OMEGANALYZER G

The OmegAnalyzer G™ is the workhorse of Bruins Instruments NIR grain analyzers. The "G" is a versatile instrument for grain analysis and is capable of handling grain and seed such as wheat, barley, corn, rice, soy, rapeseed and more. This instrument offers USA NTEP certification and a host of upgrade options and accessories.

Typical Applications

Whole grain and seed analysis including: corn, rice, wheat, barley, oil seeds, etc.   Optional Micro Cell measures flour, powders, and small amounts of grain. Universal calibrations are available for protein, moisture, fat, starch, fiber, gluten, sedimentation….

Our calibration services can develop calibrations for almost any significant component or property for your particular product.

Key Features

- NTEP certified*
- Variable pathlength from 8 to 30mm to accommodate a variety of grain and seed
- ~50 second analysis time with 16 subsamples
- Fully transferable calibrations between instruments

Options

Grain density – This optional accessory integrates with the instrument to automatically provide grain density which is incorporated into the report.

Micro Cell – For measuring flours, powders, and small amounts of grain by transmission available in pathlengths from 3-30mm.

Temperature – Measures the temperature of the grain which is incorporated into the report.

Specifications

Dimensions: 580 X 400 X 470 mm (22.8 X 15.7 X 18.5 inches)
Weight: 40 kg (88 lbs.)
Wavelength range: 730-1100nm transmission ● .5nm scan increment
Sample Presentation: automatic feed with multiple sub-sample measurements

*The OmegAnalyzer G meets or exceeds the accuracy and performance requirements for Grain Analyzers as detailed in NIST handbook 44. A Certificate of Conformance, Number 09-058, was issued under the National Type Evaluation Program (NTEP) of the National Conference on Weights and Measures, certifying this model for commercial use on the following grains: (see NCWM website for details at www.ncwm.net)

Common Features to All Bruins Instruments NIR Analyzers

Key Instrument Features

Fully Transferable Calibrations – Bruins NIR analyzers are the only scanning instruments in the world where product calibrations can be transferred between ALL instruments without any adjustment of the calibrations or the instrument. The unsurpassed instrument linearity negates the use of non-linear calibrations, such as ANN, and instead can utilize robust statistically based calibrations such as PLS.

Research Grade Precision – The Bruins monochrometer has been developed and refined over 30 years with over 10,000 units delivered. They are used in some of the most demanding applications such as the measurement of optical laser filters, standards measurements, and military applications for quality control.

Industrial Grade reliability – Utilizing a single moving part, excluding the sampling systems, Bruins NIR analyzers are known to run reliably and accurately for years without any adjustments at all utilizing the original calibrations!

Double Beam operation – All Bruins Analyzers use a single channel, double beam mode of measurement that insures the highest precision. This is the same technique used on many research grade spectrophotometers. Double beam measurements always reference the sample measurement against an open beam measurement to eliminate the effects of drift due to environmental conditions or short and long term instrument variation.

Instrument Software

Omega Predict Software –Uses a high resolution color touch screen to guide the user through the simple process of running the measurements. All data from each measurement, including the full spectrum is logged into the Predict database. Password controlled administrative functions allow tailoring the menu to the exact level of operability for the user as well as configuring products and calibrations. Results and spectra are easily exported to a local network or USB device.

Omega Predict utilizes the industry standard GRAMS PLSplus/IQ multivariate analysis software for generating calibrations for virtually any product. Unlike some NIR analyzers, calibrations are based on sound statistical models that not only provide fully transferable calibrations, but can also reliably indicate bad samples or instrumental problems and can virtually eliminate incorrect or misleading results.

Omega Predict can also utilize calibrations developed on older filter based instruments using MLR which can easily be transferred to any Bruins NIR analyzer to get you up and running fast, without costly recalibration.

Omega-Pro analysis software - is a full-featured spectroscopy software available on the research grade InfraScan instrument.

Communications – Remote control and networking software included.

Instrument hardware

Integrated PC board with network and USB connectors. Solid state Industrial grade 2GB bootable flash memory drive for program and data storage. Optional external mouse/keyboard/monitor.

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