



ORACLE™ for Fat Analysis in Any Food

Highly Versatile Technology for Contract Laboratories



Universal NMR Fat Analyzer

No Method Development

30-second Analysis



ORACLE™

Rapid NMR Fat Analyzer

The ORACLE™ is a rapid time domain NMR (TD-NMR) instrument incorporating breakthrough technology that allows for direct determination of fat/oil content in any sample. Unlike other rapid techniques, the ORACLE is able to completely isolate the detection of fat in complex matrices which eliminates the need for calibration development. Operation of the ORACLE is as simple as the touch of a button and removes operator-to-operator variability entirely.

100 tests per day will result in:

- Savings of 16,000+ labor hours per year
- Reduced consumable costs of \$110-240K per year
- No more re-testing due to out-of-spec results
- A savings of 3500 L of solvent usage

Validation

- AOAC 2008.06 – Moisture and Fat in Meats
- AOAC PVM 1:2004 – Moisture/Solids and Fat in Dairy Products
- Independently validated by Actalia Cecalait

Analyze any food sample accurately in 30 seconds with no calibration curve or method development.

At the touch of a button, ORACLE can analyze fat in any food sample with reference chemistry accuracy, without any prior knowledge of the sample matrix or composition. Simply press the run arrow and ORACLE delivers an exceptionally accurate and precise fat result in 30 seconds. Food applications include but are not limited to the lists below.

Meats

Beef
Chicken
Cod
Duck
Lamb
Pork
Salmon
Tuna
Turkey
Venison

Dairy

Butter
Cheese
Egg Whites
Heavy Cream
Ice Cream Mix
Milk
Powdered Dairy Products
Sherbet
Sour Cream
Yogurt

Processed

Chips & Crackers
Coffee Creamer
Cookies
Dough
Dressings
Frankfurter
Mayonnaise
Noodles
Nutritional Drinks
Peanut Butter

Agricultural

Almond Products
Coconut
Cocoa
Chick Pea
Corn Germ
Feed Grains
Oats
Plantain
Saw Palmetto
Wheat Flour

Other

Chocolate
Dry Dog Food
Energy Drinks
Feather Meal
Fish Meal
Gravy
Non-dairy Creamer
Nougat
Whey
Rice Powder

Unmatched repeatability vs. wet chemistry techniques

During the validation process, an exhaustive list of sample types were examined spanning a range of ca. 0.01 – 100% fat. ORACLE was able to match reference chemistry (within error) and was more repeatable than reference chemistry for all samples.

Automated high-throughput processing

Can be paired with a robotic auto-sampler for high-throughput laboratories. Process and analyze up to 100 samples unattended.

Cost savings

ORACLE receives IFT17 Food Expo Innovation Award for demonstrating time and cost benefits and eliminating use of chemicals.

Test Method	Cost per Test	Analysis Time
Soxhlet	\$12 – \$14	4 hours
Mojonnier	\$11 – \$13	90 minutes
ORACLE	\$0.96	1 minute



ORACLE will fit right into your workflow.

ORACLE is so easy to use, there is no chemist required. It can be used in a laboratory, or at-line on a production floor. All data can be exported to USB or LIMS (Laboratory Information Management System) networks for easy viewing.

Testimonials

“The CEM ORACLE Fat Analyzer has demonstrated the ability to eliminate daily calibrations used with previous technology for a broad range of samples while maintaining high sample accuracy and precision. As one of the global leaders in food testing this is very beneficial for our testing needs.”

Timothy Lumb / Chemistry Manager
Food & Pharmaceuticals ALS
Chatteris, Cambridgeshire, UK

“The ORACLE system is easy to use. Only simple tests have to be performed to check the device operability (as long-term stability for example). The ORACLE instrument presents a good performance of repeatability for all the products and below reference method limits...bringing to the conclusion, the instrument is very robust.”

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