

Digital Refractometer (Optical Refraction Method) Palette Series

# Palette



**The Palette α - high functionality in a compact size body**

- $\pm 0.1\%$  (Brix) accuracy.
- Programmable user scales enable control of various liquid concentrations.



**PR-32α** Cat.No.3405

**PR-101α** Cat.No.3442

**PR-201α** Cat.No.3452

**PR-301α** Cat.No.3462

**Palette**

# The continuing evolution of the Palette — The Debut of the Palette α

The Palette α series is the ultimate compact instrument which is the result of years of proven reliable performance, ease of operation and the functionality of design.

Sample size  
is Just  
**1 Drop!**

Measurement  
time is Just  
**3 seconds!**

Measures concentration of solutions with a light beam

Names of  
Components

Liquid Crystal Display (LCD)

Prism

START/OFF Switch

SCALE Switch

ZERO Setting Switch



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Four models of the Palette α are available  
for your different measurement samples.

\* Calibration with the Standard Liquid LG.



## Measurement Method



**1** Apply 1 drop of sample solution onto the prism surface.



**2** Press the START/OFF Switch.



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

## Main Features

### Accuracy improved to $\pm 0.1\%$

**NEW!**

The conventional measurement accuracy,  $\pm 0.2\%$ , is increased to  $\pm 0.1\%$ . The highest accuracy available in a compact model.

### External-light-Interference (ELI)\*

**NEW!**

Conventionally, digital optical instruments have the potential to display incorrect measurement values if sampling is performed near a window or outdoors where lighting may be too intense. The new ELI technology provides security under these conditions to ensure accurate measurements.

### Convenient temperature display

**NEW!**

A temperature display function has been added. The temperature is displayed by simply pressing a switch.

### User scale feature

**NEW!**

The user scale function has been added. Concentrations of various samples can be displayed by setting up a coefficient. Three separate user scales can be entered.

### Two-year warranty

**NEW!**

ATAGO has extended the warranty term for the Palette  $\alpha$  series to 2 years. For the terms and conditions, contact ATAGO.

### Automatic Temperature Compensation (ATC) function

With ATC, there is no need to worry about the measurement temperature.

### Large, easy to read display

The large-sized liquid crystal panel makes it easy to read the measured result.

## Optional

### Sucrose Solutions (for Brix confirmation)

Part No.	Part Name
RE-110010	10% Sucrose ( $\pm 0.03\%$ )
RE-110030	30% Sucrose ( $\pm 0.03\%$ )
RE-110050	50% Sucrose ( $\pm 0.05\%$ )



### \* External Light Interference (ELI) - Patent Pending

When intense light penetrates the prism of a digital refractometer, the light waves may interfere with the sensor resulting in inaccurate readings.

To ensure accurate measurement results each time, the Palette  $\alpha$  is programmed with the ELI function to display the warning message "nnn" when intense direct light is detected. Forming a habit of shading the sample stage with your hand and re-pressing the START/OFF Switch (when the warning message from the ELI function is displayed) will ensure accurate measurement results each time.

## Main Applications

	PR-32 $\alpha$	PR-101 $\alpha$	PR-201 $\alpha$	PR-301 $\alpha$
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	○	○	○	○



	PR-32α	PR-101α	PR-201α	PR-301α
Cat.No.	3405	3442	3452	3462
Measurement Range	Brix0.0~32.0%	Brix0.0~45.0%	Brix0.0~60.0%	Brix45.0~90.0%
Minimum Indication		Brix 0.1%		
Measurement Accuracy	Brix ±0.1% (5~40℃)		Brix ±0.1% (10~40℃)	Brix ±0.1% (10~30℃)
Measurement Temperature	5~40℃ Automatic Temperature Compensation		10~40℃ Automatic Temperature Compensation	
Ambient Temperature	5~40℃		10~40℃	
Sample Volume		0.1ml or more		
Measurement Time		3 seconds (approximately)		
Power Supply		006P dry battery (9V)		
International Protection Class		IP64 Water Resistant		
Dimensions and Weight		17 (W) × 9 (D) × 4 (H) cm, 300g		

## Certification

In accordance with ISO Quality Management Systems, ATAGO can provide calibration and certification for any ATAGO refractometer. The following documents will be issued (for a service fee):

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



**NEW!**

## Digital Refractometer PR-RI

- Measurement Range:** Refractive index 1.3306~1.4436  
Temperature 5~45°C
- Minimum Indication:** Refractive index 0.0001  
Temperature 1°C
- Measurement Accuracy:** Refractive index  $\pm 0.0002$  (water at 20°C)  
Temperature  $\pm 1^\circ\text{C}$
- Measurement Temperature:** 5~45°C
- Power Supply:** 006P dry battery (9V)
- Dimensions and Weight:** 17(W)  $\times$  9(D)  $\times$  4(H) cm  
300g (main unit only)



**PR-RI**

**For measuring refractive index!**

## Digital Salt Meter ES-421

- Measurement Range:** 0.00 to 10.0% (100g) of salt concentration
- Minimum Indication:** 0.01% for salt concentration of 0.00 to 2.99%  
0.1% for salt concentration of 3.0 to 10.0%
- Measurement Accuracy:** Displayed value  $\pm 0.05\%$  (for salt concentration of 0.00 to 1.00%)  
Relative precision  $\pm$  less than 5% (for salt concentration of 1.00 to 10.0%)
- Power Supply:** 006P dry battery (9V)
- Dimensions and Weight:** 17(W)  $\times$  9(D)  $\times$  4(H) cm  
300g (main unit only)



**ES-421**

**For measuring Salt %!**

## EXPLANATION OF ICONS

Icons for functions, specifications and scales have been added to this catalog.



- \* Compact and easy to carry
- \* Portable
- \* Leicht und einfach zu tragen
- \* Calibrare con liquidi standard esclusivi
- \* Compacto y fácil de llevar
- \* 輕巧易於攜帶



- \* Calibration with water
- \* Calibration 1 point\* sur eau distillée
- \* Kalibrierung mit Wasser
- \* Calibrare con acqua
- \* Calibración con agua
- \* 用水歸零



- \* Calibration with exclusive standard liquid
- \* Calibration 1 point sur solution standard
- \* Kalibrierung mit speziellem Standard
- \* Calibrare con liquidi standard esclusivi
- \* Calibración con patrones líquidos especiales
- \* 使用專屬標準液歸零



- \* Battery operated
- \* Alimentation par pile
- \* Batteriebetrieben
- \* Alimentazione a batteria
- \* Funcionamiento con batería
- \* 使用電池操作



- \* Digital display
- \* Affichage numérique
- \* Digital Anzeige
- \* Display digitale
- \* Pantalla digital
- \* 數字顯示



- \* Automatic Temperature Compensation
- \* Compensation automatique de température
- \* Automatische Temperaturkompensation
- \* Compensazione automatica della temperatura
- \* Compensación de automática de temperatura
- \* 自動溫度補償



- \* External Light Interference
- \* Interférence de la lumière externe
- \* Äußere Lichteinflüsse
- \* Interferenza della luce esterna
- \* Luz de Interferencia Externa
- \* 外部光線干涉

All ATAGO refractometers are designed and manufactured in Japan.

**CE HACCP G.M.P. G.L.P.** ATAGO products are acknowledged by 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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