



POLARIMETER - TORONAP50™ AUTO

Polarimeter - ToronAP50™ Auto integrates advanced automatic photoelectric inspection technology, offering accurate and reliable measurements with effortless operation. By detecting optical rotation, it enables the analysis and determination of density, content, and purity of various substances. This versatile instrument is widely utilized across pharmaceutical, petroleum, food, chemical, flavor, spice, sugar manufacturing industries, as well as academic and research institutions.

APPLICATIONS

The Torontech ToronAP50™ Auto is a high-precision instrument designed for the automated analysis of optically active substances. By precisely measuring the optical rotation, it provides a fundamental and quantitative determination of a substance's concentration, identity, and purity. Its integrated Peltier temperature control ensures that all measurements are performed under stable, standardized conditions, which is essential for achieving the accuracy required for stringent quality control and regulatory compliance.

This critical analysis is a cornerstone of quality and process control in:

- **Pharmaceutical Industry:** For the quality control of Active Pharmaceutical Ingredients (APIs) in full compliance with USP, EP, and other global pharmacopoeias, where specific rotation is a critical test for both chemical identity and chiral purity.
- **Sugar & Food Industry:** To determine the concentration and purity of sugars, syrups, and honey based on the International Sugar Scale (ISS), serving as a primary tool for quality control from raw material grading to final product release.
- **Flavor & Fragrance:** To verify the authenticity and quality of essential oils and flavor compounds by measuring their specific rotation, a key indicator that distinguishes natural, optically active sources from synthetic adulterants.
- **Chemical Manufacturing:** For the in-process control and final quality assurance of chiral chemicals and intermediates, ensuring that products meet their specified enantiomeric purity and concentration for use in advanced synthesis.

FEATURES

- **Peltier Temperature Control:** Automatically maintains the sample temperature within a range of 10°C to 50°C for consistent measurement conditions.
- **User Calibration System:** Equipped with standard polarization tubes and calibration software for user-initiated adjustments, ensuring precision over time.
- **Enhanced Touchscreen Display:**
 - **ToronAP10™ Auto:** Features a 5.6-inch TFT display.
 - **ToronAP10™ AutoPlus / ToronAP50™ Auto / ToronAP50™ AutoPlus:** Features an 8-inch TFT color touchscreen with an intuitive software interface for seamless operation and data collection.
- **Long-Lasting LED Light Source:** High-brightness LED light with a lifespan exceeding 100,000 hours eliminates the need for frequent replacements, reducing maintenance downtime

New Polarimeter Models: ToronAP10 AutoPlus & ToronAP50 AutoPlus

Introducing the **ToronAP10™ AutoPlus** and **ToronAP50™ AutoPlus**, featuring next-generation capabilities for enhanced usability and performance:

New and Improved Features:

- **Larger 8-Inch TFT Touchscreen:**
Powered by an innovative Android system for an intuitive and user-friendly interface.
- **Dynamic Timing Measurement and Atlas Display:**
Visualize the dynamic optical rotation changes of the sample in real-time, providing deeper insights into the measurement process.
- **Enhanced Connectivity:**

- **1 USB Port:** For connecting U-Disk, keyboard, or mouse.
- **3 USB Ports** (ToronAP50 AutoPlus): For expanded peripheral support, including U-Disk, keyboard, and mouse.
- **WiFi Connectivity:** Simplifies printer integration for easy data printing and documentation.

The ToronAP series redefines precision, reliability, and convenience in polarimetry, making it an indispensable tool for both industry professionals and researchers.

TECHNICAL SPECIFICATIONS

ToronAP10 Auto	ToronAP50™ Auto	ToronAP10™ AutoPlus	ToronAP50™ AutoPlus	
Measuring range	±89.99°Arc; ±259°Z			
Measuring Model	Optical Rotation; Specific Rotation; Concentration; Sugar Degree			
Min.reading	0.001°(optical rotation)			
Accuracy	±0.01º(-45º. optical rotation ≤+45º; ±0.02º (optical rotation□□ 45º or optical rotation□□ 45º)			
Repeatability (standard deviation)	0.002°(optical rotation)			
Min. Transmittance	1%			
Light Source	LED			
Wavelength	589.3nm LED			
Temperature Control	No	Peltier	No	Peltier
Temperature Control Range		10°C□ 50°C		10°C□ 50°C

Temperature Control Accuracy		0.2°C		0.2°C
Communication Port	USB; RS232	USB×3,RS232□ Wi-Fi	USB×3,RS232□ Wi-Fi	USB×3,RS232□ Wi-Fi
Data Storable	1000	8GB	8GB	8GB
21CFR Part 11	No	No	Yes	Yes
Display	5.6 inch	8 inch	8 inch	8 inch
Sample Cell	Up to 200mm	Up to 200mm	Up to 200mm	Up to 200mm
Graphic	No	No	4hours	4hours
Power	220V AC (±10%) 50Hz (110V is also available)	220V AC (±10%) 50Hz (110V is also available)	220V AC (±10%) 50Hz (110V is also available)	220V AC (±10%) 50Hz (110V is also available)
Calibration System	Option	Option	Option	Option



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