



Digital Hand-held "Pocket" Dual Scale Refractometer  
**PAL-BX/RI**

Cat.No.3851

PAL-BX/RI has dual scales of Brix full range and Refractive Index!

**Measurement Range**  
Brix 0.0 to 93.0 %  
Refractive Index 1.3306 to 1.5284  
Temperature 10 to 100°C (Brix) , 5 to 45°C (RI)

**Resolution**  
Brix 0.1 %  
Refractive Index 0.0001  
Temperature 0.1°C

**Measurement Accuracy**  
Brix ±0.1%  
Refractive Index ±0.0003(water at 20°C)  
Temperature ±1°C



# A new ergonomic design for comfort and ease of use!

**NEW** Measurement temperature up to 100°C **NEW** Temperature display

In pursuit of an "easy to use", "easy to operate" and ergonomic architecture of new instruments, ATAGO has achieved a "palm-fitting" masterpiece as well as a unit that is high in hygienic properties. By reducing the number of unnecessary assembly parts, we have reduced the risks of a germ reproductive environment. Through our efforts to produce a hygienic instrument to be used in any industry, these units are designed to be completely washable. The new Pocket PAL series has been approved by the HACCP, and are equipped with the new ELI feature, which ensures accurate measurements - even outdoors. Requests from our customers worldwide are reflected in the development of the new PAL units.



### Certification

In accordance with ISO Quality Management Systems, ATAGO can calibrate and certify your Digital Hand-Held "Pocket" Refractometer. The following documents will be issued (for a service fee):

1. Calibration Certificate
2. Traceability System Diagram
3. Traceability Certificate



Everyone is talking about the new "Pocket" as featured on recent TV programs and Magazines

## The next generation of Digital Refractometers

### Names and Functions of Components

The PAL can be operated with one hand. **Actual Size**

#### Sample Stage

The metal sample stage allows for the sample temperature to conform quickly and evenly to the prism temperature for accurate measurements.

#### Liquid Crystal Display (LCD)

Digital measurement values are large and easy to read. Displays battery indicator and temperature.

#### START Key

Conveniently located for single hand operation.



#### Prism

Made of highly durable optical glass to prevent scratching.

#### ZERO Key

For Zero Setting, place water on the prism and press.

#### Strap Holder

Suitable for wrist straps or lanyards.

### Main Features



\* Always clean and shiny - can be cleaned under running water



\* The innovative design makes it easy to pour out and remove a sample, but difficult to spill the sample.

- \* Revolutionary new ELI\* feature
- \* Calibrate with water - no more standard solutions
- \* Light & Compact, 100g
- \* Automatic Temperature Compensation (ATC)
- \* Ergonomically designed for one-handed operation

Convenient storage case



### Measurement Method



**1** Apply 2-3 drops onto the prism surface.



**2** Press the START key.



**3** Brix(%) value and temperature displayed in 3 seconds!

### Application

	PAL-1 Low & Intermediate Brix	PAL-2 High Brix	PAL-3 (PAL-α) Full Range
At fruit and vegetable farming orchards	○	○	○
At beverage factories... fruit juices, coffee, soft drinks, etc. juice concentrates, etc.	○	○	○
At food factories... soy sauce, various sauces, etc. syrups, jellies, etc. seasoning, soups jams, marmalade, honey, etc. condensed milk, etc.	○	○	○
At fruit and vegetable markets or supermarkets	○	○	○
At restaurants or food shops	○	○	○
In Junior High, High Schools, or Universities as a course material	○	○	○

The PAL series can measure high temperature samples during the heating or cooking process. (The measured Brix value will stabilize after taking a few repeated measurements.)

### Optional

#### ● Sucrose Solutions (for Brix confirmation)

Part No.	Part Name
RE-110010	10% Sucrose (±0.03%)
RE-110020	20% Sucrose (±0.03%)
RE-110030	30% Sucrose (±0.03%)
RE-110040	40% Sucrose (±0.04%)
RE-110050	50% Sucrose (±0.05%)
RE-110060	60% Sucrose (±0.05%)

#### Accessories - For easy carrying -

- PAL-case RE-39409
- PAL-strap RE-39410



### Specifications

Model	PAL-1	PAL-2	PAL-3	PAL-α
Cat. No.	3810	3820	3830	3840
Measurement Range	Brix 0.0 to 53.0%	Brix 45.0 to 93.0%	Brix 0.0 to 93.0%	Brix 0.0 to 85.0%
Resolution	Brix 0.1% Temperature 0.1°C			
Accuracy	Brix ±0.2% *Brix ±0.1% Temperature ±1°C			
Measurement Temperature	10 to 100°C Automatic Temperature Compensation (Boiled samples over 100°C can be measured under specific conditions. Please contact ATAGO for further details.)			
Ambient Temperature	10 to 40°C			
Power Supply	AAA alkaline battery X2			
Battery Life	Approx. 11,000 measurements (When using new alkaline batteries)			
International Protection Class	IP65 Water Resistant			
Dimensions and Weight	55(W)X31(D)X109(H)mm, 100g (main unit only)			

\*Repeatability

