

FAMO850

Portable Near Infrared Analyzer for Rapid Grain, Oilseed and Feed Analysis

FAMO850 is a compact portable near-infrared analyzer for rapid, nondestructive quality control of grain, oilseed and feed materials. Diffuse-reflectance NIR measurement, fast multi-scan analysis, Bluetooth communication and battery operation support practical use at receiving points, production facilities and field locations.

PORTABLE NIR

1000-1800 NM

6-10 S ANALYSIS

30 SCANS

BLUETOOTH

UP TO 24 H BATTERY

Product family: **FAMO850 Super NIR**

Instrument class: **Portable routine NIR analyzer**

Application scope: **Grain, oilseed and feed quality control**

Document type: **Technical Specification Sheet**



MEASUREMENT PRINCIPLE

NIR diffuse reflectance

WAVELENGTH RANGE

1000-1800 nm

ANALYSIS TIME

6-10 seconds

SAMPLE VOLUME

200 mL

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Informational technical sheet · Non-binding · Controlled electronic document

FAMO850 Portable Near Infrared Analyzer

Fast, nondestructive multi-component analysis for mobile and routine quality-control workflows

RAPID ROUTINE ANALYSIS

MINIMAL SAMPLE PREPARATION

MOBILE APP WORKFLOW

REPLACEABLE LAMP

FIELD-READY OPERATION

ANALYSIS TIME

6-10 s

Thirty scans per sample support fast routine decisions.

DETECTOR

Cooled InGaAs

Two-stage thermal stabilization at -20°C.

MOBILITY

Up to 24 h

Battery-powered operation with Bluetooth mobile-app connection.

Product overview

Commercial designation	FAMO850 Super NIR Portable Analyzer
Product identification	Model: FAMO850 · Sales product name: COLO Super NIR2300 Portable NIR Analyzer · SKU: PRO7084
Instrument category	Portable near-infrared analyzer for grain, oilseed and feed materials
Measurement concept	Near-infrared spectroscopy with diffuse-reflectance measurement
Routine parameters	Moisture, protein, oil/fat, ash, fiber, starch, sugar, dry matter and application-dependent parameters
Operation	Load the sample cup, close the measurement cover and start analysis through the connected mobile application
Connectivity	Bluetooth communication with mobile application

Target use	Receiving inspection, field screening, mill and feed-plant quality control, and agricultural research
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Technical specifications - main unit

Model	FAMO850
Measurement principle	Near-infrared spectroscopy, diffuse reflectance
Wavelength range	1000-1800 nm
Light source	Tungsten-halogen lamp; service life >10,000 h; user replaceable
Detector	InGaAs detector, cooled to -20°C with two-stage thermal stabilization
Optical bandwidth	10.95 ± 0.3 nm @ 1395.5 nm
Signal-to-noise ratio	>10,000:1
Analysis time	6-10 s (30 scans per sample)
Wavelength repeatability	<0.05 nm
Wavelength accuracy	±0.2 nm
Stray light	<0.1%
Sample volume	200 mL
Dimensions (L x W x H)	220 x 310 x 310 mm
Weight	Approx. 10 kg, without battery
Mains power	220 V ± 20 V, 50 Hz
Battery operation	Up to 24 h
Operating temperature	0-40°C
Operating humidity	5-85%
Communication	Bluetooth; mobile application

Measurement workflow and operation

Sample analysis workflow

- Fill the 200 mL sample cup with the selected material
- Position the sample and close the measurement cover
- Run 30 scans in approximately 6-10 seconds
- Review application-specific results in the connected mobile application

Portable operation

- Bluetooth connection avoids a fixed workstation
- Battery operation supports up to 24 hours of mobile use
- Compact housing is suitable for receiving points and field locations
- User-replaceable lamp simplifies routine maintenance

Operational note: Reported parameters depend on the installed calibration model and sample matrix. Calibration availability, measurement range and expected prediction performance must be confirmed for the intended application before order placement.

Key instrument features

- Fast and nondestructive near-infrared analysis
- Multi-component results from a single sample scan
- Compact portable design for field and plant workflows
- Cooled InGaAs detector for controlled optical performance
- Thirty scans per sample in approximately 6-10 seconds
- Bluetooth mobile-application workflow
- Battery-powered operation up to 24 hours
- User-replaceable tungsten-halogen light source
- No chemical reagents required for routine NIR measurement
- Calibration packages for multiple grain, oilseed and feed matrices

Application areas

Grain and oilseed receiving

Rapid screening of wheat, corn, soybean, sunflower, rapeseed, rice and related raw materials for moisture, protein, oil and other calibration-dependent quality parameters.

