

# Near-infrared spectroscopy

## EXPEC 1350 analyzer

EXPEC 1350 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.



EXPEC 1350 analyzer  
(with diffuse reflection probe)

### ■ Abundant 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 transfection 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.



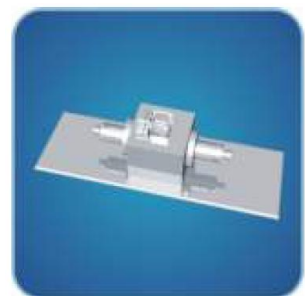
Light source plane diffuse reflection probe

### ■ Product features

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



Optical fiber diffuse reflection probe



Cuvette rack

■ Typical application scenarios



■ Specifications and parameters

| Name   | Specification   |
|--|---|
| 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 transfection 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  |

Measuring accessory parameters

| 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                         |