Reasons to choose the MASTER

 $\alpha \cdot H$

Water Resistant

1 Water Resistant



The concept of a washable handheld analog unit is exceptional. After measuring, the instrument can be cleaned with running water under a faucet. The new structuraldesign of these units

allows them to be washed whenever necessary. Rated IP65 (dust tight and water resistant).

2 Hygienic Design



The MASTER series was also designed with a smooth and easy-to-clean grip, eliminating the possibility of food and samples being trapped which can result in contamination and bacterial

3 Visibility



Efficiently using an analog unit depends on how easily the measured value can be read. Extensive research and the use of quality optics result in a measurement scale that is very bright, creating a high contrast to see clearly where the boundary intersects the memory lines of the scale.

4 Automatic Temperature Compensation (ATC) α·T·H



The newly designed ATC system allows the MASTER series to read more accurately than any comparable unit. ATAGO has applied for a patent on the design of the improved ATC system. The MASTER series reads more accurately than any comparable unit in the market.

5 Durability



resistance, dust resistance, and drop tests. instruments were subjected to water jets form four directions, dropped from a height of one meter onto an oak platfoam, and withstood the pressure changes of air travel.

6 Calibration



The α and H types can now be calibrated with the new waterproof calibration screw.

All MASTER models can be calibrated by end-

7 Automatic Sample Distribution (ASD)



8 Repair and Service

ATAGO has established a close network of customers by providing excellent customer service and support. When an ATAGO instrument needs servicing, not only is each customer treated with respect, but they are also provided with detailed methods and userspecific suggestions on sampling and taking measurements, based on individual needs.

9 Reputation for Quality



ATAGO has built a firm reputation for reliability and quality during its over 70 years history. We are a strong company that exports to over 154 countries with continued growth expectations. ISO 9001 certified, along with our integrated system for producing and marketing our products, based on the "Plan-Do-Check-Act" cycle, is essential to the continued quality and to the promoting of the ATAGO name.

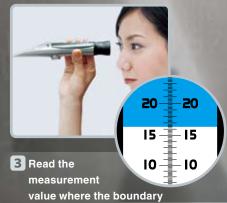
Simple Operation



1 Apply 1-2 drops onto the prism.



2 Close the daylight plate. View the scale through the



line intersects the scale.



The MASTER series has passed all water



ATAGO has developed a spoon-shaped tip that automatically spreads the sample across the prism. This makes the instrument even more user-friendly. saving valuable time.





Small Volume Daylight **Plate With Hinge Pin**

Optional Accessories



Sodium chloride solution

sea water, pickles

Honey

Wine

▶ Salinity

Parts.No. RE-2311-58M

Jam, Syrup

Drink

Fruit juice, soft drink.

carbonated beverage

Machine Tools

soluble cutting oil



ISO9001

REGISTERED
H.Q. & Factory

Extractor

-Measuring sugar concentration, concentration, Brix and Refractive Index-

Soymilk

▶ Cooking

Chinese noodle soup

various soup, various sauces

Chemicals and medicine

medicine, chemical, cosmetics,

cleaning solution

Sucrose solution (for Brix confirmation)

▶ Condiments

Condiment, seasonings, ketchup,

various sauces, soy sauce

▶ Agriculture

Fruit and vegetable juice

Clinical

Urine, serum

leaf juice, stem juice, root juice

Parts.No. RE-110010 10% Sucrose Parts.No. RE-110020 20% Sucrose Parts.No. RE-110030 30% Sucrose Parts.No. RE-110040 40% Sucrose Parts.No. RE-110050 50% Sucrose Parts.No. RE-110060 60% Sucrose

All ATAGO refractometers are designed and manufactured in Japan.



XSpecifications and appearance are subject to change without notice.

