in dried mangoes was developed for accuracy and traceability of measurements. The efficiency of the method was satisfactory compared with other local and international testing laboratories.



Researcher working on RM for sulfite testing

With these developments, DOST-ITDI's STD is now able to offer the sulfite (SO₂) test for dried mangoes.

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The availability of this new testing service resulting from research and development (R&D) will greatly help local dried mango processors comply with product quality and standards set by the international market. This is one big step to help avoid very costly product detention.

Like the Philippines, other countries also strictly monitor the presence of sulfite in export food products, as the sulfite level can be a technical barrier to trade when not compliant to standards. Product detention applies when sulfites are not declared in the label and analysis shows the presence of sulfites at levels greater than the regulated limit.

The Philippines' Food and Drug Administration (FDA) set the regulations on the allowable limit of sulfite content in food products at 3,000 mg/kg of dried fruits/mangoes as indicated in the Philippine National Standard, PNS/BFAD 15:2007.

Sulfite is a food additive that is used for the preservation of processed food products to increase its shelf life. It is widely used in processed foods such as dried fruits, canned vegetables, jams, and condiments. Sulfites also occur naturally in some foods, such as beer, wine, and fruit and vegetable juices.

However, it is known also to have adverse effects on human health at elevated levels. Hence, the government regulates its use. Sulfite-sensitive individuals have been reported to show adverse reactions ranging from dermatitis, flushing, abdominal pain, and diarrhea to life-threatening anaphylactic and asthmatic reactions.

DOST-ITDI started offering its sulfite testing service in June 2019. The testing fee is at PhP 2,200.00 per sample. A minimum of 500 grams of sample is required.

For those needing this testing service, and/or, for inquiries, contact the Standards and Testing Division at (02) 8837-2071 local 2197 or send an email at std@itdi.dost.gov.ph or visit their Facebook page, Standards and Testing Division-ITDI, or ITDI's DOST ITDI Updates. (*DDGotis & CCRamil, DOST-ITDI S&T Media Service*)

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