Recognizing Corporate Social Responsibility

Established in 1940, ATAGO has continuously made strides in the research and development of a wide variety of optoelectronic products, specifically focusing on refractometers. ATAGO directly controls the entire production process - designing, developing, assembling, and shipping. Our products are used in a variety of industries; from food and beverage processing, to petrochemicals and metalworking. ATAGO has an established reputation as a trusted brand and enjoys the fullest confidence of end-users, not only in Japan but also in 154 countries worldwide. Our continuing global expansion includes the opening of ATAGO U.S.A. in Bellevue, WA in July 2002 to oversee the operations in North and Latin America. ATAGO INDIA Instruments Pvt. Ltd. in Mumbai, India was established as a sales office in February 2005, followed by ATAGO (THAILAND) Co., LTD in December 2009. ATAGO BRASIL Ltda. made a start in February 2010 to better serve the growing sugar industry in Brazil. The two most recent developments are the openings of ATAGO ITALIA s.r.l. in October of 2010 and ATAGO CHINA Guangzhou Co., Ltd. in March of 2011. While we have long enjoyed market presence domestically in Japan, our service to the global market is becoming increasingly important.

As a result, ATAGO is fully aware of our corporate responsibility as a member of the global community, and we seek to make a positive impact both locally and internationally.

Below is the history of ATAGO’s charitable assistance to those who have been victims of natural disasters.

<table>
<thead>
<tr>
<th>Month</th>
<th>Year</th>
<th>Natural Disaster</th>
</tr>
</thead>
<tbody>
<tr>
<td>November</td>
<td>2004</td>
<td>Earthquake in Chuetsu, Niigata</td>
</tr>
<tr>
<td>September</td>
<td>2005</td>
<td>Hurricane Katrina in New Orleans</td>
</tr>
<tr>
<td>October</td>
<td>2005</td>
<td>Earthquake in Pakistan</td>
</tr>
<tr>
<td>June</td>
<td>2006</td>
<td>Earthquake in Central Java</td>
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<tr>
<td>April</td>
<td>2007</td>
<td>Earthquake in Noto Peninsula</td>
</tr>
<tr>
<td>July</td>
<td>2007</td>
<td>Earthquake in the coast of Chuetsu, Niigata</td>
</tr>
<tr>
<td>December</td>
<td>2007</td>
<td>Earthquake in Peru</td>
</tr>
<tr>
<td>May</td>
<td>2008</td>
<td>Earthquake in Sichuan</td>
</tr>
<tr>
<td>May</td>
<td>2008</td>
<td>Cyclone Nargis in Myanmar</td>
</tr>
<tr>
<td>June</td>
<td>2008</td>
<td>Earthquake in Iwate/Miyagi Inland</td>
</tr>
<tr>
<td>April</td>
<td>2009</td>
<td>Earthquake in Abruzzo</td>
</tr>
<tr>
<td>January</td>
<td>2010</td>
<td>Earthquake in Haiti</td>
</tr>
<tr>
<td>February</td>
<td>2010</td>
<td>Earthquake in Chile</td>
</tr>
<tr>
<td>August</td>
<td>2010</td>
<td>Flood in Pakistan</td>
</tr>
<tr>
<td>March</td>
<td>2011</td>
<td>Earthquake in New Zealand</td>
</tr>
</tbody>
</table>

As new regulations and requirements are imposed in the marketplace, the competition is expected to become fiercer. Being true to our mission statement: "Create and Advance in Consonance," ATAGO is devoted to making strides in the research and development of scientific instruments to meet the ever-changing demands of our clientele.

Standard & Poor's Rating

ATAGO has received the top grade “aaa” from Japan SME (Small & Medium Sized Enterprise) Rating in 2007 and 2008. This grade is presented by Standard & Poor's, a well-known provider of independent credit ratings.

Excellence in Tax Declaration

In November 2007, ATAGO received recognition of excellence from the Itabashi revenue office for the tax honesty, stable profitability, and transparent business model in 2002 and 2007.

Tokyo Trial Purchase Program

The “MASTER” handheld refractometer series was selected by the Tokyo Trial Purchase Program 2009. Through this program, Tokyo Metropolis experimentally purchases reputable and cutting-edge products and provides marketing support to the local small and mid-size manufacturers.

All ATAGO refractometers are designed and manufactured in Japan.