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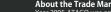
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The Ultimate Hand-Held Refractometer Unsurpassed in Function, Operation, and Design MASTER



About the Irade Mark:

Year 2005-ATAGO was established 65 years ago and we have been developing, manufacturing, and marketing Refractometers based on our in-depth study of optics. Thisyear we have released our NEW Hand-Held Refractometer series, the "MASTER" to support and meet our customer's needs. The NEW "MASTER" series is a fitting name to match its ultimate performance. The trade mark, "½" is the Japanese Kanji which means "light" The decision to use this Kanji as a trade mark for the MASTER series is to emphasize that this product was designed and manufactured in Japan. With the multitude of imitation products



Hand-held Refractometer





MASTER series

Choose the right model for your sample, based on the features and materials of the instrument.



Material 2 types

Choose either metal or plastic.



Metal

Die-cast aluminum

Ideal for the agriculture industry, metal working fluids, and various high-temperature samples. Resistant to organic solvents



Plastic

(polybutylene terephthalate)

Resistant to salty and acidic

Features 4 types

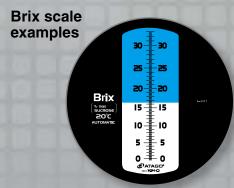
Both the $\, a$ and T types are equipped with the Automatic Temperature Compensation feature. Choose the α type for the added feature of IP 65 water-resistance. The H type is the heat-resistant version of the α type.

Series	а	T	M	Н
Water resistant	•	_	_	•
Automatic temperature compensation	•	•	_	•
Heat resistant			_	•
Calibration	• NEW	•	•	• NEW

Scale

Brix or other special scales

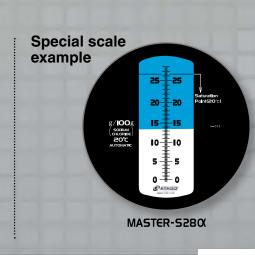
Custom scales are available upon request.



MASTER-C

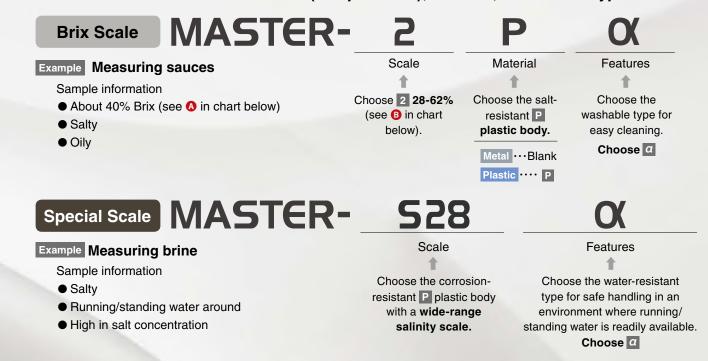
Brix 0~33%





■ Understanding model names

A model name consists of the scale (sample name), material, and feature type.



■ Brix of Various Samples Refractive index and Brix of various types of samples

Brix(%)		Food industry			Chemical industry	Medical Science industry ☐ = Memory No.					
(Ri) 1.333	0	Drinks Green tea	Fruits /	Water Seasonings	Cutting oil (emulsion)	Methanol Saline Aloe extract Sea water	(<u>1</u>)	10 0 5	20	53 0 5	
1.34 -	5	Beer Coffee	Vegetables Tomato Strawberry Lemon	Miso soup	Nickel plate liquid	Chlorella extract	0 5 33 %	10 %	0 \$ 20 %	53 %	
1.35 —	10	Soy milk Cola Milk	Orange Apple Prince melon	Beef curry Demiglace (sauce)	Gelatin liquid	Serum					
1.36 -	20	Lactic acid- bacteria be		Orange jelly Canned syrup	Silicone solution (emulsion)	Acetone Ethanol					
1.37 —	30			Ketchup	Electrolyte Freon 11 Acrylonitrile	Acetic acid Saturated saline		B			
1.39 — 1.40 —	40			Soy sauce Jam Sauce A Low-sugar jam	Silicone oil			28 \$ 62 %		•••••	
	50	Fats		Egg yolk	Ethylene glycol Propylene glycol	Octane			45 \$		
	60 70	Butter Olive oil		Honey Jam	Diesel oil		3 58 5		82 %		
1.50	90			Honey Starch Syrup	Polyvinyl chloride (PCV) Styrene Asphalt	Glycerin	90 %				