Feed and ingredient quality control

Routine control of meals, DDGS, compound feed and animal-feed ingredients at receiving, formulation and production checkpoints.

Milling and processing

Fast checks of flour, milled grain and starch-related materials to support batch consistency and production decisions.

Field and research work

Portable analysis for agricultural trials, field screening and quality-control tasks away from a fixed laboratory workstation.

Calibration scope by sample type

Sample group	Sample type	Typical reported parameters
Cereals and milled products	Wheat grain	Moisture, crude protein (as-is / dry basis), wet gluten, hardness, falling number, dry gluten
	Milled wheat	Moisture, crude protein (dry / as-is basis), crude ash, wet gluten
	Millet	Moisture, lysine, amylose, protein, fat, gel, vitamin B1
	Rice	Moisture, crude protein, amylose, eating quality
	Flour	Moisture, crude ash, wet gluten, crude protein, water absorption, falling number
	Corn grain	Moisture, crude protein, test weight, crude oil, starch, crude ash, crude fiber
Oilseeds, meals and cakes	Soybean grain	Moisture, crude protein (as-is / dry basis), crude oil (as-is / dry basis)
	Soybean meal	Moisture, crude protein, crude ash, crude oil, crude fiber
	Cottonseed	Moisture, crude protein, oil
	Cottonseed meal	Moisture, crude protein, crude ash, crude oil, crude fiber
	Rapeseed	Moisture, crude oil, glucosinolates, erucic acid, palmitic acid C16:0, eicosenoic acid, crude protein
	Rapeseed cake / meal	Moisture, crude protein (as-is / dry basis), crude ash, crude fiber, crude oil (as-is / dry basis)
	Sunflower seed	Moisture, oil
	Sunflower meal	Moisture, crude protein, residual oil
Feed and animal-protein materials	DDGS	Moisture, crude protein, crude ash, phosphorus, crude oil, crude fiber
	Pig feed	Moisture, crude protein, crude ash, calcium, phosphorus, salt, crude oil, crude fiber

Sample group	Sample type	Typical reported parameters
	Cattle feed	Moisture, crude protein, crude ash, calcium, phosphorus, salt, crude oil, crude fiber
	Poultry feed	Moisture, crude protein, crude ash, calcium, phosphorus, salt, crude oil, crude fiber
	Fish meal	Moisture, crude protein, crude ash, calcium, phosphorus, salt, crude oil, amino acids
	Meat meal	Moisture, crude protein, crude ash, calcium, phosphorus, crude oil
	Sow feed	Crude ash, moisture, crude protein, NaCl
	Feather meal	Moisture, protein (RProtein / Protein), VBN, protein ratio (RPratio), ash, fat, AV

Calibration notice: The manufacturer's calibration libraries use different sample-set sizes by material, including more than 400, more than 200 or fewer than 200 calibration samples. Exact matrices, parameter ranges, SEP/SEC performance and supplied calibration models must be confirmed in the approved quotation.

Commercial and supply information

Brand line	COLO.Science
Product designation	FAMO850 Super NIR Portable Analyzer
Product positioning	Portable rapid NIR analyzer for grain, oilseed and feed quality control
Typical users	Receiving stations, farms, mills, feed plants, processors and agricultural quality-control laboratories
Required quotation confirmation	Calibration package, supported matrices and parameters, battery and mobile-device supply scope, software access and standard accessories

Contact and support

MANUFACTURER AND SUPPORT

COLO Lab Experts

Polje ob Sotli 4, SI-3255, Slovenia

FAMO850 selection should be matched to the sample matrices, required parameters, calibration range, operating environment, battery workflow and expected reporting process.

QUICK CONTACT

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Request a quote or FAMO850 calibration guidance

Share the sample materials, required quality parameters, expected measurement ranges and intended operating location. COLO can help confirm the appropriate FAMO850 calibration package and delivery configuration.

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Binding specification notice: This document supports product selection and does not replace the binding quotation, order confirmation, manufacturer manual or approved calibration documentation. Confirm the supplied calibration package, supported matrices and parameters, measurement ranges, software access, battery configuration, included accessories and final delivery scope before ordering. Specifications may change without notice.