

DIGITAL SALT-METER (Conductivity Method)

ES-421

SALT-METER

**Introducing advanced
digital salt-meter!**

(Funnel-shaped sensor is incorporated
in the handy body.)



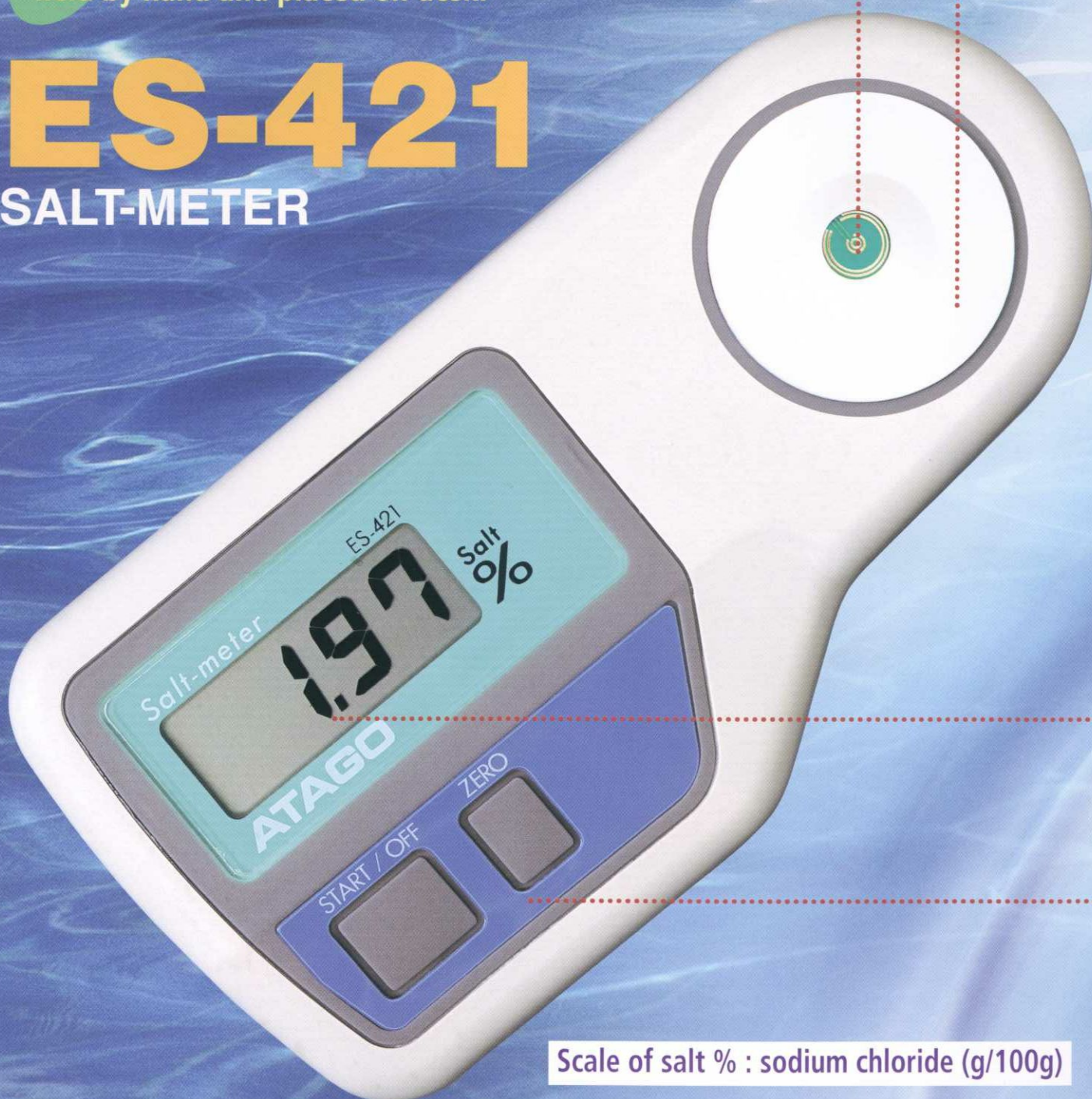
Easy and simple measurement of salt % by conductivity method!

Up-to-the-minute funnel-shaped sensor section.

Compact body for two-way measurements being held by hand and placed on desk.

ES-421

SALT-METER



Scale of salt % : sodium chloride (g/100g)

●Sensor section

The funnel-shaped sample receiver employed in the sensor section realizes measurement with a small amount of sample. Cleaning of the sensor section after measurement is very easy by just wiping it with tissues moistened with water. Differently from salt-meters employing glass electrodes, the ES-421 is free from fear of damage of the electrode and from special care to keep and store it.

●Sample stage

The sample stage made of corrosion resisting hard plastics serves for a long time with cleanliness of the surface.

Little
sample
is enough
for measure-
ment!

Cleaning by
just wipe-
over!

