

REFRACTOMETERS

For WINE

- Grape growers
- Wine cooperatives (sorting grape must)
- Wineries (purchasing grape must)
- Buyers for grape must

Refractometers can effectively estimate the alcohol content in finished wine.



Refractometers are used to measure the sugar content of grape must before fermentation. During fermentation, sugars in grape must are converted into alcohol. Pre-fermentation Brix readings are a reliable indicator for the finished alcohol level. Although Brix is a popular sugar scales for winemakers worldwide, there are other scales for measuring grape must. The WM-7 Digital Wine Refractometer is equipped with 7 scales to satisfy the need of end-users in different countries and regions to meet various standards.

Digital Wine Refractometer

WM-7

Cat.No.3415



7 Scales

Digital Hand-held "Pocket" Wine Refractometer



PAL-84S

Dual Scale

- PAL-79S Cat.No.4479
- PAL-80S Cat.No.4480
- PAL-83S Cat.No.4483
- PAL-84S Cat.No.4484
- PAL-86S Cat.No.4486
- PAL-87S Cat.No.4487

Scales	Measurement range	Minimum indication	Measurement accuracy
[1] Brix (determined by ICUMSA)	0.0 to 45.0%	0.1%	±0.1%
[2] T.A. 1990 (Titre Alcoometrique established in 1990)	0.0 to 26.0%	0.1%	±0.2%
[3] T.A.1971 (Titre Alcoometrique established in 1971)	0.0 to 25.0%	0.1%	±0.2%
[4] Oe (GER) (Oechsle used in Germany)	0 to 240°	1°	± 1°
[5] Oe (Oechsle)	0 to 240°	1°	± 1°
[6] KMW (or Babo)	0.0 to 40.0°	0.1°	±0.2°
[7] Baume	0.0 to 21.0°	0.1°	±0.2°
Measurement temperature	5 to 40°C (ATC)		
Ambient temperature	5 to 40°C		
Measurement time	3 seconds		
Power supply	006P Dry battery (9V)		
International protection class	IP64 Water resistant		
Dimensions and weight	17×9×4cm, 300g		

Model	Cat.No.	Scale	Measurement range	Minimum indication	Measurement accuracy
PAL-79S	4479	T.A. 1990	0.0 to 26.0%	0.1%	±0.2%
PAL-80S	4480	T.A. 1971	0.0 to 25.0%	0.1%	±0.2%
PAL-83S	4483	KMW (or Babo)	0.0 to 40.0°	0.1°	±0.2°
PAL-84S	4484	Baume	0.0 to 21.0°	0.1°	±0.2°
PAL-86S (Dual Scale)	4486	Oe (GER)	0 to 240°	1°	±1°
		Brix	0.0 to 53.0%	0.1%	±0.2%
PAL-87S (Dual Scale)	4487	Oe (Oechsle)	0 to 240°	1°	±1°
		Brix	0.0 to 53.0%	0.1%	±0.2%

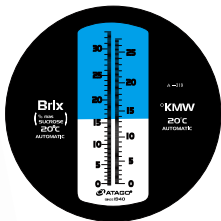
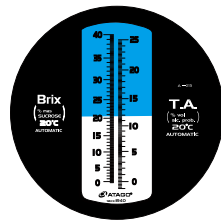
Measurement temperature	10 to 40°C (ATC)
Ambient temperature	10 to 40°C
Measurement time	3 seconds
Power supply	2×AAA Batteries
International protection class	IP65 Water resistant
Dimensions and weight	5.5×3.1×10.9cm, 100g

REFRACTOMETERS For WINE



ATC & Water Resistant Wine Refractometer

MASTER-TA	Cat.No.2590
MASTER-OE	Cat.No.2591
MASTER-GOE	Cat.No.2592
MASTER-KMW	Cat.No.2593
MASTER-BAUME	Cat.No.2594



Material: Metal

Wine Refractometer

MASTER-P/TA	Cat.No.2600
MASTER-P/OE	Cat.No.2601
MASTER-P/GOE	Cat.No.2602
MASTER-P/KMW	Cat.No.2603
MASTER-P/BAUME	Cat.No.2604



Material: Plastic

Scale	Model	
T.A.1990 / Brix	MASTER-TA	MASTER-P/TA
Oe (Oechsle) / Brix	MASTER-OE	MASTER-P/OE
Oe (GER) / Brix	MASTER-GOE	MASTER-P/GOE
KMW (or Babo) / Brix	MASTER-KMW	MASTER-P/KMW
Baume / Brix	MASTER-BAUME	MASTER-P/BAUME

