

High-Precision NIR Instruments Dedicated to Whole Grain Analysis

OVERVIEW

The Bruins Instruments' AgriCheck Series of near infrared spectroscopy (NIR) analyzers are cost-effective, high-performance instruments with specific calibration libraries dedicated to analyzing whole grains, from wheat and corn to soybeans, sorghum, rice, and others.

Every day, hundreds of AgriCheck analyzers are trusted to measure incoming grain, in-process samples, and final products for moisture, protein, and starch, as well as oil, fiber, gluten, zeleny, amylose, FFA and other parameters depending on product type. The AgriCheck provides rapid, accurate, and reliable measurements of quality at an attractive price point for growers, millers, and processors.

APPLICATIONS

AgriCheck models are designed to analyze most types of whole grain and seeds, including:

- Wheat
- Durum
- Barley
- Corn
- Soybeans
- Rapeseed (Canola)
- Brown rice
- Milled rice
- Rough rice
- Oats
- Rye
- Triticale
- Sorghum



AGRICHECK FEATURES

- Highly precise patented linear monochromator design provides years of reliable measurements with minimal routine maintenance
- Intuitive software and a large touchscreen make the analyzer easy to use with minimal required training
- Optional Test Weight module determines the specific weight of the grain



VERSATILITY TO MEASURE EVERY TYPE OF WHOLE GRAIN

Every AgriCheck model comes standard with a simple funnel and automated sample wheel for the transmission analysis of most grain types. Depending on the application, additional models are available that add the capability to analyze wet or small sample types, or granular processed materials.

AgriCheck calibrations have been developed from years of samples collected from many geographical regions to ensure your quality specifications are being met for incoming and outgoing grain.

Three configurations of AgriCheck are available:



AgriCheck

- General purpose for the measurement of whole grains
- Easy to use with quick and accurate results
- Automatic feed with multiple sub-sample measurements
- Measures moisture, protein, oil, starch, fiber, gluten, Zeleny, amylose, FFA and others depending on the product



AgriCheck XL

- Measures all kinds of whole grain, oil seeds, and feed products, along with higher-moisture samples (up to 60% moisture) like wet grain and green malt
- Able to analyze small amounts of samples for plant breeding applications
- Unique additional top sample presentation dish for non-free-flowing, high-moisture, or very small grains



AgriCheck Plus

- Measures all kinds of whole grain, oil seeds, flour, and feed products
- Includes dual optics to analyze samples with either transmission or reflectance methods
- Reflectance cell allows you to measure ground products and pastes
- Ideal for use in mills or processors to measure incoming grain and processed flours or meals

MEASUREMENT OPTIONS FOR ALL STEPS OF GRAIN PROCESSING

The standard sampling method every AgriCheck employs to analyze whole grains is an automated sample feed and transmission analysis. In this mode, the user fills the sample funnel with grain, and the automated sample wheel feeds subsamples through a transmission cell, where an NIR signal penetrates the entire whole grain sample to acquire reproducible analysis of important constituents. This is the industry standard for whole-grain analysis and provides the most accurate and repeatable results for the majority of grain types.

While the automated sample feed and transmission is best for the majority of grain testing, certain sample types or processed samples are better analyzed with other methods.

Analyzing high moisture grains, very small grains and seeds (like rapeseed or millet), or small-quantity samples for plant breeding?

- ✓ The versatile **AgriCheck XL** has a second transmission sample chamber on the top of the instrument, as well as a selection of optional sample dishes to reliably analyze these sample types in transmission.

Analyzing grains that are processed into a powder or paste?

- ✓ The **AgriCheck Plus** includes an additional rotating reflectance dish on top of the instrument and a reflectance detector (spectral range of 1400-2500 nm) for optimal measurements of powdered, granular, and paste sample types. Incorporating both transmission and reflectance measurements makes AgriCheck Plus the ideal solution for mills and processing facilities for analyzing both incoming whole grains and ground processed products.

SELECT THE RIGHT AGRICHECK FOR YOUR GRAIN

Model	Standard Grains	Both Small and Large Grains	Wet Grains	Small Sample Size	Powered and Granular Samples
AgriCheck	✓				
AgriCheck XL	✓	✓	✓	✓	
AgriCheck Plus	✓				✓

ORDERING INFORMATION

The AgriCheck series analyzers are available in three pathlengths for the standard transmission sample wheel. This must be specified at the time of ordering.

- 18 mm for barley, oats, rye, and wheat
- 22 mm for durum, rice, soybeans, and wheat
- 30 mm for corn, rice, and soybeans

MODELS

Part Number	Description
BRU-01	AgriCheck Grain Analyzer. Includes funnel and spare lamp.
BRU-02	AgriCheck Plus Flour and Grain Analyzer. Includes funnel, 48 mm and 96 mm sample cups, sample cup adapter, sample cup cover, and spare lamp.
BRU-03	AgriCheck XL Versatile Transmission Grain Analyzer. Includes 25 mm and 7/18 mm deep sample dishes and adapter, and spare lamp.

ACCESSORIES

Part Number	Description
BRU-CAL-01T	Transmission calibration for one product type. (Must specify)
BRU-CAL-01R	Reflectance calibration for one product type. AgriCheck Plus only. (Must specify)
BRU-HLW-001	Test Weight module – optional accessory to determine the specific weight of the grain.
BRU-03-90-11-00	Sample Cup for AgriCheck XL: Combination 18 / 7 mm for the Analysis of Most Grain Types Including Wheat, Barley, Soybeans, Rice, Rye, Oats, and Rapeseed.
BRU-03-90-10-00	Sample Cup for AgriCheck XL: 25 mm for Large Grains Such as Corn and Soybeans.
BRU-02-90-11-00	Sample Cup for AgriCheck Plus: 96 mm Reflectance Measurements for Flour, Powders, and Pastes.
BRU-02-90-09-00	Sample Cup for AgriCheck Plus: 48 mm Reflectance Measurements for Flour, Powders, and Pastes. Black
BRU-02-90-08-00	Sample Cup for AgriCheck Plus: 48 mm Reflectance Measurements for Flour, Powders, and Pastes. Silver
BRU-22A-18-1	Spare Lamp for AgriCheck Series

SPECIFICATIONS

Dimensions	385 x 420 x 385 mm (15.2 x 16.5 x 12.6 in)
Weight	AgriCheck: 21 kg (46 lbs); AgriCheck Plus: 23 kg (52 lbs); AgriCheck XL: 24 kg (53 lbs)
Voltage	220-240 V or 100-120 V 50/60 Hz
Power	45 W
Analysis Time	45 S
Sample Size	650 ml
Analysis Principle	Scanning Monochromator; Transmission for All AgriCheck Models; Optional Reflectance Cell for the AgriCheck Plus
Sample Presentation	Automatic Feed with Multiple Sub-Sample Measurements
Pathlength	Fixed. 18, 22, or 30 mm. Must Specify at Time of Order
Wavelength Range	730-1100 nm (730-1100 nm and 1400-2500 nm for the AgriCheck Plus)
Data Increment	0.5 nm
Interfaces	USB, Ethernet, Centronics
Protection	Dust and Humidity Protected

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