

# Automatic Digital Refractometer RX-70000X

Cat.No.3262

For High Temperature Samples  
Wide Measurement Range



## Features



- Wide measurement range!  
Refractive index (nD) 1.3250 - 1.7000, Brix 0.0 - 95.0%
- Internal Peltier system controls measurement temperature between 5 - 70 °C
- 30 User-programmable scales available
- Manual Calibration can be performed by the operator
- History function
- User-Friendly Operation

## Application

### Refractive Index (nD)

Light oil	Vegetable oils and fats
Heavy oil	Edible oil
Crude oil	Animal oils and fats
Industrial medicine	Medicinal liquid
Flavor	Insulating oil
Citrus oil	etc.
Chemicals	
Methylene chloride	
Polymer	

### Brix Measurements

Alcohol drinks	Canned syrup
Fruit juice	Liquid sugar
Soft drinks	Glucose
Tea drinks	Condensed milk
Oolong tea	Ketchup
Coffee drinks	Soup
Cocoa drinks	etc.
Concentrated fruit juice	
Puree	

### User Scale Measurements

DMF	Cesium chloride
IPA	Seawater
PVA	Surfactant
Amino acid	etc.
Alkaline solution	
Ammonia	
Ethanol	
Ethylene glycol	
Calcium chloride	

# Specifications

## AUTOMATIC DIGITAL REFRACTOMETER RX-7000 $\alpha$

<b>Cat.No.</b> : 3262	<b>Measurement temperature</b> : 5.00 to 70.00°C (the lower limit is the room temperature minus 10°C)
<b>Measuring system</b> : Optical-refraction, critical-angle detection system	<b>Temperature display accuracy</b> : $\pm 0.05^\circ\text{C}$
<b>Constant-temperature function</b> : Built-in Peltier Thermo-module	<b>Display method</b> : Back lit LCD (320 $\times$ 240 dpi)
<b>Measurement scales</b> : Brix (Automatic Temperature Compensation), Refractive index (nD), User scale (30 User-defined Scales can be inputted)	<b>Graphic display</b> : Setting upper and lower standard values, a graphic upper and lower limit bar can be displayed with the value.
<b>Measurement range</b> : Brix 0.00 to 95.00%, Refractive index (nD) 1.3250 to 1.7000	<b>Input of user scale</b> : By simply inputting 3 corresponding points of the user scale (in relation to refractive index) the RX-7000 $\alpha$ will calculate the conversion formula automatically. Unit (% , g/100g, g/100ml, mol/l, %mas, %vol, no unit) can be displayed.
<b>Minimum indication</b> : Brix : 0.1%/0.01% by selection, Refractive index (nD) 0.0001/0.00001 by selection, Temperature 0.01°C	<b>History function</b> : 30 previous measurements are stored and can be displayed or printed.
<b>Measurement accuracy</b> : Brix : $\pm 0.1\%$ (on measurement of sucrose), Refractive index (nD) : $\pm 0.0001$	<b>Zero adjustment</b> : Zero point is adjusted with distilled water.
<b>Measurement modes</b> :	<b>Manual calibration</b> : Calibration can be set manually to any standard (within a certain range).
①MODE1... This is the standard and most accurate mode of measurement. The sample's temperature is adjusted to the set target temperature and then the measurement is taken.	<b>Output</b> : Digital Printer DP-RX (Optional) • Communication method: RS-232C
②MODE2... This mode is used to measure the sample quickly and when accuracy is not as critical. After the START key is pressed, the unit measures the refractive index and temperature at short intervals and displays the estimated value at the target temperature.	<b>Power supply</b> : AC100 to 240V, 50/60Hz
③MODE3... This mode is the quickest way to measure and is best suited when the properties of the sample are changing constantly. In this mode, the unit starts measuring immediately after the START key is pressed. A time delay can also be programmed to postpone the measurement after pressing START.	<b>Power consumption</b> : 480VA
<b>Automatic temperature compensation range for Brix</b> : 5.00 to 70.00°C	<b>Light source</b> : LED (Approximating to wavelength of D line)
	<b>Materials</b> : Prism: Artificial Sapphire Sample stage: SUS 316
	<b>Sample volume</b> : Greater than 0.1ml
	<b>Environmental operating conditions</b> : Temperature: 5 to 40°C, Humidity: Max. 90%RH, Altitude (above sea level) : Max. 5,000 m
	<b>Dimensions and weight</b> : 37 $\times$ 26 $\times$ 14cm, 9kg