www.itn.com

information@itm.com

■ Specifications

Brix Scale

Range	Series	а		T		M	
(Minimum)	Material	Metal	Plastic	Metal	Plastic	Metal	Plastic
(4)	Model	MASTER-α	MASTER-Pα	MASTER-T	MASTER-PT	MASTER-M	MASTER-PM
(1)	Cat.No.	2311	2391	2312	2392	2313	2393
0~33%	Accuracy	±0.2% *±0.1% (10~30°C)		±0.2% *±0.1% (10~30°C)		_	
(0.2%)	Size & Weight	3.2×3.4×20.3cm/155g	3.2×3.4×20.3cm/105g	3.2×3.4×20.3cm/155g	3.2×3.4×20.3cm/105g	3.2×3.4×20.3cm/155g	3.2×3.4×20.3cm/105g

2	Model	MASTER-2α	MASTER-2Pα	MASTER-2T	MASTER-2PT	MASTER-2M	MASTER-2PM
2 000/	Cat.No.	2321 2941		2322	2942	2323	2943
28~62%	Accuracy	±0.2% *±0.1% (10~40°C)		±0.2% *±0.1% (10~40°C)		_	
(0.2%)	Size & Weight	3.2×3.4×20.3cm/155g	3.2×3.4×20.3cm/105g	3.2×3.4×20.3cm/155g	3.2×3.4×20.3cm/105g	3.2×3.4×20.3cm/155g	3.2×3.4×20.3cm/105g

	2	Model	MASTER-3α	MASTER-3Pα	MASTER-3T	MASTER-3PT	MASTER-3M	MASTER-3PM
	5000 0/	Cat.No.	2331	2951	2332	2952	2333	2953
	58~90%	Accuracy	±0.2% *±0.1% (10~40°C)		±0.2% *±0.1	% (10~40℃)	_	-
	(0.2%)	Size & Weight	3.2×3.4×16.8cm/130g	3.2×3.4×16.8cm/90g	3.2×3.4×16.8cm/130g	3.2×3.4×16.8cm/90g	3.2×3.4×16.8cm/130g	3.2×3.4×16.8cm/90g

4	Model	MASTER-4α	MASTER-4Pα	MASTER-4T	MASTER-4PT	MASTER-4M	MASTER-4PM
45 000/	Cat.No.	2341	2961	2342	2962	2343	2963
45~82%	Accuracy	±0.2% *±0.1% (10~40°C)		±0.2% *±0.1% (10~40°C)		_	
(0.2%)	Size & Weight	3.2×3.4×16.8cm/130g	3.2×3.4×16.8cm/90g	3.2×3.4×16.8cm/130g	3.2×3.4×16.8cm/90g	3.2×3.4×16.8cm/130g	3.2×3.4×16.8cm/90g

10	Model	MASTER-10α	MASTER-10Pα	MASTER-10T	MASTER-10PT	MASTER-10M	MASTER-10PM
	Cat.No.	2371 2981		2372	2982	2373	2983
0~10%	Accuracy	±0.2% *±0.1% (10~30°C)		±0.2% *±0.1% (10~30°C)		_	-
(0.1%)	Size & Weight	3.2×3.4×20.3cm/155g	3.2×3.4×20.3cm/105g	3.2×3.4×20.3cm/155g	3.2×3.4×20.3cm/105g	3.2×3.4×20.3cm/155g	3.2×3.4×20.3cm/105g

