

Brix
Inverted sugar concentration
HFCS-55(High Fructose Corn Syrup)
HFCS-42(High Fructose Corn Syrup)

Sophisticated

Automatic Refractometer

SMART-1

Cat. No.3150



The Brix,
inverted sugar,
HFCS-55(High Fructose Corn Syrup) or
HFCS-42(High Fructose Corn Syrup)
can be measured
in a range of 0.00 to 95.00%
and with a high accuracy of

±0.05%!!

ATAGO

The SMART-1 is an automatic refractometer with

Features

- A wide measuring range of 0.00 to 95.00%
- A high accuracy of $\pm 0.05\%$
- Automatic temperature compensation at a range of 5 to 40°C
- Four kinds of scales, Brix, inverted sugar, HFCS-55(High Fructose Corn Syrup) and HFCS-42(High Fructose Corn Syrup) displayed directly in accordance with the sugar type
- A mode to display a value at a point where it becomes stable ! Hotter or colder solutions than room temperature can be measured without paying attention to the temperature.
- Printer and computer outputs through RS-232C communication
- Only three operation keys, ZERO, START and SCALE which make you comfortable and raise efficiency

Applications

- At beverage factories
- At food factories
- At sugar factories
- In industrial fields
- In medical, pharmaceutical and other industries

Samples

- | | |
|-------------------------------|--------------------|
| ● Fruit juice | ● Soft drinks |
| ● Oolong tea | ● Coffee drinks |
| ● Lactic drinks | ● Alcohol drinks |
| ● Tomato juice | ● Puree |
| ● Liquid sugar | ● Inverted sugar |
| ● Starch | ● Honey |
| ● Marmalade | ● Condensed milk |
| ● Soy sauce | |
| ● Sauce | |
| ● Ketchup | ● Ethanol |
| ● Soup | ● Sodium carbonate |
| ● Wort | ● Citric acid |
| ● Vinegar | ● Protein |
| ● Pickle(liquid) | ● Cesium chloride |
| ● Waste liquid of sugar, etc. | ● Seawater |
| | ● Sizing liquid |

a wide measuring range.



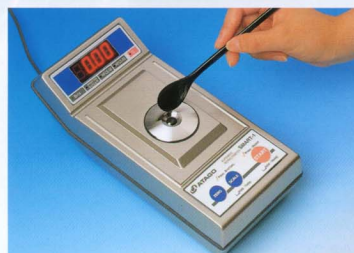
Measuring method

- Tea drinks
- Cocoa drinks
- Concentrated fruit juice
- Canned syrup
- Glucose
- Jam

- Water-soluble cutting oil
- Quenching oil
- Water-soluble detergent
- Coolant and brine solutions
- Ethylene glycol
- Propylene glycol
- Rust preventive
- IPA

- PVA
- NaOH
- Acetic acid
- Glycerin
- Gelatin
- Calcium chloride
- Coating solution

- Alkaline solution
- Sodium glutamate
- Amino acid
- Injection liquid
- Salt water
- Fire extinguishing solution
- Waste liquid of alcohol, etc.



1. Drop a sample on the surface of the prism.



2. Press and release the START key at once.



3. A measured value is indicated.

Automatic Refractometer **SMART-1**

Specifications

| | |
|--|--|
| Cat. No. | 3150 |
| Measuring system | Optical refraction critical angle detection system |
| Measurement items | ① Brix (automatic temperature compensation) ② Inverted sugar concentration (automatic temperature compensation) ③ HFCS-55(High Fructose Corn Syrup) (automatic temperature compensation) ④ HFCS-42(High Fructose Corn Syrup) (automatic temperature compensation) |
| Measurement range | ① Brix : 0.00 to 95.00% ② Inverted sugar concentration : 0.00 to 95.00% ③ HFCS-55(High Fructose Corn Syrup) : 0.00 to 95.00% ④ HFCS-42(High Fructose Corn Syrup) : 0.00 to 95.00% |
| Minimum indication | ① Brix : 0.01% ② Inverted sugar concentration : 0.01% ③ HFCS-55(High Fructose Corn Syrup) : 0.01% ④ HFCS-42(High Fructose Corn Syrup) : 0.01% ⑤ Temperature : 0.05°C |
| Measurement accuracy | ① Brix (on measurement of sucrose) : ±0.05% ② Inverted sugar concentration : ±0.05% ③ HFCS-55(High Fructose Corn Syrup) : ±0.05% ④ HFCS-42(High Fructose Corn Syrup) : ±0.05% |
| Temperature compensation range | 5.00 to 40.00°C |
| Temperature indication accuracy | ±0.10°C |
| Environmental conditions | Ambient temperature: 5 to 40°C Ambient humidity: Max. 90%RH Ambient altitude(Above sea level): Max. 5,000m |
| Display method | LED |
| Printer output | Digital Printer DP-22 (optional) is used. Output system: RS-232C Printing items: Either Brix or concentration, and sample No. |
| Computer communication | Communication system: RS-232C Output item: Either Brix or concentration Input item: Zero setting and measurements can be started from the computer. |
| Zero setting | Zero is to be set with distilled water. |
| Light source | LED(D line wavelength approximation) |
| Material | ① Prism:Optical glass ② Sample stage: SUS316 |
| Input power supply | AC100 to 240V, 50/60Hz |
| Power consumption | 20VA |
| Size and weight | Refractometer: 27×12×9cm, 2.0kg AC adapter : 10.5×17.5×4cm, 0.7kg |

Option

Digital Printer DP-22

| | |
|-----------------------------|---|
| Cat. No. | : 3013 |
| Input method | : RS-232C |
| Type of printer | : Thermal dot matrix printer |
| Printing item | : Either Brix or concentration, and sample No. |
| Printer power supply | : Power terminal is available for DP-22(optional) on AC adapter of the SMART-1. |
| Power consumption | : 26VA |
| Size and weight | : 13.5×10.0×3.8cm, 390g |



HACCP

G.M.P.

G.L.P.

ATAGO products are installed in HACCP, G.M.P. and G.L.P. systems.

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