



UV-VIS SPECTROMETER

UV-VIS Spectrometer TT-1840

UV-VIS Spectrometer TT-1840 adheres to the ASTM D1840 Standard Test Method for Naphthalene Hydrocarbons in Aviation Turbine Fuels by Ultraviolet Spectrophotometry.

This testing procedure for naphthalene hydrocarbons is part of a set of tests used to evaluate the combustion properties of aviation turbine fuels within the kerosene boiling range. The determination of naphthalene hydrocarbon content is crucial because naphthalenes, upon combustion, tend to contribute more significantly to a sooty flame, smoke, and thermal radiation compared to single-ring aromatics.

APPLICATIONS

The primary application of this spectrometer is to determine the content of naphthalene hydrocarbons in aviation turbine fuels, in compliance with the ASTM D1840 standard. This is essential for evaluating the combustion properties of the fuel.

Due to its versatile technology, the spectrometer is also suitable for a broad range of other fields, including:

- Biological research
- Bio-industry
- Pharmaceutical analysis
- Environmental protection
- Food hygiene
- Clinical examination
- Health and epidemic prevention

FEATURES

- **Applications:** The UV-VIS Spectrometer TT-1840 is used in various fields including biological research, the bio-industry, pharmaceuticals, environmental protection, food hygiene, clinical examination, and health and epidemic prevention.
- **Wavelength and Bandwidth:** It has a wide wavelength range and offers customizable spectral bandwidths (5nm, 4nm, 2nm, 1nm, or 0.5nm) to meet pharmacopeial standards.
- **Design and Performance:** The instrument features an automatic and LSI (Large-Scale Integration) design for simplicity, enhanced scalability, and reliability. Its optimized optical system with high-performance sources and receivers ensures superior performance.
- **Measurement Modes:** The spectrometer supports various measurement methods such as wavelength scanning, time scanning, multi-wavelength determination, and optional features like DNA protein measurements. All data is shown on a 6-inch screen.
- **Data Handling:** Measurement data can be output to a printer via a USB interface. The device can also save parameters and data even when powered off.
- **Optional Features:** Users can add optional accessories like racks, stands, and colorimetric frames. PC control is also available for more precise and flexible measurements, and a standard curve editor simplifies operation.

TECHNICAL SPECIFICATIONS

1. Wavelength range: 190~1100nm
2. Bandwidth: Adjustable to 1.8nm, 1.0nm, 0.5nm, 1nm, 2nm, or 4nm
3. Wavelength accuracy: $\pm 0.3\text{nm}$
4. Wavelength repeatability: $\leq 0.1\text{nm}$
5. Photometric accuracy: $\pm 0.3\% \tau$ (0-100% τ), $\pm 0.002A$ (0-0.5A), $\pm 0.003A$ (0.5A-1A)
6. Stray light: $\leq 0.03\% \tau$ (220nm NaI, 340nm NaNO₂)
7. Stability: 0.0005A/h @ 500nm
8. Noise: $\pm 0.0002A$ @ 500nm
9. Photometric modes: T, A, C, E
10. Wavelength setting: Automatic
11. Photometric display range: -4 to 4A

12. Display: 6-inch high brightness blue LCD
13. Detector: Silicone photodiode
14. Light source: Deuterium lamp and tungsten lamp
15. Power requirement: AC 220V/50Hz, 110V/60Hz
16. Power consumption: 120W
17. Dimensions (L*W*H): 560*450*230mm
18. Weight: 28kg



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