



POLARIMETER - TORONAP50™ AUTOPLUS

Polarimeter - ToronAP50™ AutoPlus incorporates cutting-edge automatic photoelectric inspection technology to deliver precise and reliable measurements with ease of use. This advanced instrument determines optical rotation, enabling the analysis of density, content, and purity of various substances. It is widely utilized in industries such as pharmaceuticals, petroleum, food, chemicals, flavors, spices, sugar manufacturing, and academia, including universities and research institutes.

APPLICATIONS

The Torontech ToronAP50™ AutoPlus is a high-precision polarimeter engineered for the most demanding quality control and regulatory environments. By providing a highly accurate measurement of optical rotation, it delivers a definitive analysis of a substance's concentration, identity, and chiral purity. Its integrated Peltier temperature control, advanced data management, and full compliance with FDA 21 CFR Part 11 make it the essential instrument for industries where data integrity and traceability are non-negotiable.

This compliance-ready analysis is a cornerstone of quality assurance in:

- **Pharmaceuticals & Biotechnology:** For the release testing of Active Pharmaceutical Ingredients (APIs) and excipients in cGMP environments. Its audit trail, user management, and secure data features are essential for meeting stringent regulatory requirements for both identity and chiral purity testing.
- **Food & Beverage (Regulated):** To perform official quality grading and purity analysis of sugars, syrups, and honey according to the International Sugar Scale (ISS), providing the traceable, secure data required for regulatory compliance and international trade.
- **Flavor, Fragrance & Essential Oils:** To authenticate high-value natural ingredients and detect economic adulteration by verifying their specific rotation, a key marker of origin and purity, with the robust data integrity required for quality certification.
- **Chemical & Agrochemical R&D:** For the development and scale-up of chiral compounds, enabling researchers to precisely monitor enantiomeric purity and reaction kinetics with a system that provides the data security and traceability needed for patent applications and regulatory submissions.

FEATURES

Peltier Temperature Control

- Efficiently manages sample temperature within a range of 10°C to 50°C using a Peltier system for accurate readings.

User Calibration System

- Includes standard polarization tubes and software for on-demand user calibration, ensuring ongoing precision.

Large Color Touch Screen

- Equipped with a vibrant and intuitive touch screen interface for seamless operation and data management.
- ToronAP10 Auto features a 5.6-inch TFT display, while ToronAP10 AutoPlus, ToronAP50 Auto, and ToronAP50 AutoPlus feature an upgraded 8-inch TFT display.

LED Light Source

- Long-lasting LED light source with a service life exceeding 100,000 hours, eliminating the need for frequent replacements.

Enhanced Features in ToronAP10 AutoPlus / ToronAP50 AutoPlus

Advanced Touch Screen Interface

- A sleek 8-inch TFT touch screen powered by the Android system simplifies operation for users.

Compliance with FDA 21 CFR Part 11

- Designed to meet stringent regulatory requirements for data integrity and security.

User Management System

- Facilitates user ID creation, deletion, and permission management for streamlined operations.

Dynamic Data Visualization

- Timing measurement and atlas display functionality provide real-time visualization of optical rotation changes.

Extensive Data Storage

- Offers 8GB of internal storage for robust data archiving and classification.

Enhanced Connectivity

- Features three USB ports for connecting U-Disk, keyboard, and mouse, as well as WiFi connectivity for direct printer integration.

With its comprehensive capabilities and user-friendly design, the ToronAP50 AutoPlus sets a new standard for polarimetry, empowering professionals across industries to achieve unparalleled accuracy and efficiency.

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	$\pm 0.01^\circ$ (-45°. optical rotation $\leq +45^\circ$; $\pm 0.02^\circ$ (optical rotation $\leq -45^\circ$ or optical rotation $\leq +45^\circ$)		
Repeatability (standard deviation)	0.002°(optical rotation)		
Min. Transmittance	1%		
Light Source	LED		
Wavelength	589.3nm LED		
Temperature Control	No	Peltier	No
Temperature Control Range		10°C~ 50°C	
Temperature Control Accuracy		0.2°C	
Communication Port	USB; RS232	USB×3,RS232~ Wi-Fi	USB×3,RS232~ Wi-Fi
Data Storable	1000	8GB	8GB
21CFR Part 11	No	No	Yes
Display	5.6 inch	8 inch	8 inch
Sample Cell	Up to 200mm	Up to 200mm	Up to 200mm
Graphic	No	No	4hours
Power	220V AC ($\pm 10\%$) 50Hz (110V is also available)	220V AC ($\pm 10\%$) 50Hz (110V is also available)	220V AC ($\pm 10\%$) 50Hz (110V is also available)
Calibration System	Option	Option	Option



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