



REFRACTOMETER - AUTO DIGITAL TT- REFRACTOMETER-70

Refractometer – Auto Digital TT-Refractometer-70 is equipped with a high-performance CCD light-sensitive component based on the Abbe principle. It precisely and automatically measures the refractive index (nD) of various liquid samples, including transparent, translucent, dark, and viscous substances. Additionally, it determines the sugar content (Brix) of sugar solutions.

APPLICATIONS

This device is designed for accuracy, reliability, speed, and ease of use, meeting the standards of FDA 21 CFR Part 11. The Refractometer-70 model introduces a cloud service system, enabling seamless data updates to a cloud server, ideal for group enterprises or government institutions.

The automatic refractometer is highly versatile, serving industries such as manufacturing, universities, scientific research, petroleum, oil, pharmaceuticals, paints, food production, personal care, sugar processing, and geological exploration.

FEATURES

Multiple Samples Suitability

The Automatic Refractometer is extensively utilized across various industries. It is a key instrument in sectors such as oil, pharmaceuticals, paints, food, personal care, sugar production, geological exploration, and research institutions.

Superior Measuring Prism

Crafted from high-hardness sapphire glass, the measuring prism resists corrosion and scratches, ensuring easy maintenance and exceptional durability.

Advanced CCD Sensor

The high-resolution CCD detector delivers precise, automatic measurements, eliminating user errors. It accommodates transparent, translucent, and viscous liquid samples with ease.

Long-Lasting Light Source

Equipped with an LED cold light source, the refractometer ensures an ultra-long lifespan exceeding 100,000 hours, offering reliable and energy-efficient performance.

Characteristic

1. **Regulatory Compliance:** Fully adheres to FDA 21 CFR Part 11 requirements for user ID classification, tracking, e-signatures, and tamper-proof data management.
2. **Exceptional Measurement Precision:** Offers a resolution of up to 0.00001 (nD) and 0.01% (Brix) for the TT-Refractometer-70 model.
3. **Accurate Temperature Control:** Integrated Peltier temperature control system with an accuracy of $\pm 0.02^{\circ}\text{C}$ ensures consistent and reliable measurements.
4. **Durable Measuring Prism:** Made from high-hardness sapphire glass, the prism resists corrosion and scratches, making it easy to clean and highly durable.
5. **Advanced CCD Detector:** High-resolution CCD technology ensures automatic, precise measurements with minimized user error. Compatible with transparent, translucent, and viscous liquid samples.
6. **Long-Lasting Light Source:** Equipped with a high-brightness LED light source with a lifespan exceeding 100,000 hours.
7. **Intuitive User Interface:** Features a 7-inch color touchscreen powered by an Android system with 4GB RAM, supporting seamless method and data management.

8. **Versatile Connectivity:** Includes 2 USB ports, 1 RS232 port, and 1 Ethernet port, allowing easy connections for printers, networks, data export, and backups.

TECHNICAL SPECIFICATIONS

Refractive index measuring range (nD)	1.30000-1.70000
Measured value error (nD)	±0.0001
Measurement resolution (nD)	0.0001/0.00001
Scope of sugar solution mass fraction (Brix)	0-100%
Measured value error (Brix)	±0.1%
Measurement resolution (Brix)	0.1%0.01%
Temperature control mode	Peltier
Scope of temperature measuring	0-100℃
Temperature control range	5-80 ℃
Temperature control accuracy	±0.02℃
Interface	RS232/USB/SD card/U disk/Internet
Data storage capacity	4GB
Display modes	7 inches, TFT touch screen
Voltage	110V~240V(12V,10A)
Power	45W
Net weight	5kg

Dimensions	365mmX300mmX150mm
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