HACCP GMP GLP

* Specifications and appearances are subject to change without notice.
A Wide Selection to Meet Every Measurement Need

Most Accurate and Full Range
RX-5000x-Plus
The world’s highest level of accuracy
Brix ±0.001%, Refractive Index ±0.00002
Brix value displayed to the 3rd decimal place

World’s Highest Standard of Accuracy
The RX series are the most accurate of ATAGO refractometers, programmed with a trusted and advanced algorithm. The epitome of which boasts the accuracy of ±0.000010 nD and ±0.0001% Brix.

Ergonomically Designed Layout
The RX-500 series was designed with ease of use in mind. Extensive research was performed in the design phase to ensure an ergonomic interface that made operation easy while maximizing efficiency.

Wide Range and High Temperature
Most Accurate and Full Range
Every Measurement Need

Refractive Index Scale is also included

World’s No. 1 Accuracy
RX-6070x

Fast response time: samples less than 5% Brix
World’s highest accuracy ±0.005% Brix

Hygienic Flat Sample Stage
RX-5000x-Bev

Developed for the beverage industry in mind
Easy-to-clean flat sample stage
Quickly measure a sample after another

Wide Range, High Temperature, and Accuracy
RX-5000x

Wide Range, High Temperature, and Accuracy
RX-7000x

Ideal for high Refractive Index samples
- Fragrances, organic solvents, etc.
A wide Refractive Index range: 1.3250-1.7000 with Automatic Temperature Compensation up to 70°C

Rugged Metal Body
The sturdy, yet elegant die-cast metal body protects the optical system. A special coating on the surface with extra-durability against chemicals.

Dependable Optical System
Sturdy Sheet Switch
Dependable Optical System
Sturdy Sheet Switch

Acid and Alkaline Resistance
Specialized per high alkaline or acidic samples - please contact ATAGO.

Printer Connectivity
GLP/GMP compliant - sample numbers, dates, time, ambient temperature, and changes can be printed. Data can be exported for external reporting. Thermal or impact printer models available (see Accessories on page 8).

Computer Connectivity
Thermal data to a PC via RS-232C or USB (USB with firmware version 1.00 or higher). Printer and RS-232C data is also available for almost instant export to Excel (see Accessories on page 8).

Visual “Pass/Fail” Indication
Quality identify if the measurement value is within the target range with the graphic display. It is to confirm that the measurement value is programmed to improve inspection efficiency.

Measurement History
The built-in memory will instantly recall the last 30 measurement values.

Programmable User Scale
Cover Plate
Cover Plate
- Fragrances, organic solvents, etc.

Wide Selection of Accessories
See Accessories on page 9.

No-Complicated Operation
Simple Operation

No-Fuss Zero-Setting
Simple place distilled water on the prism, and press the ZERO button. Once the temperature has stabilized, zero-setting is completed in within a few seconds. No complicated operations are involved.

Range Accuracy: Rugged Metal Body
The sturdy, yet elegant die-cast metal body protects the optical system. A special coating on the surface with extra-durability against chemicals.

Wide Ambient Temperature Range
The ambient temperature range of 5°C to 55°C is always available. A wide range of temperature conditions with a high-alkaline or acidic sample.

Acid and Alkaline Resistance
Specialized per high alkaline or acidic samples - please contact ATAGO.

Calibration Certificate
A calibration document can be obtained through the calibration service. Please contact ATAGO for further details.

Dependable Optical System
Sturdy Sheet Switch
Dependable Optical System
Sturdy Sheet Switch
The RX-5000 refractometer is highly accurate and easily usable. It requires only a small amount of sample and can be used for quick, precise measurements in various fields.

**Application Examples**

**1. Refractive Index**

- Brix: Measured for fruits, vegetables, and juices to ensure quality and determine sugar content.
- Concentration: Used for industrial solutions, pharmaceuticals, and cosmetics. For example, in the food and beverage industry, it is used for ketchup, sauces, and soups.
- Fragrance and Food Additives: Essential for quality control in the fragrance and food industries. It is used to identify unknown fragrances.
- Pharmaceutical Products: Used for quality control and formulation in pharmaceuticals.
- Cosmetics: Commonly used for quality control of cosmetic products.

**2. Brix**

Brix is a measurement of the sugar content in fruits, vegetables, and juices. It is a standard used by the food and beverage industry to ensure product quality.

