Datasheet

Multi-Function Pesticide Residue Detector | ATFD120

Features

- Accuracy: High detection accuracy.
- Speed: Single sample test in 15 minutes.
- Sensitivity: High sensitivity.
- Ease of Use: Intelligent operation.
- Self-Diagnosis: Automatic startup self-check.
- Automatic wavelength calibration.
- Real-Time Display: Shows instrument performance.
- Automatic Data Printing
- Software: Integrated with touchscreen.

Application

- Food Safety
- Agriculture process
- Edible oil
- Environment monitoring
- alcoholic beverages
- Additive testing

Description

ATFD120 has a wide range of applications, primarily including: fruits, vegetables, seafood, dried sea products, dried fruit products, milk, meat products, cooking oil, vinegar, soy sauce, chili, flour, alcoholic beverages, honey, preserved fruits, and other types of food. The specific testing items are as follows:

Pesticide residues, nitrites, nitrates, sulfur dioxide, formaldehyde, hydrogen peroxide, bleach, borax, protein, melamine, methanol, acid value, peroxide value, benzoyl peroxide, potassium bromate, sodium saccharin, sweeteners, acesulfame, sodium benzoate, potassium sorbate, soy sauce (hair dye), industrial acetic acid, total acid in vinegar, total acid in soy sauce, amino acid nitrogen, monosodium glutamate, iodine content in salt, propionaldehyde, sesame oil purity, volatile basic nitrogen, diseased meat, volatile basic nitrogen, histamine, phosphates, industrial alkali, malachite green, acid orange, basic orange, Sudan red, Rhodamine B, potassium alum, tea polyphenols, sesame oil purity, sodium thiocyanate, honey sucrose, fructose glucose, organophosphates, pyrethroids, carmine, allura red, amaranth, lemon yellow, sunset yellow, indigo, brilliant blue, heavy metal lead, heavy metal arsenic, heavy metal mercury, etc.

Model	Channels
ATFD120-12	12
ATFD120-24	24

1503 Bld. A04, 3rd Software Park, Jimei, Xiamen, 361005, China
Tel: +86-592-6102588

1. Parameter

Specification	Details
Wavelength Accuracy	±0.2 nm (Automatic calibration on startup)
Wavelength Reproducibility	≤0.1 nm
Stray Light	≤0.01% (T) at 360 nm
Absorbance Range	0.000 to 4.000 A
Transmittance Accuracy	±0.5%; Transmittance Reproducibility: 0.02% (Calibration report from provincial metrology institute)
Photocurrent Stability	0.4%/3 min; Stability: 0.001 A; Channel Error: 0.012 A
Operation Interface	7-inch industrial-grade true color capacitive touch screen; Full Chinese operating system; Software features data analysis, storage, statistics, and internet upload
Main Control Board Configuration	Android 8.0 or higher, USB 2.0, WIFI, 8-core processor, 2 GB RAM, 16 GB SSD
Light Source	Solid-state high-brightness imported LED light source, lifespan over 10,000 hours
Built-in Printer	Mini thermal printer; lifetime ribbon-free operation; Automatic printing of detection data including time, sample name, technician, data, and results
Additional Support	A4 report printing available; includes detection data such as serial number, test items, sample name, detection values, results, testing unit, inspection unit, inspector, relevant national standards, detection time
Power Supply	Directly uses 220V AC power; Built-in rechargeable lithium battery with over 4 hours of usage during power outage

2. Core Performance

Specification	Details
Detection Items	Includes but is not limited to pesticide residues, sulfur dioxide, formaldehyde, nitrites, bleach, borax, potassium alum, and nitrates. Total of at least 110 detection items.
Channels	12 channels; Any one channel can be used for comparison. The instrument allows simultaneous detection of 12 samples for any expanded or built-in test items. Supports multiple independent batches. (e.g., Channels 1, 3, 5 for one batch and Channels 2, 4, 6 for another, with each batch operating independently.)

1503 Bld. A04, 3rd Software Park, Jimei, Xiamen, 361005, China
Tel: +86-592-6102588

Light Sources	Each channel has 6 wavelength light sources: 410 nm, 460 nm, 520 nm, 550 nm, 590 nm, 630 nm.
Temperature Control	Built-in adjustable heating function; Temperature range: 25-60°C; Temperature accuracy: ±1°C.
Additional Detection Programs	Reserved for future project additions and interface for direct on-site project expansion. Built-in or expandable projects include organophosphates and carbamate pesticide residues with enzyme inhibition rate method, offering both national and ministry standards. Detection time: 1-3 minutes.
Simultaneous Sample Detection	Can simultaneously test 12 samples for any built-in or expanded test items. Users can independently add detection items and adjust standard curves. Standard curves can be set or adjusted manually on the instrument.
Detection Limits and Sample Management	Detection limits, sample names, and reference national standards can be modified directly on the detection interface as per the latest detection requirements, including expanded projects.
Sample Library and Search Functionality	Sample library includes ≥17 categories of agricultural products (≥240 common fruits and vegetables). Convenient search (by Pinyin initials, Chinese phrases, or keywords), add, and delete functions available. Detection interface shows absorbance difference and comparison values at the latest time.

3. Software Parameters

Feature	Description
Data Charts	Built-in charts: line, pie, 3D pie, and bar graphs. Query by project, type, unit, or date. (Demo available)
Windows Software	USB interface for testing, data upload, storage, and spectral analysis.
Access Control	User accounts with password protection for system login.
Standards	Latest national limits integrated; automatic result assessment and system editing.
Guidance	Includes operation videos and technical documents.
Info Module	National regulations, standards, production basis, and videos for daily compliance.
Task Management	Receives commands, auto-saves data; Android tablet supports hotspot for data upload to regulatory systems, with prevention of duplicate uploads. (Demo available)
Task Import/Export	Batch import/export (Excel, CSV, TXT formats).
Remote Updates	Supports remote push for updates.

1503 Bld. A04, 3rd Software Park, Jimei, Xiamen, 361005, China
Tel: +86-592-6102588