

Agriculture and Food Industry Alliance

On-Site Freshness Testing for Food



Anyone who has ever baked a cake with salt instead of sugar knows that the correct identification of visually similar substances such as sugar and salt has great significance in food preparation.

However, complex compositional analyses can also provide information about the quality, ripeness, or freshness of products. Therefore, **Fraunhofer IPMS** is researching

and developing tiny energy-efficient scanner systems that enable non-contact and mobile freshness testing on site.

Their use in the food sector can not only ensure quality, but also make an important contribution to environmental protection.

Thanks to the timely detection of deteriorating freshness throughout



the entire supply chain, food losses can be minimized. And consumers are less disappointed when the avocado that looked tasty in the store turns out to be overripe at home.

Freshness testing using near-infrared spectral analysis

The analytical instruments developed by **Fraunhofer IPMS** are based on near-infrared (NIR) spectral analysis, which is already a proven and highly accurate method in laboratory use.

The use of micro-electromechanical systems (MEMS) now enables a greatly reduced size and thus integration into handheld devices, tablets or, prospectively, even into smartphones.

For further information, please follow the QR code.