MASTER-TA	Model	MASTER-P/TA
2590	Cat.No.	2600
T.A. 0.0 to 25.0 % Brix 0.0 to 40.0 % (ATC)	Scale range	T.A. 0.0 to 25.0 % Brix 0.0 to 40.0 %
T.A. 0.2 % Brix 0.2 % T.A. ± 0.3 % Brix ± 0.5 % (10 to 30°C)	Minimum Scale Accuracy	T.A. 0.2 % Brix 0.2 % —
3.2×3.4×20.3cm, 155g	Size and weight	3.2×3.4×20.3cm, 105g
MASTER-OE	Model	MASTER-P/OE
2591	Cat.No.	2601
Oe 0.0 to 130° Brix 0.0 to 33.0 % (ATC)	Scale range	Oe 0.0 to 130° Brix 0.0 to 33.0 %
Oechsle 1° Brix 0.2 % Oechsle $\pm 1^\circ$ Brix ± 0.2 % (10 to 30°C)	Minimum Scale Accuracy	Oechsle 1° Brix 0.2 % —
3.2×3.4×20.3cm, 155g	Size and weight	3.2×3.4×20.3cm, 105g
MASTER-GOE	Model	MASTER-P/GOE
2592	Cat.No.	2602
German Oechsle 30 to 170° Brix 0.0 to 40.0 % (ATC)	Scale range	German Oechsle 30 to 170° Brix 0.0 to 40.0 %
German Oechsle 1° Brix 0.2% German Oechsle $\pm 2^\circ$ Brix ± 0.5 % (10 to 30°C)	Minimum Scale Accuracy	German Oechsle 1° Brix 0.2% —
3.2×3.4×20.3cm, 155g	Size and weight	3.2×3.4×20.3cm, 105g
MASTER-KMW	Model	MASTER-P/KMW
2593	Cat.No.	2603
KMW 0.0 to 27.0° Brix 0.0 to 33.0 % (ATC)	Scale range	KMW 0.0 to 27.0° Brix 0.0 to 33.0 %
KMW 0.2° Brix 0.2 % KMW $\pm 0.2^\circ$ Brix ± 0.2 % (10 to 30°C)	Minimum Scale Accuracy	KMW 0.2° Brix 0.2 % —
3.2×3.4×20.3cm, 155g	Size and weight	3.2×3.4×20.3cm, 105g
MASTER-BAUME	Model	MASTER-P/BAUME
2594	Cat.No.	2604
Baume 0.0 to 21.0° Brix 0.0 to 40.0% (ATC)	Scale range	Baume 0.0 to 21.0° Brix 0.0 to 40.0%
Baume 0.2° Brix 0.2% Baume 0.3° Brix ± 0.5 % (10 to 30°C)	Minimum Scale Accuracy	Baume 0.2° Brix 0.2% —
3.2×3.4×20.3cm, 155g	Size and weight	3.2×3.4×20.3cm, 105g

All ATAGO refractometers are designed and manufactured in Japan.

HACCP GMP GLP

ATAGO products comply with HACCP, GMP, and GLP system standards.

ATAGO CO., LTD.

Headquarters: The Front Tower Shiba Koen, 23rd Floor
2-6-3 Shiba-koen, Minato-ku, Tokyo 105-0011, Japan
TEL : 81-3-3431-1943 FAX : 81-3-3431-1945
overseas@atago.net http : //www.atago.net/

ATAGO U.S.A., Inc.

TEL : 1-425-637-2107 customerservice@atago-usa.com

ATAGO INDIA Instruments Pvt. Ltd.

TEL : 91-22-2833-8038 / 8076 customerservice@atago-india.com

ATAGO (THAILAND) Co., Ltd.

TEL : 662-982-8718-9 customerservice@atago-thailand.com

ATAGO BRASIL Ltda.

TEL : 55 16 3916-6000 customerservice@atago-brasil.com

ATAGO ITALIA s.r.l.

TEL : 39 2 36557267 customerservice@atago-italia.com

ATAGO CHINA Guangzhou Co., Ltd.

TEL : 86 20-38106065 info@atago-china.com



※Specifications and appearance are subject to change without notice.