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ZELTEX[®] ZX-50

Portable, Battery-Operated

Near-Infrared Whole Grain Analyzer

For analysts
...Where you need it most
...When you need it most™



Portable, Affordable, and Profitable

For In-Field Measurement of Protein, Moisture, and Oil

The Zeltex ZX-50 Portable, Battery-Powered Whole Grain Analyzer

Provides the In-the-Field Data to Manage and Increase Crop Yield, and Profits ...

Here's How:

Portable, Accurate, State-of-the-Art Technology

The ZX-50 Whole Grain Analyzer was developed to provide today's farmer with a *completely portable*, state-of-the-art tool for analyzing grain protein, moisture, and oil concentration critical to the profitability of each harvest.

Highly accurate near-infrared spectroscopy delivers grain analysis *where you need it most, when you need it most*—to separate harvests from different fields for highest return at the grain elevator.

The ZX-50 has been specially designed for rugged in-the-field use and can be operated without problem on the combine, tractor, pickup or while walking around the field. The ZX-50's total solid state design uses no motors, no gears, no light bulbs or other mechanical devices that are failure prone. An optional aluminum carrying case allows the ZX-50 and all accessories to be quickly and easily transported from one location to another.

The ZX-50 displays protein and oil both on an *As-Is* basis and a Constant Moisture (CM) basis. With the optional printer, all results can be printed out including time and date of the test.



Simple, Easy to Use Operation

The ZX-50 requires no special skills to operate. Simply pour the whole grain to be analyzed into the ZX-50's sample holder and place it into the analyzer. No special

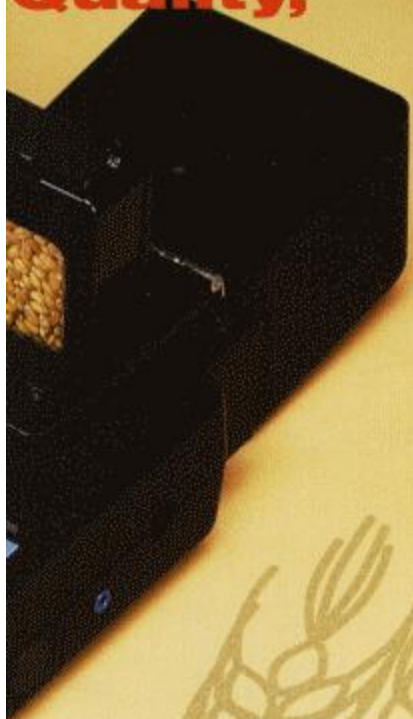
sample preparation is needed and the integrity of the sample is maintained with no waste or chemical by-products.

Once activated, the ZX-50 quickly measures the grain's protein, moisture, and oil concentrations and displays them on the analyzer's built-in LCD display in less than a minute.



y-Operated

You Need Quality,



Outstanding Operating Features for Long Term Reliability and In-the-Field Use

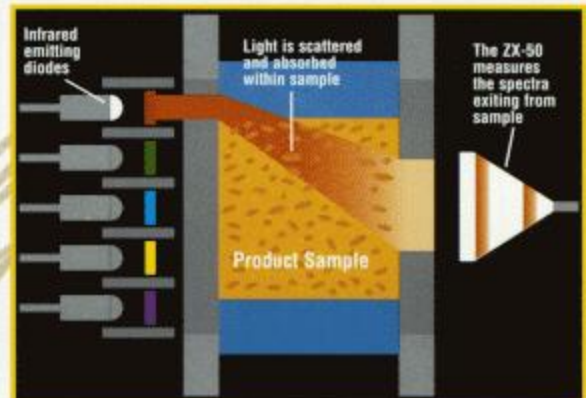
The ZX-50:

- Easy to use
- Completely portable—can be used with (6) 1.5V "AA" alkaline batteries or AC/DC adaptor
- Provides unmatched reliability (no moving parts to fail or break)
- Measures a large 100 gram sample (no sample preparation, damage or chemical by-products)
- Displays results in under 1 minute
- Accurately measures at extreme moisture levels
- Measures multiple constituents simultaneously
- Comes precalibrated for HRS wheat and one additional grain
- Has a built-in RS-232 port for sending data to a PC for further analysis or printing
- Available with numerous options including:
 - Printer
 - Rugged aluminum carrying case
 - Up to 8 additional calibrations, 3 constituents each
 - Full calibration analysis software
 - 30 mm sample cup (required for corn analysis)
 - 20 mm sample cup (required for soybean analysis)
 - 10 mm sample cup (required for small oil seed analysis)

How it Works: Applied Science in Measurement

Diffuse Transmittance

Light energy that enters the sample is scattered and absorbed within the sample. The ZX-50 measures the spectra exiting from the sample and directly displays the product's constituent concentrations.



Specifications

Function

Field analysis of whole grain for protein, moisture, oil, and other constituents.

Available Options

Data Analysis Software	Full calibration software
Additional Calibrations	Up to eight (8) with three (3) constituents each
Printer	Mates directly to ZX-50 or can be linked by cable; provides hard copy for time, date, sample number, moisture, oil, and protein analysis
Additional Sample Cup	Required for some grains
Carrying Case	Aluminum; holds ZX-50, sample holder, and accessories



Optical Capabilities

Spectrum Range	12 filters covering wavelengths from 893 to 1045 nm (standard)
Scan Speed	Up to 10 scans per second
Optical Range	0 to 6 AU
Resolution	0.0001 AU
Stability	0.05 Milli-AU
Measurement Modes	Diffuse transmittance
Measurement Time	Variable (typically under 1 minute)
Measurement Data	Log 1/T value; 12 primary wavelengths

Sample Information

Sample Size	100 grams approximately
Sample Holder	Adjustable, reusable 5-30 mm cuvette for different grain sizes
Sample Preparation	None required
Sample Destruction	None
Measurement Range	From 1.0% to 95%

Physical Data

Dimensions	10.5" x 4.75" x 3" (26 x 12 x 9 cm)
Weight	3 lbs. (1.5 kg)

Installation Data

Power Requirements	Batteries: (6) alkaline 1.5V "AA", AC/DC Adaptor: 120 to 240 VAC, 50/60 Hz
Power Consumption	750 mw

System Capabilities

Data Transfer	Via RS-232 port for interface with PC
Results	Approaches lab accuracy when calibrated to official laboratory tested samples
Calibrations	Standard HRS wheat and one additional grain. Capacity to store ten (10) calibrations
Temperature Compensation	Built-in: Instrument 5°-45°C (45°-110°F) Sample -10°- 45°C (20°-110°F)
Outputs	LCD display, optional printer

Other Zeltex Products

Zeltex 800 Whole Grain Analyzer

- Lab accurate results in under 1 minute
- Easy-to-use, one button operation
- Analyzes whole grain (wheat, barley, soybeans, rice, corn, etc.)
- Measures protein, moisture, oil, and other constituents
- Large LCD display and RS-232 output to PC
- Stores up to 20 calibrations with four 4 constituents each
- Designed to meet NTEP requirements
- Thousands in use at grain elevators worldwide



For analysis

...Where you need it most
...When you need it most™

Zeltex[®]
Inc.

