

# Specifications

## Function

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

## Includes

PDA ..... For collection and and display of grain analysis  
PDA Memory Card ..... For PC data loading  
Software ..... Full Calibration Software  
..... Mapping Software  
Calibrations ..... Precalibrated for wheat (Optional Calibrations: Barley, Corn, Soybeans)  
GPS Locator ..... Accurately records the location of each measurement  
Mounting Template ..... For fast, easy installation

## Optical Capabilities

Measurement Mode ..... Diffuse transmittance  
Spectrum Range ..... 14 filters covering wavelengths from 893 to 1045 nm  
Optical Range ..... 0 to 6 AU  
Resolution ..... 0.00001 AU  
Stability ..... 0.05 Milli-AU  
Measurement Time ..... Variable (Typically 12-15 seconds)  
Measurement Data ..... Log 1/T value; 14 primary wavelengths

## System Capabilities

Data Transfer ..... Via RS-232 port for interface with PDA  
Calibrations ..... Standard HRS wheat. Capacity to store ten (10) calibrations  
Temperature Compensation ..... Built-in: Instrument 0° - 45° C (32° - 110° F) Sample -10° - 50° C (20° - 120° F)  
Outputs ..... RS-232 to PDA

## Sample Information

Sample Size ..... 300 grams (approximately)  
Sample Pathlength ..... Adjustable (15-25 mm)  
Sample Preparation ..... None required  
Sample Destruction ..... None  
Measurement Range ..... from 1.0% to 95%

## Physical Data

Dimensions ..... 23" X 11" X 7"  
Weight ..... 27 lbs.

## Installation Data

Power Requirements ..... 12 Volts DC on clean power line  
Power Consumption ..... 10 amps max

## Other Zeltex Products

### ZX-50 Near-Infrared Portable Grain/Food Analyzer

- In-field measurement of protein, moisture, oil, and other constituents
- Uses (6) 1.5 V "AA" batteries
- Measures large 100 gram samples and concentrations from 1.0 to 95%
- Displays results in under one minute
- Whole grain analysis-no grinding and little or no sample preparation necessary
- Optional printer, aluminum carrying case, data analysis software, and up to eight additional calibrations-three constituents each



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# AccuHarvest

## On-Combine Grain Analyzer

Protein, Moisture and Oil  
Analysis WHILE You Harvest

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



**Zeltex**  
Inc.

# The New Reality for Precision Farming



## Calibrations Are Available For:

Wheat  
Barley  
Corn  
Soybeans

## Everything You Need To Equip Your Combine With The Industry's BEST On-Combine Grain Analyzer

The AccuHarvest is designed to help today's precision farmer increase quality and increase profits.

The industry's first commercial on-combine grain analyzer can be fitted on to any combine.

The AccuHarvest includes:

- A patented sample analysis system that mounts on your combine's clean grain elevator
- A custom configured PDA (Personal Digital Assistant) to collect and record all data from the AccuHarvest .
- A GPS tracker to mount on top of the combine to allow precision field mapping
- Powerful analysis software that enables you to plot your fields and increase your profits.

### How Does it Work?

The AccuHarvest automatically samples grain four to five times per minute (on average) as you harvest. The AccuHarvest's patented sampling technique provides you with accurate, real-time grain analysis while your combine is moving through the field.

Protein, moisture, and oil are displayed and saved on a PDA that is located in the cab. After combining, the data on the PDA can be quickly and easily downloaded to a PC for further analysis.

**Increase Quality...**

**...Increase Profits**

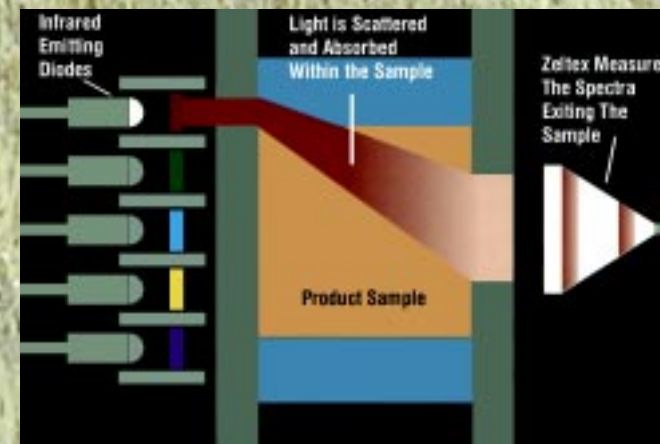


## How Does It Work?

### Applied Science in Measurement

#### Diffuse Transmittance

Light energy that enters a product is scattered and absorbed within the product. The AccuHarvest analyzes the spectra that exit from the products and measures constituent concentrations.



## The New Reality of Profitability in Precision Farming

Until now, profitability has been the *promise* of precision farming. The AccuHarvest makes that *promise* a **reality**.

- Segregation of crops by quality is now a **reality**. The AccuHarvest will display the average value of the bin for protein, moisture, and oil.
- Fast, efficient protein mapping is a **reality**. Mapping of protein allows the most efficient use of fertilizer for next year.
- Real-time analysis of your grain is a **reality**. Enables you to harvest for best segregation and quality.

### Includes Mapping Software

The AccuHarvest allows you to map your fields to determine where you are getting the best protein, moisture, and oil as you harvest.

Tracking and mapping the grain quality from this year's harvest allows you to use nitrogen more efficiently for next year's planting to further improve the quality and profitability of your harvest.

### Comparison of Lab Protein vs. AccuHarvest Protein Maps of a North Dakota Field