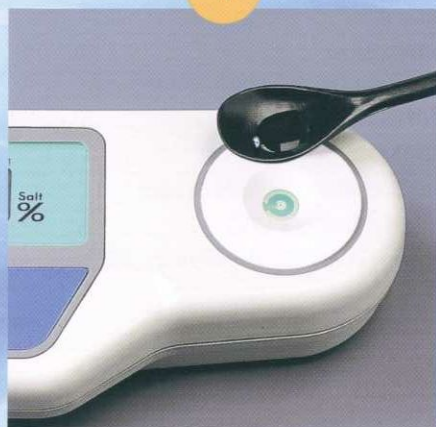
Simple
calibration
with air!

Easy and simple operation!

The digital salt-meter ES-421 employs a funnel-shaped sensor section (conductivity method), which measures the salt % of a sample (dilute solution of soy sauce, ketchup, mayonnaise, Worcester sauce, squeezed juice of pickles, etc.) poured into it by a little amount (1.0ml approx. is enough for measurement).

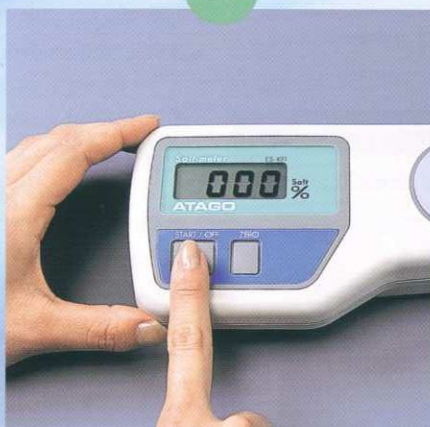
*For measurement of a sample containing ingredients other than salt, dilute the sample so that its Brix index (percentage of soluble solid content) is less than 6%. For example, dilute soy sauce, Worcester sauce with distilled water 10 times (in weight) as thin as the original for measurement, and the actual salt % is obtained by multiplying the measured value by 10.

1



Apply drops of sample into the sensor section until it fills above the indication line.

2



Press the Start/Off switch.

3



After arrow flashes three times, the display indicates the salinity of the measured sample in percentage.

●High reliable digital indicator

A large-sized LCD employed for indication of measured value enables the operator to check the test result easily and promptly with its excellent readability.

●Excellent operability

Simple design with only two switches on the panel. Turning power on/off, zero setting, start of measurement can be operated with one touch of a switch.

Moreover, two switches designed considerably big for easy pressing facilitate correct and quick measurement for every operator.

The ES-421 indicates salt % of sample in digits just by filling up the funnel-shaped sensor section with a small amount of sample (1.0ml approx.) and pressing the Start/Off switch.

●Note:

For measurement of food containing high conductive ingredients other than salt, it may be required to dilute sample specially or to prepare a special conversion table.

Digital Salt-meter (Conductivity Method) **ES-421**



Features

- Compact body is convenient for measurement in either way of being held by hand and placed on desk.
- Simple measurement just by pouring a small amount of sample into the funnel-shaped sensor section and pressing the Start/Off switch. Then, the salt % of the sample is displayed in percentage.
- Easy calibration just by zero setting with the sensor being exposed to air. Span adjustment with the reference solution is not required in general.
- By use of a refractometer (sugar content meter) together with, quantity of soluble solid content other than salt and calory of sample (except solution containing fats and oils and liquors) can be obtained roughly.
- After measurement, it needs simple cleaning just like wipe-over with tissues moistened with water. Moreover, the ES-421 needs not special care nor trouble for storing and handling it differently from other salt-meters employing glass electrodes.

Applications

- At factories of food processing, sauce and dressing manufacturing, pickles manufacturing, etc.
- At fast food shops, restaurants, etc.
- At laboratories of cooperatives and consumers center, etc.
- At public health centers for nutrition guidance.
- At supermarkets for stocking foods and demonstration.
- As teaching materials at junior and senior high schools, universities.

Specifications

- **Detection method:** Conductivity method
- **Measurement range:**
0.00 to 10.0% (g/100g) of salt concentration
- **Measurement precision:**
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%)
Example 1: Solution of salt (3% of salt content)
 $\pm(3.0 \times 0.05) = 0.15$ (measurement precision $\pm 0.15\%$)
Example 2: Solution of salt (10% of salt content)
 $\pm(10.0 \times 0.05) = 0.5$ (measurement precision $\pm 0.5\%$)
- **Minimum measurement unit:**
0.01% for salt concentration of 0.00 to 2.99%
0.1% for salt concentration of 3.0 to 10.0%
- **Measurement temperature:**
10 to 40°C Automatic temperature compensation
- **Ambient temperature:** 10 to 40°C
- **Materials:** ABS resin (Main body)
Vinyl chloride resin (Sample stage)
- **Power source:** One 006P battery (9V)
- **Dimensions & Weight:** 17(W)×9(D)×4(H)cm, 300g

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
- * Calibrazione con liquidi standard esclusivi
- * Compacto y fácil de llevar
- * 輕巧易於攜帶



- * 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



- * Salt concentration scale
- * Teneur en sel
- * Skala fuer Salzkonzentration
- * Salinità%
- * Escala de concentración salina
- * 鹽分濃度刻度



HACCP G.M.P. G.L.P.

ATAGO products are acknowledged by HACCP, G.M.P. and G.L.P. systems.

* Specifications and design are subject to change without notice.

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