20	Model	MASTER-20 α	MASTER-20P α	MASTER-20T	MASTER-20PT	MASTER-20M	MASTER-20PM
	Cat.No.	2381	2991	2382	2992	2383	2993
0~20%	Accuracy	±0.2% *±0.1% (10~30°C)		±0.2% *±0.1% (10~30°C)		-	_
(0.1%)	Size & Weight	3.2×3.4×20.7cm/165g	3.2×3.4×20.7cm/110g	3.2×3.4×20.7cm/165g	3.2×3.4×20.7cm/110g	3.2×3.4×20.7cm/165g	3.2×3.4×20.7cm/110g

50	Model	MASTER-53α	MASTER-53P α	MASTER-53T	MASTER-53PT	MASTER-53M	MASTER-53PM
53	Cat.No.	2351	2971	2352	2972	2353	2973
0~53%	Accuracy	±0.5% *±0.25% (10~30°C)		±0.5% *±0.25	5% (10~30℃)	_	-
(0.5%)	Size & Weight	3.2×3.4×16.8cm/130g	3.2×3.4×16.8cm/90g	3.2×3.4×16.8cm/130g	3.2×3.4×16.8cm/90g	3.2×3.4×16.8cm/130g	3.2×3.4×16.8cm/90g

► Heat resistant

Series	H H									
Material		Me	etal							
Model	MASTER-50H MASTER-80H MASTER-93H MASTER-100H									
Cat.No.	2354	2364	2374	2384						
Range	Brix 0.0∼50.0%	Brix 30.0~80.0%	Brix 45.0~93.0%	Brix 60.0~100.0%						
Minimum		0.5	5%							
Accuracy	±0.5% *±0.25%									
Size & Weight		3.2×3.4× 10	6.8cm/130g							

Special Scale

Sample	Coolant	Battery Coolant	Battery Coolant	Refractive index
Series	M	M	M	M
Material	Plastic	Plastic	Plastic	Metal
Model	MASTER-BR	MASTER-BC	MASTER-BCF	MASTER-RI
Cat.No.	2930	2931	2932	2612
Scale	propylene glycol ethylene glycol	ethylene glycol freezing temp propylene glycol freezing temp battery fluid d20/20	ethylene glycol freezing temp propylene glycol freezing temp a battery fluid d20/20	Refractive index
Range	① 0 to 70% 0 to −50°C ② 0 to 70% 0 to −50°C	① 0 to −50°C ② 0 to −50°C ③ 1.150 to 1.300	① 32 to -60°F ② 32 to -50°F ③ 1.150 to 1.300	1.435 to 1.520
Minimum Scale	5% 5℃	① 5℃ ② 5℃ ③ 0.01	① 10°F ② 10°F ③ 0.01	0.001
Size & Weight		3.3×3.3×16.8cm, 90g		3.3×3.3×16.8cm, 120g

Sample	Seawater	Seawater	Salinity	Salinity	Salinity (Wide range)	Salinity (Wide range)	
Series	α	M	α	M	α	M	
Material	Plastic	Plastic	Plastic	Plastic	Plastic	Plastic	
Model	MASTER-S/Mill a	MASTER-S/Mill M	MASTER-S10 α	MASTER-S10 M	MASTER-S28 a	MASTER-S28 M	
Cat.No.	2491	2493	2471	2473	2481	2483	
Scale	① Salinity ② Sp	pecific gravity	Sodium	chloride	Sodium chloride		
Range	① 1‰ ② 0	0.001	0.0 to 10	.0g/100g	0.0 to 28	.0g/100g	
nimum Scale	① 0 to 100‰ ②	2 1.000 to 1.070	0.1g/	100g	0.2 g/100g		
easurement Accuracy	① ±2‰ *±1‰ ② ±0.001 *±0.0005 (10 to 30%)	-	±0.2g/100g *±0.1g/100g (10 to 30°C)	_	±0.2g/100g *±0.1g/100g (10 to 30°C)	_	
nternational tection Class	IP65	_	IP65	_	IP65	_	
ze & Weight	3.3×3.3×20	.4cm, 100g	3.3×3.3×20	.4cm, 100g	3.3×3.3×20.4cm, 100g		
	and a contract and a contract and a standard and			·			