Digital Refractometer

AD-4772

A&D Weighing

IP67 Waterproof

Main unit can be washed under running water

Color LCD

Easy-to-read even in dark places

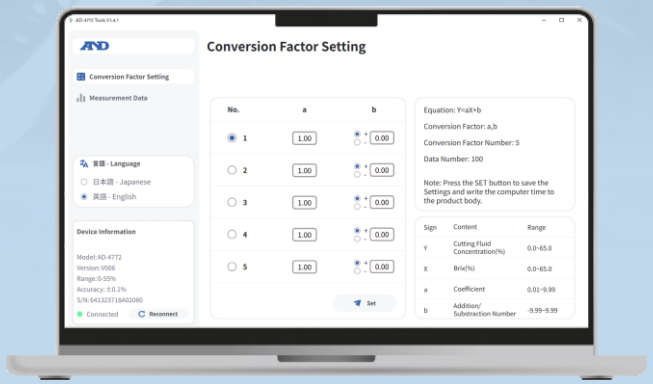
USB Type-C

Rechargeable / Connect to a PC to manage data

PC Software "AD-4772 Tools"

Connect the main unit to a PC via USB

1. Conversion Factor Setting
2. Synchronize date and time
3. Set the language (Japanese/English)
4. Transfer measurement data, save to csv



Cutting Fluid Concentration Calculation

Calculate the appropriate concentration for the type of cutting fluid by configuring and selecting conversion factors.

y = ax + b

y: cutting fluid concentration

x: measured value (Brix%)

a: coefficient

b: addition / subtraction number

	a	b
1	1.00	+ 0.00
2	1.18	- 0.05
3	1.32	+ 0.10
▶ 4	1.34	- 0.21
5	1.50	+ 0.02
Return		

(a: coefficient, b: addition / subtraction number)
Up to 5 pairs can be set

Save measurement data

Up to 100 measurements can be stored
Save data to a csv file using PC software

Memory no.	Date	Time	Conversion Factor no.
Factor a	Factor b	Cutting fluid Concentration	Tem

Specifications	AD-4772
Measurement range	Brix: 0 % to 65 %, Temperature: 5 °C to 75 °C
Measurement accuracy	Brix: ±0.2 % (5°C to 45°C), Temperature: ±1.0°C
Resolution	Brix: 0.1%, Temperature: 0.1°C
Refractive index display	○
Configurable range of conversion factors	coefficient a: 0.01 to 9.99 addition / subtraction number b: -9.99 to 9.99
No. of conversion factors registered	5
Measurement data storage capacity	100 items
Automatic temperature compensation range	5°C to 45°C
Measurement time	Approx. 2 seconds
Auto power off	Approx. 3 minutes
Dustproof / waterproof	IP67
Operating environment	5°C to 45°C
Storage environment	-10 to 55°C, 10 to 95%RH
Power source / Battery life	Built-in lithium battery (3.7 V / 900 mAh) / Approx. 490 times (fully charged)
Dimensions / Weight	48 (W) × 25 (D) × 115 (H) mm / Approx. 102 g
Accessories	USB-C cable, storage case, cleaning cloth, dropper x 2, strap, inspection certificate, instruction manual

For Brix Control of Food and Agricultural Products

Refractometers measure the Brix% of fruits, beverages, seasonings, etc., making them ideal **for determining the optimum harvest time and quality control.** From agriculture to food manufacturing, they support consistent, delicious taste and reliability.

* When measuring Brix% of fruits and other foods with the AD-4772, do not set the conversion factor.
(The initial settings are a=1.00, b=0.00.)

For Cutting Fluid Concentration Control

Stabilization of metalworking accuracy | **Cutting tool wear control**

Refractometers, which are generally used to control the concentration of cutting fluids, measure the refractive index and display it as Brix%. However, the conversion factors for Brix% and cutting fluid concentration will be different depending on the cutting fluid type. Therefore, **to display the cutting fluid concentration, it is necessary to apply the appropriate conversion factors for the type of cutting fluid used**.

* Contact the fluid manufacturer for the appropriate concentration and conversion factor.

Cutting fluid concentration to Brix% formula

$$y = ax + b$$

y: cutting fluid concentration
x: measured value (Brix%)
a: coefficient b: addition / subtraction number

A&D Company, Ltd.

Discover Precision

A&D Company, Ltd. (JAPAN)
URL: aandd.jp

A&D Engineering, Inc. (USA)
URL: andonline.com

A&D Australasia Pty Ltd. (Australia)
URL: andaustralasia.com.au

A&D Instruments Ltd. (United Kingdom)
URL: andprecision.com

<German Sales Office>
URL: andprecision.com

A&D Korea Ltd. (South Korea)
URL: andk.co.kr

A&D Rus Co., Ltd. (Russia)
URL: and-rus.ru

A&D Instruments India (P) Ltd. (India)
URL: aanddindia.in

A&D Scientech Taiwan Ltd. (Taiwan)
URL: aandd.com.tw

A&D Instruments Thailand Ltd. (Thailand)
URL: thai.andprecision.com