GrainSense®

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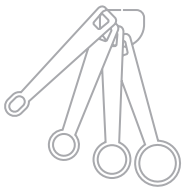
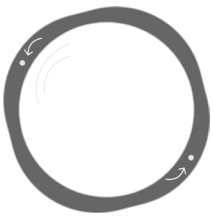
Product Sheet

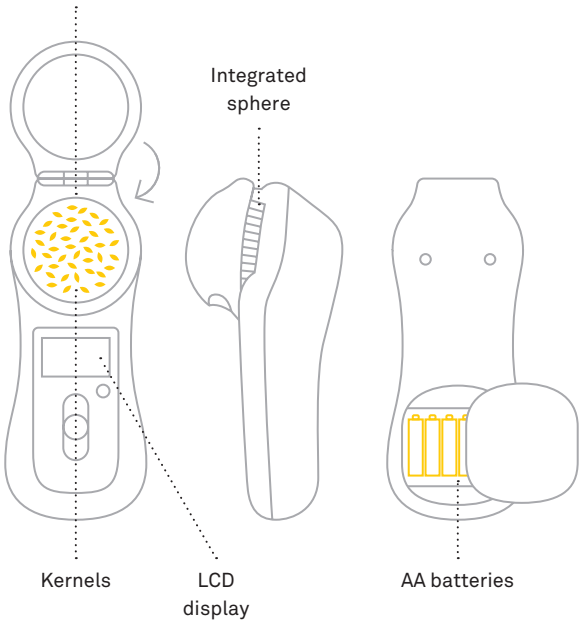
GrainSense Go
Grain analyzer

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.







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.**

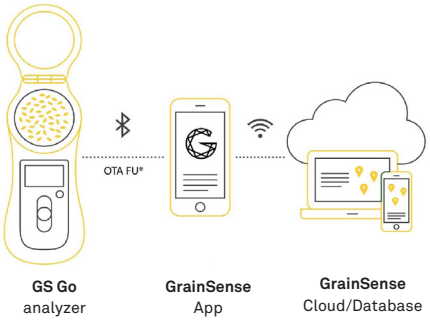
Technical specifications	
Size	Hand-held (footprint 270 mm x 115 mm)
Weight	820 grams (without batteries)
Batteries	6 x AA batteries labeled with “for industrial use” / rechargeable batteries
Battery operation	50 to 100 measurements depending on battery quality and type of use
Measurement principle	Near 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, soybean meal 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:



**Over-the-air Firmware Updates*

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**.

Product sheet subject to change without notice
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