AT-Line NIR Analyzer | IR2000

Features

- Unique optical path design and 256 InGaAs linear array detector
- No sample preparation required
- Large spot, rotating scanning
- IP65 safety level
- HD touch screen
- Long life light source (more than 10,000 hours)
- Various data transmission interfaces

Application

Description

IR2000 is a newly developed multi-functional full-spectrum near-infrared analyzer based on InGaAs detector developed by Optosky. It is specially designed for fast and non-destructive analysis. It combines exceptional analytical accuracy with speed, ease of use and ruggedness. It is widely used and can detect almost all moisture, protein, fat, ash, starch and other parameters in solid samples.

Grain industry	Major cereals such as wheat, soybeans, rice, corn, rapeseed, and peanuts; Small grains such as sorghum and oats; cash crops such as flax, and cauliflower seeds.
	Measurable ingredients: Protein, fat, fiber, starch, amylose, fatty acid composition, various amino acids, gluten, hardness, sedimentation value, water absorption, etc.
Flour processing industry	Wheat, flour, bran,noodles and dough, etc.
	Measurable ingredients: Moisture, protein, fiber, sedimentation value, ash, hardness, gluten, water absorption, etc.
Meat products industry	Various meats and meat products
	Measurable ingredients: Moisture, protein, fat, ash, water activity, origin traceability, etc.
Feed industry	Semi-finished or final feed products, including pet feed.
	Measurable ingredients: Moisture, protein, fat, etc.
other industry	Grain storage, starch industry, medicine, tobacco
	Measurable ingredients: Moisture, protein, fat, etc.

Datasheet

1. parameter

Analysis parameters

1	Analysis time	6 seconds~30 seconds
2	Sample Volume	0.5~300g
3	Sample types	Solid samples：pellets、Flaky、powders、paste, etc.
4	Analysis parameters	moisture、protein、fat、fiber,etc.
5	Measurement mode	contactless ，Rotary scan
6	Sample area analyzed	Standard sample tray 154cm2 ，small plate 44cm2

Optical parameters

7	Detector	256(InGaAs Detector)
8	Wavelength range	950nm-1650nm
9	Wavelength accuracy	less than 0.05nm
10	wavelength repeatability	less than 02nm/2times ，or less than0.2nm/years
11	Bandpass	about 7nm
12	Spectral Resolution	0.1nm~10nm Adjustable
13	Noise Level	less than 20uA
14	scans number	100 times/second
15	Light source life	≥10000 hours

General parameters

16	Screen	10-inch high-definition touch screen with intuitive operating software
17	Ingress protection	IP65
18	communication mode	USB ，Network port
19	storage	8GB
20	Power requirements	110V~240V ，50/60Hz
21	Dimensions	500*400*500mm
22	Weight	10kg

2. working principle

In the near-infrared spectrum region, the absorption of near-infrared light is caused by the stretching vibration of hydrogen-containing atomic groups such as N-H, O-H, and C-H with higher energy in the organic matter contained in the measured substance. This principle can be used to perform corresponding Quantitative analysis of substances.

The instrument emits light through a light source, is collimated, and then splits the light through a spectroscope so that the light spot hits the sample vertically. After diffuse reflection, the light is collected through multiple surrounding optical fiber holes. Finally, the reflected light containing information is emitted through the optical fiber. Enter the spectrometer for analysis and calculation.

3. system structure

10-inch Touch Display

Sample Compartment

IR2000

OPTOSKY