# Optional

## Digital Printer DP-RX

<b>Cat.No.</b> : 3121
<b>Input method</b> : Conforms to Centronics standard (with connection cable)
<b>Type of printer</b> : Thermal dot matrix printer
<b>Printed items</b> : Refractive index, Brix, User scale, Temperature, Date, Month, Year, Time
<b>Power supply</b> : AC adapter (AC 100 to 240V)
<b>Power consumption</b> : 13VA
<b>Dimensions and weight</b> : 17 $\times$ 16 $\times$ 7cm, 580g



## Adapter for volatile samples for RX-7000 $\alpha$

Parts No. : RE-56152



## Flow cell attachment for RX-7000 $\alpha$

Parts No. : RE-56155



\*The DP-RX printer is suitable for RX-7000 $\alpha$  units having their serial numbers from 051301 and on. For serial numbers 051220 and down, the DP-62 $\alpha$  printer (Cat.No.3019) is suitable.

## EXPLANATION OF ICONS Icons for functions, specifications and scales have been added to this catalog.

<ul style="list-style-type: none"> <li>RS-232C Interface</li> <li>Interface RS232C pour PC</li> <li>Interface RS232C</li> <li>Interfaccia RS232C</li> <li>Interface RS232C</li> <li>RS-232C輸出</li> </ul>	<ul style="list-style-type: none"> <li>Can be connected with printer</li> <li>Sortie imprimante</li> <li>Verbindung mit Personalcomputer</li> <li>Collegabile a stampante esterna</li> <li>Conexión para impresora</li> <li>可與印表機連結</li> </ul>	<ul style="list-style-type: none"> <li>User scales can be inputted</li> <li>Echelles à façon programmables</li> <li>Eingabe von Anwendertabellen</li> <li>Scale di misura impostabili dall'utente</li> <li>Definición de escalas de usuario programables</li> <li>可輸入用戶自訂刻度</li> </ul>	<ul style="list-style-type: none"> <li>Measurement at a set temperature</li> <li>Mesure à température constante programmable</li> <li>Messung bei voreingestellter Temperatur</li> <li>Misura a temperatura impostata</li> <li>Medida a temperatura prefijada</li> <li>可設定測量溫度</li> </ul>	<ul style="list-style-type: none"> <li>Automatic Temperature Compensation</li> <li>Compensation automatique de température</li> <li>Automatische Temperaturkompensation</li> <li>Compensazione automatica della temperatura</li> <li>Compensación de automática de temperatura</li> <li>自動溫度補償</li> </ul>
<ul style="list-style-type: none"> <li>Calibration with water</li> <li>Calibration 1 point* sur eau distillée</li> <li>Kalibrierung mit Wasser</li> <li>Calibrazione con acqua</li> <li>Calibración con agua</li> <li>用水歸零</li> </ul>	<ul style="list-style-type: none"> <li>Digital display</li> <li>Affichage numérique</li> <li>Digital Anzeige</li> <li>Display digitale</li> <li>Pantalla digital</li> <li>數字顯示</li> </ul>	<ul style="list-style-type: none"> <li>AC outlet(AC100 to 240V)</li> <li>Alimentation secteur(CA 100 à 240 V)</li> <li>AC Ausgang (AC 100 bis 240V)</li> <li>Uscita AC( AC 100 240V )</li> <li>Conexión a 240V CA</li> <li>AC插座(AC 100至240V)</li> </ul>	<ul style="list-style-type: none"> <li>Refractive index scale</li> <li>Indice de réfraction</li> <li>Skala fuer Refraktive Index</li> <li>Indice di rifrazione</li> <li>Escala de índice de refracción</li> <li>折射率刻度</li> </ul>	

All of ATAGO refractometers are designed and manufactured in Japan.

**HACCP G.M.P. G.L.P.**

ATAGO products are acknowledged HACCP, G.M.P. and G.L.P. systems.

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\*Specifications and appearance are subject to change without notice.

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