**3. Concentration**

- Cutting Oil and Quenching Oil: Used in metalworking and manufacturing processes to ensure effective cooling and lubrication of cutting edges.
- Chemical Solutions: Used in various industrial processes to maintain product quality and ensure safety.
- Antifreeze and Coolants: Used in automotive and industrial applications to prevent freezing and ensure proper cooling.

**Why Choose ATAGO?**

1. **Proud Heritage and Experience**
   ATAGO has over 130 years of experience in optical instrument manufacturing. With our expertise and quality reputation, we can help businesses in various industries achieve high standards in their products.

2. **Industry-Leading Technology**
   ATAGO's refractometers are designed with cutting-edge technology. They are user-friendly, simple to operate, and offer high accuracy in various application fields.

3. **Trusted Product**
   ATAGO's products are highly reliable and maintain high standards of performance. They are backed by over 30 years of research and development in optical instrument manufacturing.

**End User Feedback**

We are very satisfied with the ATAGO RX-5000 refractometer. It has our full support and approval. The device is easy to use and accurate, making it a valuable tool for our operations. We are looking forward to continuing our successful partnership with ATAGO in the future.
### Application Trivia:

- **Eye drop** | *Topical: R1 503-1.507*
  - One drop dispensed from a bottle is approximately 0.05ml, of which 0.25ml actually enters the eye. This makes the effective way of administering to keep the eye closed for about two minutes after eye drop is applied.

- **Facial mask** | *Glycerin: R1 1.4740*
  - Cream forms a moisturizing membrane for the skin. Ingredients vary from fruit, Meadow, rice, coriander, brine,后海, sake, honey, molybdenum, flour, and even bush willows' droppings.

- **Soap** | *Soap: Brix 24.12%*
  - Soap may have been first discovered when ancient people noticed that their hands were cleaner when washed with ashes of wood ashes and fats of animals.

### Model Measurement items and ranges

<table>
<thead>
<tr>
<th>Material</th>
<th>Minimum indication</th>
<th>Measurement accuracy</th>
<th>Temperature Compensation range</th>
<th>Dimensions &amp; weight</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Soap</strong></td>
<td>1.330150 to 1.341500</td>
<td>±0.00001</td>
<td>5.00 to 60.00°C (lower is ambient temp -18°C)</td>
<td>37×26×14cm, 6.4kg</td>
</tr>
<tr>
<td><strong>Facial mask</strong></td>
<td>1.4740</td>
<td>±0.00001</td>
<td>5.00 to 70.00°C (lower is ambient temp -18°C)</td>
<td>37×26×14cm, 6.4kg</td>
</tr>
<tr>
<td><strong>Soap</strong></td>
<td>24.12%</td>
<td>±0.0001</td>
<td>5.00 to 70.00°C (lower is ambient temp -18°C)</td>
<td>37×26×14cm, 6.4kg</td>
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### Accessories

- **Funnel-type Flow Cell**
  - Save time with the flow cell. No need to clean the prism between measurements.  
  - [RE-56172] RX-5000a, -5000a-Plus  
  - [RE-56173] RX-7000, -7000a

- **Digital Printer DP-RX**
  - Cat.No. 3121, DP-RX  
  - For printing on thermal paper.  
  - Power supply: AC100V to 240V  
  - Power consumption: 50W/60W, 65VA  
  - Environmental operating conditions: Temperature 5 to 40°C, Altitude 2,000m above sea level

- **Data Transmission Software**
  - Cat.No. 3121, PC data transmission software  
  - Measurement results of the RX-a series can be transferred to Microsoft® Excel.

- **Fan Filter Replacement**
  - Regular cleaning of the fan filter is highly recommended to maintain the optimum performance level of the RX-a series.  
  - Shelf life is 10 days.

- **Key Cover**
  - Prevent accidental system changes by covering all but the START and ZERO keys.  
  - Cat.No. 3122, Key cover

### Measurement system

- **Optical-refraction critical-angle detection system**
  - Light source: LED  
  - Materials: Sample stage - SUS 316 Prism - Artificial sapphire  
  - Light source: LED  
  - Environmental operating conditions: Temperature 5 to 40°C, Altitude 2,000m above sea level

### For the utmost in customer satisfaction...

ATAGO offers calibration service in conformance with ISO quality management systems as well as HACCP, GMP and other standards. The following three documents will be issued. (Calibration service is performed at an additional cost.)

- **Calibration Certificate**
- **Traceability Certificate**
- **Traceability Diagram**