

SALT ANALYSER

Model: SAT-500

The Model SAT-500 provides quick and easy measurement of salt and chloride ions. The measurement can be carried out within 25 seconds by dispensing a small amount of the sample solution into the measuring beaker using a micro-dispenser. The instrument is suitable for use in a wide range of applications in food processing.

Features

Simple, reliable operation

Measurement starts automatically after injection of sample using the micro-dispenser. The instrument provides extremely accurate results (less than 0.5% in C.V. for 1% solution).

Fast Measurement

Measurement is completed within 25 seconds for 1% standard solutions. Even for high concentration samples measurement is completed in 40 seconds.

Same electrolyte can be used continuously

The same electrolyte can be used for continuous measurement. The same solution can be used for more than 100 measurements of 1% standard solution or 50 measurements of high concentration samples. This reduces running costs and minimises routine set-up work.

Complete range of statistical functions

Printouts for average value every n measurements. Individual measurements can be selected and excluded from the statistical calculations and results if required.

Direct reading for salinity

Measurement of solid samples that can be dissolved and diluted is possible. The dilution factor that was used can be input into the instrument to enable display and print out of the direct measurement result.

Powerful data acquisition functions

The analyser itself can store 300 data points internally. Optional PC software is available to transfer data to a Windows® based PC. Once transferred to the PC, the data can be exported to other, third party applications, using CSV format.

Standard Specifications

Measuring Method:	Coulomb-metric titration method (end point is detected by potential difference).
Display:	LCD panel (320x 240 pixels) with back light. Selectable English /Japanese language menus.
Sample Injection Method:	Micro-dispenser
Sample Injection Volume:	2, 20, 200 μ l or other (1~9999 μ l)
Measurement:	NaCl or Cl ⁻ (chloride ion)



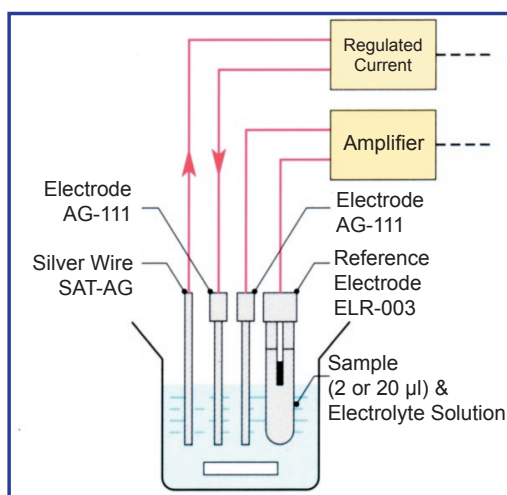
Measuring Ranges & Resolution:	2 μ l dispenser, 0.00~49.99% (0.01%) 20 μ l dispenser, 0.000~4.999% (0.001%) 200 μ l dispenser, 0.0000~0.4999% (0.0001%) Other disp. vol., 0.000~99.99% (depends on calibration solution concentration)
Concentration Units:	%(w/v), %(w/w), mg/l or mol/l
Repeatability:	0.5% or less in C.V. value at 1% of NaCl standard solution with 20 μ l dispenser
Calculation Constant Setting:	It is possible to set dilution ratio etc.
Calibration:	Automatic single point calibration using NaCl standard solution
Measurement Start:	Automatic start on detection of potential change or manual start by pressing START key.
Printer:	Built-in thermal printer
Printer Memory:	300 data points (with backup)
Outputs:	RS-232C (for PC or extrn. printer) Output 1 (for auto injector) Output 2 (for sample changer)
Ambient Temperature:	10~35 deg C (avoid sudden temperature changes)
Power Source:	AC line, 100~240V, 50/60Hz
Power Consumption:	Approx. 20VA (maximum)
Dimensions (mm):	Main; 190(w) x 192(h) x 385(d) Meas. Section; 110(w) x 370(h) x 220(d)
Weight:	Main; 3.3Kg, Meas. section; 1.1Kg

Principle of Operation

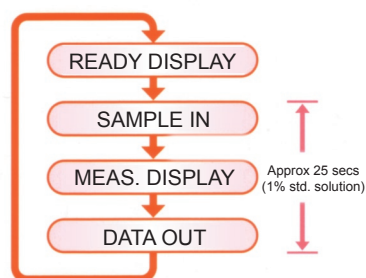
The Model SAT-500 performs measurements based on the principle of Coulomb metric titration. It directly measures the volume of chlorine in the sample. An electric current is passed between the silver wire (SAT-AG) and the silver electrode (AG-111) to form white deposits of silver chloride by electrolysis. The white deposits are formed from the dissolved silver ions and the chloride present in the sample:



Therefore the chloride volume in the sample can be determined from the electricity ($I \times \text{time}$) required until all the chloride in the sample has been depleted by electrolysis.



Measurement Procedure



- Very simple operation - just dispense sample into the electrolyte solution.
- Sequence is automatically started and controlled by the analyser.

Due to continuous product improvement, specifications contained herein are subject to change without notice.



Always read the instruction manual before operation.

International Operations:

DKK-TOA Corporation
29-10, 1-Chome, Takadanobaba, Shinjuku-ku, Tokyo 169-8648 Japan
Tel: +81-(0)3-3202-0225 Fax: +81-(0)3-3202-5685

Representative Office (Europe):

DKK-TOA European Representative
St. Johns Innovation Centre, Cowley Rd., Cambridge CB4 0WS UK.
Tel: +44 (0)1223-968885 Fax: +44 (0)1223-709239

www.dkktoa.net www.toadkk.co.jp

Standard Accessories

- Stirrer unit, 6877950K, Qty=1
- Electrode holder, 6877940K, Qty=1
- Silver electrode, AG-111, Qty=2
- Silver wire for electrolysis, SAT-AG, Qty=1
- Reference electrode, ELR-003, Qty=1
- Electrolyte (500ml), SAT-1F1, Qty=1
- Additional solution 50ml, SAT-1G1, Qty=1
- Polishing solution 50ml, SAT-1Z1, Qty=1
- Ref. electrode inner solution (100ml), SAT-1E1, Qty=1
- Exclusive beaker, Qty=1
- Stirrer, SAT-SB, Qty=2
- Printer paper (2 rolls), Qty=1
- Power cable, Qty=1
- Instruction manual, Qty=1
- Micro dispenser (specify type required) *1, Qty=1
- NaCl standard solution (specify conc. required) *2, Qty = 1

*1 Only one set of micro dispenser is included as part of standard accessories. Please select from 2µl (0SZ00018), 20µl (0SZ00021), 200µl (0SZ00024).

*2 When ordering, please specify concentration of standard solution required. Either 10% NaCl (SAT-1A1) or 1% NaCl (SAT-1A2) are available.

Options

- External printer * (non-thermal type), EPS-G
 - Cable for external printer, 0GC00003
 - Paper for printer, P000119
 - Ink ribbon for printer, ORD00001
- Data logging/acquisition software for Windows® based PC
- RS-232C cable (2m), 0GC00002

* When ordering the external printer, connecting cable (0GC00003) must also be purchased.

Micro Dispenser Components

- For 2µl:
 - Glass tube (100 pcs), 0SZ00019
 - Parts kit * for replacement, 0SZ00020
- For 20µl:
 - Glass tube (100 pcs), 0SZ00022
 - Parts kit * for replacement, 0SZ00023
- For 200µl:
 - Glass tube (100 pcs), 0SZ00025
 - Parts kit for replacement, 0SZ00026

Local Representative: