

Product Sheet

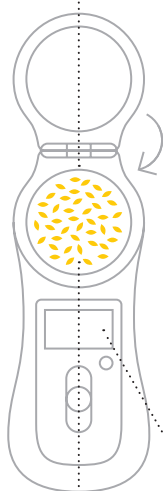
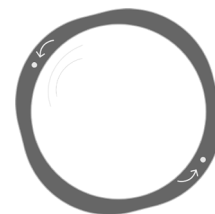
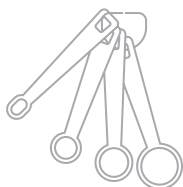
GrainSense Go Grain analyzer

The GrainSense Go analyzer measures the quality of cereal grains and other crops in seconds: **protein, moisture, carbohydrates, and oil contents***

* Percentages are calculated on a dry, wet or fixed basis, based on country guidelines.



Sampling tray

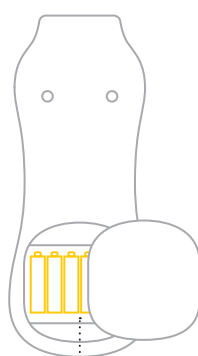


Kernels

Integrated sphere



LCD display



AA batteries

The technical principle is **Near-infrared (NIR) spectroscopy** in the so-called third overtone wavelength range. This technique has been used in laboratory instruments for years. GrainSense is the first to realize such an instrument in a handheld format.

Because of the **patented sampling technology** (grain inside an “integrating sphere”) the light intensity arriving at the detector is several hundred times higher than otherwise possible. This enables the building of a **small, battery-operated analyzer, certified for the use of rechargeable AA batteries.**





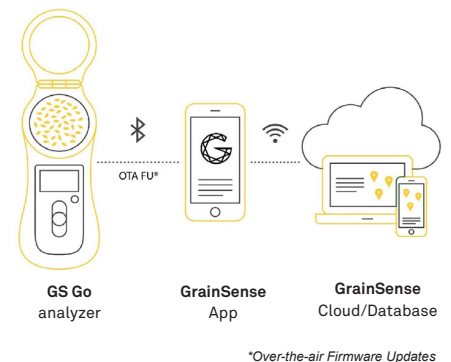
Technical specifications	
Size	Hand-held (footprint 270 mm x 115 mm)
Weight	820 grams (without batteries)
Batteries	6 x AA batteries labeled with "for industrial use" / rechargeable batteries
Battery operation	50 to 100 measurements depending on battery quality and type of use
Measurement principle	Near infrared transmittance spectroscopy
Sample size	≈ 3 grams, depending on the size of kernels
Measurement time	About 30 seconds, including the Analyzer warm-up and the user loading the sample
Species (whole kernels)	Wheat, barley, oats, rye, rapeseed, sunflower seeds. Maize and soybean. Glassless tray is a necessary accessory for bigger kernels.
Operational conditions	+5 to +45 C 20 to 90 % RH (non condensing)
Storage temperature	-10 to +60 C
Protection	Designed for outdoor use - except raindrops on the sample tray will affect the moisture result
Bluetooth	LE 5.0
Language	Latin and non-Latin alphabets supported, symbols
Mobile application	Android/iOS

Customer support: support@grainsense.com

GrainSense
360° light penetration method
(integrating sphere)

- + Short measurement time
- + Enables small samples
- + Works with simpler and more affordable technology
- + Analyzer size can be small
- + Wider use than grain as other types of samples possible

The key components of the GrainSense solution are the GrainSense Go analyzer, mobile application, and cloud-based database:



- 1. The GS Go analyzer** measures the grain quality from a few kernels for any calibrated species. The protein, moisture, carbohydrates and oil contents are measured in a few seconds. The GS Go interacts with the GrainSense Mobile Application via Bluetooth and for Over-the-Air Firmware Updates (OTA FU).
- 2. The GrainSense App** connects with the cloud to upload calibrations and other settings to the GS Go analyzer and sends measurements results from the analyzer to the cloud-based database.
- 3. The GrainSense cloud-based database** and API store the measurement results and provide updated calibrations/settings to the GS Go analyzer (via Mobile application). The cloud services include access to the **GrainSense App** and the **GrainSense Dashboard**.

