

NIR DW-EXPEC1350

Near-infrared Spectroscopy

Introduction

DW-EXPEC1350 Analyzer is a universal mobile portable analyzer with a compact size, built-in rechargeable battery, mass storage device and LCD module. Through different measuring accessories, it enables non-destructive rapid testing of some physical and chemical components in particle, powder and liquid samples, which is widely used in inspection of textile fiber and food quality, as well as scientific research.



DW-EXPEC1350 analyzer
(with diffuse reflection probe)



Light source plane
diffuse reflection probe



Optical fiber diffuse
reflection probe



Cuvette rack

Measuring accessories

It provides a variety of measurement methods by connecting different types of probes and accessories.

- The light source plane diffuse reflection probe supports diffuse reflection detection mode, and sample testing of flake, particle, paste and powder, such as the non-destructive testing of cloth, fruits, grains, plastics, papers and tobaccos.
- Optical fiber diffuse reflection probe supports diffuse reflection and transflection detection modes. The former one is applicable to single-grain sample testing, such as non-destructive testing of small fruit products and on-site testing of meat. The other is for transparent liquid sample testing, including on-site testing of edible oil and fuel oil.
- The cuvette rack supports transmission detection mode, which is mainly used in liquid sample testing.

Annex name	Light source plane diffuse reflection probe	Optical fiber diffuse reflection probe		Cuvette rack
Test sample type	Cloth, solid particles or powder	Liquid (such as edible oil)	Single-grain seed, western medicine, plastic particle	Liquid, such as gasoline, wine, etc
Spot diameter	30mm	5mm	5mm	5mm
Optical path	/	2 / 5 / 10mm	/	2 / 5 / 10 / 50mm

Features

1. Stable and reliable portable solution
2. Abundant measuring accessories for different samples, ensuring easy probe replacement
3. Fast analysis speed, to detect multiple indicators simultaneously within 30 seconds
4. High measurement accuracy, close to the laboratory routine analysis
5. Completely non-destructive rapid testing of on-site samples
6. Built-in standard substance, with automatic diagnosis and fault prompt function
7. accuracy
8. Built-in mass storage device, to store analysis data and spectra
9. Built-in USB interface, to directly transfer data to the computer
10. RIMP software, to upload/download data and output analysis report
11. Software applicable to different management permissions
12. Easy to operate, even for non-technicians
13. Multiple power supply modes: DC 19V and built-in lithium battery
14. Small size, light weight (only 6kg)



Specifications

Dimensions (L × W × H)	(355 × 278 × 117) mm
Weight	<6 kg
Applicable samples	Solid and liquid samples, with various probes available
Assay method	Diffuse reflection and transflection detection
Light source power	Internal light source of 5V/5W; external light source of 5V/10W
Light source life	> 5000 hours
Detector	TEC refrigerated and temperature-controlled indium gallium arsenide (InGaAs) detector
Communication interface	USB2.0
Power supply	DC 19V adapter or built-in lithium battery (lifetime: up to 8 hours)
Wavelength range	1000-1800nm
Absorbance noise	<50uA
Wavelength accuracy	±0.2nm
Wavelength repeatability	<0.01nm
Spectral resolution	(10.95±0.3) nm@1529.5nm
Stray light	<0.15%
Analysis time	< 30 seconds
Number of storage model sets	Group 16
Number of indicators for simultaneous analysis	6
Stored spectrogram	Article 320
Stored analysis results	4000