

LAB-X

Quality Control of Food Products: Safe testing and immediate feedback

This food manufacturer has been producing tinned foods, such as soups, sauces and pastes for over 100 years. As an established and popular brand, they must balance customer taste expectations against strict regulations regarding salt content in food.

Salt levels in food have in the past been measured by direct silver nitrate titration. However, this specialized method is more suited to a laboratory environment, rather than a production one, especially where food is produced. The challenge for the manufacturer was to find another testing method that was suitable for a food production environment, give the accuracy needed to meet salt regulations and fast enough to maintain continuous production. Alternative methods were trialed, but all struggled to detect salt levels against the complex range of ingredients used across all the recipes.

OBJECTIVES:

- | One single test to establish salt levels across all products
- | Method that is safe within a food environment
- | High accuracy to comply with strict legislation

RESULTS:

- | Accurate and precise readings
- | Fast results for rapid production release
- | No rejections of finished goods for out of spec salt content

“Thanks to the LAB-X, we have had no isolations of finished goods for out of spec salt.”

Thankfully, the LAB-X benchtop x-ray fluorescence (XRF) analyzer by Hitachi High-Tech provided the solution. It works by detecting the presence of chlorine from the salt in the food and gives an accurate reading that is converted into salt content. It was the only instrument that our customer tried that could reliably measure salt in complex sauces and soups.

Salt content tests are carried out on incoming ingredients, such as paste or cheese, and at final inspection before the finished food is packaged into tins or jars. Testing is also used to decide whether a made-up sauce can be released into production. And since using the LAB-X, this manufacturer has seen a reduction in the amount of product they've had to reject before shipping.

RESULTS WITHIN 2 MINUTES FOR RAPID RELEASE OF RAW MATERIALS

Thanks to the ease of use of the LAB-X, there's no need to have dedicated personnel using the equipment. All operators who are involved in making up recipes can use the LAB-X for a salt content test. A reading takes up to two minutes, which means that batches of incoming food can be released into production and made-up sauce can be confirmed as suitable for canning almost immediately.

IMPROVED QUALITY CONTROL

The Hitachi High-Tech LAB-X series of benchtop XRF analyzers are designed for busy production environments where quality must be controlled to tight specifications for every batch. Containing powerful optics and detection technology, the LAB-X has a small footprint and rugged exterior, ensuring it can slot easily and safely right alongside manufacturing activities. Easy to use with intuitive software and



built-in safety features, the LAB-X gives maximum uptime, ensuring you can get instant feedback on the quality and composition of your products whenever you need it throughout the production process.

LAB-X BENCHTOP XRF ANALYSER – EVERY SHIFT. EVERY TEST. EVERY TIME

For over 45 years, our benchtop XRF analyzers have been counted on for reliable analysis in production control and testing laboratories.

The LAB-X X-ray fluorescence spectrometers are the workhorse of many production facilities and laboratories worldwide, delivering high accuracy and precision within a rugged, durable and compact instrument.

If you'd like to see the LAB-X in action visit www.hitachi-hightech.com/hha or book a demo.

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