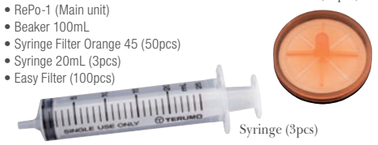
Package RePo-1 Type A

## Recommended for sugar industry

Cat.No.5020

A package for the RePo-1 that includes syringes and single-use, disposable filters. By using a syringe and a disposable filter, it is possible to measure stabilized values of substances such as raw sugar and other materials. These accessories are also sold separately.

- RePo-1 (Main unit)
- Beaker 100mL
- Syringe Filter Orange 45 (50pcs)
- Syringe 20mL (3pcs)
- Easy Filter (100pcs)




Syringe (3pcs)



Filter (50pcs)

# Measurement Method

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

Press START.

Measurement is displayed.

# Optional Accessories

| Part Name | Compatible models |
|---|---|
| RE-99110 | Standard liquid Repo-series (approx. 7mL) |
| RE-79000 | MAGIC™ for RePo |
| RE-79423 | Beaker 100mL |
| RE-79420 | Syringe Filter Orange 45 (100pcs) |
| RE-79421 | Syringe 20mL (3pcs) |
| RE-79422 | Easy Filter (100pcs) |

MAGIC™ for RePo (Anti-volatile sample cover.)

# Common Specifications

| | |
|---|---|
| Measurement Scale | AR, Brix, Temp |
| Measurement Readings | AR, Brix, Temp,<br>Brix (%): with ATC |
| Measurement Range | AR : -5.00 to +5.00° *1<br>Brix : 0.0 to 85.0%<br>Temp : 15.0 to 40.0°C |
| Display Range | AR : -5.99 to +5.99°<br>Brix : -2.0 to 86.6%<br>Temp : 14.0 to 41.0°C |
| Resolution | AR : 0.01°<br>Brix : 0.1%<br>Temp : 0.1°C |
| Measurement Accuracy | AR : ±0.1° (at 20°C)<br>Brix : ±0.2%<br>Temp : ±1.0°C |
| Repeatability | AR : ±0.05° (at 20°C)<br>Brix : ±0.1% |

| | |
|---|---|
| Measurement Time | 12 seconds |
| Ambient Temperature | 15 to 40°C |
| Storage Environment Temperature | 0 to 65°C |
| Temperature Compensation Range | Brix : 15 to 40°C |
| Sample Volume | 3mL |
| Measurement Wavelength | 589nm<br>(equivalent to the sodium-D line spectrum) |
| Light Source | LED |
| Power Supply | Size AAA alkaline battery × 4 |
| International Protection Class | IP67 |
| Dimensions & Weight | 101×160×38mm,<br>325g (Main unit only) |

*1 These ranges are measured by the device's 20mm light path. These are convertible to below ranges: -25.00° to +25.00° with a 100mm observation tube -50.00° to +50.00° with a 200mm observation tube. Any sample that has Angle of Rotation within above ranges can be measured by RePo units.

# Specifications

| | RePo-1<br>Cat.No.5010 | RePo-2<br>Cat.No.5012 | RePo-3<br>Cat.No.5013 | RePo-4<br>Cat.No.5014 | RePo-5<br>Cat.No.5015 |
|---|---|---|---|---|---|
| Measurement Scale | ISS, Purity, Conc, SR | Fructose % of HFCS | Invert ratio % of Invert Sugar | Fructose % of Honey,<br>Honey Moisture % | RI, Conc, SR |
| Measurement Readings | User (ISS/ Purity/ SR/ Conc)<br>Purity/ ISS: with ATC | User (Fructose %) | User (Invert ratio %) | User (Fructose %, Honey Moisture %) | User (RI/ SR/ Conc) |
| Measurement Range | ISS : -130 to +130°Z | Fructose % : 0.0 to 99.9% | Invert ratio % : 0.0 to 99.9% | Fructose % : 0.0 to 99.9%<br>Honey Moisture % : 13.0 to 30.0% | RI : 1.3306 to 1.5050 |
| Display Range | ISS : -130 to +130°Z *2<br>Purity : -120 to 120% *2<br>SR : -999 to +999° *2<br>Conc : -2.0 to 999% *2 | Fructose % : -2.0 to 102% | Invert ratio % : -2.0 to 102% | Fructose % : -2.0 to 102%<br>Honey Moisture % : 12.5 to 30.5% | RI : 1.3278 to 1.5093<br>SR : -999 to +999° *2<br>Conc : -2.0 to 999% *2 |
| Resolution | ISS : 0.1°Z | Fructose % : 0.1% | Invert ratio % : 0.1% | Fructose % : 0.1%<br>Honey Moisture % : 0.1% | RI : 0.0001 |
| Measurement Accuracy | ISS : ±3.0°Z (at 20°C) | —— | | Honey Moisture % : ±0.2% | RI : ±0.0002 (at 20°C) |
| Repeatability | ISS : ±1.5°Z (at 20°C) | —— | | Honey Moisture % : ±0.2% | RI : ±0.0002 (at 20°C) |
| Temperature Compensation Range | ISS/ Purity : 18 to 40°C | —— | | Honey Moisture % : 15 to 40°C | —— |

