RePo-1, cat. no. 5010

Portable Refracto-Polarimeter

Fusion of refractive index and angle of optical rotation

Brix alone can only indicate the overall amount of dissolved solids in a solution. With the RePo-1 it is now possible to know the actual quantities of each dissolved solid, such as fructose and glucose content, in a solution.

RePo Four Points

Point 1 – 2 in 1 - Brix alone can only indicate the overall amount of dissolved solids in a solution. With RePo-1, it is possible to determine if a product has been adulterated by measuring the optical rotation. For example, fructose rotates light to the left while glucose rotates light to the right. If a sample has been adulterated with glucose, it will make the optical rotation readings appear more positive than a pure solution.

Point 2 - Compact size - Great portability, 10.1 × 16.0 × 3.8cm and weighs only 325g.

Point 3 - Automatically calculated scales - Press "User" to select the desired scale: Purity, International Sugar Scale, Specific Rotation, and Concentration.

A.R. –Angle of Rotation

Brix - Brix

User Specific Scales

Point 4 - Measurement evaluation indicator - Measurements are evaluated against pre-set tolerance limits, and the result is indicated by green or red light. (Upper and lower tolerance limits must be set in advance to using this function)

Green light - Within tolerance

Red light - Outside tolerance

RePo-1 Application Examples

- Sugar industries – sugar manufacturers and refineries
- Analyzing inverted sugar syrup
- Analyzing fragrances
- Honey
  - Investigating how fast different honey crystallizes by determining the fructose and glucose content
  - Researching honey collected from the same district or honey collected from the same flower

Measurement Method

1. Fill the sample stage up to the fill line (approx. 3mL)

2. Press START.

3. Measurement is displayed

RePo-1 Specifications

Scale	Angle of rotation, Brix, International Sugar Scale, Temperature
Measurement Readings	Angle of rotation, Temperature, User (International Sugar Scale/ Purity/ Specific Rotation/ Concentration), Brix, Purity, International Sugar Scale with ATC
Measurement Range	Angle of Rotation: -5.00 to +5.00°(*1) International Sugar Scale: -130 to +130°Z Brix: 0 to 85% Temperature: 15.0 to 40.0℃
Display Range	Angle of Rotation: -5.99 to +5.99° Brix: -2.0 to 86.6% International Sugar Scale: -130 to +130°Z Purity: -120 to 120% Specific Rotation: -999 to +999 Concentration:-2.0 to 999% Temperature: 14.0 to 41.0℃
Resolution	Angle of Rotation: 0.01° Brix: 0.1% International Sugar Scale: 0.1°Z Temperature: 0.1°C
Measurement Accuracy	Angle of Rotation: ±0.1°(at 20℃) International Sugar Scale: ±3°Z Brix: ±0.2% Temperature: ±1℃
Repeatability	Angle of Rotation: ±0.05°(at 20℃) Brix : ±0.1% International Sugar Scale: ±1.5°Z (at 20℃)
Wavelength	589nm (equivalent to the sodium-D line spectrum)
Temperature compensation range	Brix: 15 to 40℃ Purity: 18 to 40℃ International Sugar Scale: 18 to 40℃

RePo Series - In addition to angle of rotation and Brix:

RePo-2: can determine the amount of fructose (%) in HFCS - ideal for various industries such as food and beverage, or sugar refining.

RePo-3: can determine the amount of invert sugar (%) converted from sucrose - ideal for various industries such as sugar refining.

RePo-4: can determine the amount of fructose (%) and honey moisture (%) - ideal for Q.C. of honey.

RePo-5: can determine refractive index (nD) - ideal for quality control in various industries such as fragrances, cosmetics, or pharmaceutical.

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