*2 Measurements are round to 1 decimal place up to 99.9 and to a whole number above 100.

**Reference** : AR = Angle of Rotation, SR = Specific Rotation, ISS = International Sugar Scale, Temp = Temperature, Conc = Concentration, RI = Refractive Index, ATC= Automatic Temperature Compensation

All ATAGO products are designed and manufactured in Japan.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ATAGO®

# Refractometer Polarimeter

## Measurement Result Display

Automatically calculates and displays Refractive Index, Purity (from Angle of Rotation), International Sugar Scale, Specific Rotation and Concentration. Temperature is displayed constantly.

## 2 in 1

Refractive index and angle of rotation are measured simultaneously. Only 3mL of sample is required.

## Evaluation Indicator (RePo-1 only)

An indicator light alerts the user if a measurement value is within a range set by the user.

Portable Refracto-Polarimeter **RePo series**

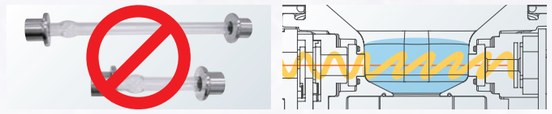
# Simultaneous Measurement of Refractive Index and Angle of Rotation – Making the Invisible, Visible

## Economical - Only a Small Amount of Sample Required

The sample amount is a mere 3mL. Simultaneously measures refractive index and angle of rotation. Compared to standard 100mm and 200mm observation tubes, much less volume of liquid (sample) is needed to complete measurements.

## Absolutely No Observation Tubes Necessary

The RePo requires absolutely no observation tubes whatsoever. No more hassling with sample prep, avoiding air bubbles, and washing out thin, narrow observation tubes.



ISS
## RePo-1

Standard model of the RePo Series. Toggle through Angle of Rotation, Brix, Purity, International Sugar Scale, Specific Rotation and temperature displays simply by pressing a button.

# 2 in 1 Hybrid RePo series

## The World's Smallest, Portable Device

A single device that can measure refractive index and angle of rotation. Compared to other polarimeters up until now, it is 1/20th the size, compact, and fits in the palm of your hand. Its portability means you can measure anywhere; you are no longer limited to a designated spot.

## Compatible With All Kinds of Samples

Samples with a high angle of rotation can be measured by diluting them.

HFCS
## RePo-2

HFCS (high-fructose corn syrup) is a liquid sweetener mixture of glucose and fructose. As it possesses a distinctive quality in which sweetness levels increase under low temperatures, it is used in soft drinks and frozen desserts. The RePo-2 displays the amount of fructose (%) contained in HFCS.

Honey
## RePo-4

In Europe, purity analysis through angle of rotation is designated per honey and food standards. This instrument measures the amount of fructose (%) among the sugars contained in the honey and honey moisture (%), which is useful when harvesting honey.

Inverted Sugar
## RePo-3

Inverted Sugar is a sweetener made by hydrolyzing (splitting) sucrose into glucose and fructose. In contrast to sucrose and glucose, which exhibit slight dextrorotation, fructose has strong levorotation. This instrument displays the amount of sucrose that was converted as an inverted ratio (%).

RI
## RePo-5

Displays refractive index. This model can display angle of rotation and refractive index, making it ideal for a wide range of samples and industries.