

# Simplified Instruction Manual for SAT-500 Salt Analyzer

Congratulations on your purchasing of the DKK-TOA Salt Analyzer, SAT-500 which is one of the most advanced salt analyzers in the world.

This is a simplified instruction manual edited by picking the essence of the instruction manual which comes in the book style. The operators are requested to read the instruction manual thoroughly before operating the analyzer.

## F1 (Condition setting)

1. Starting method determin.
2. Sample number setting
3. Comment inputting
4. Arbitrary sample inject. vol.
5. Coefficient setting
6. Concentrat. unit setting
7. NaCl/Cl conversion set
8. Analysis condition print

## F2 (Data analysis)

1. Memory data re-analysis  
-- single data analysis
2. Memory data re-analysis  
-- multiple data analysis
3. Printout data selection

## F3 (Signal communication)

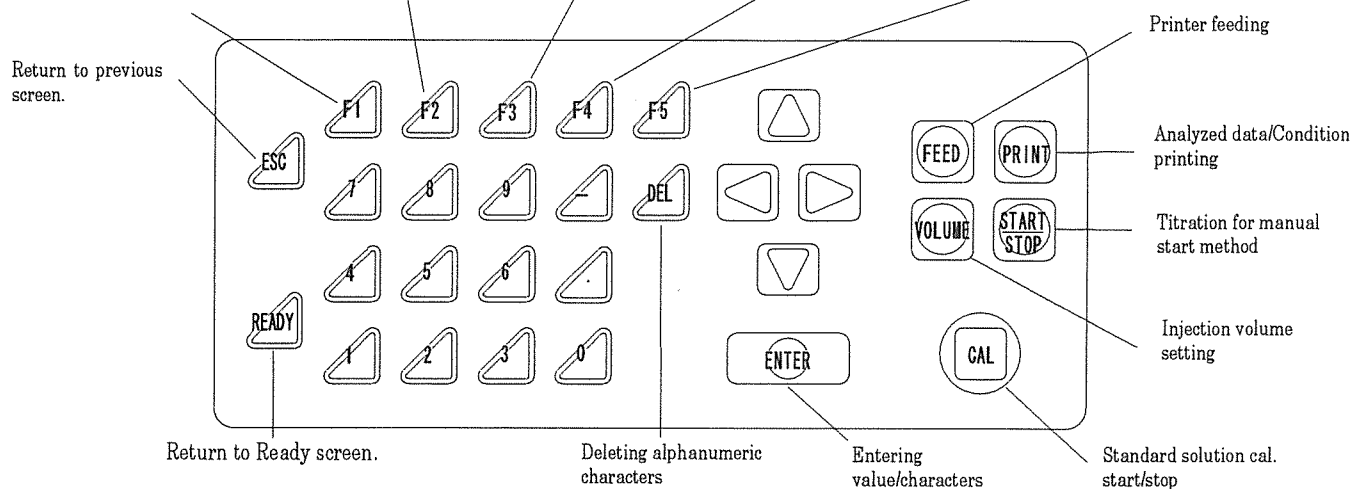
1. Internal/External/No printer selection.
2. RS-232C setting

## F4 (Maintenance functions)

1. Titration checking .
2. Electrolyte change warning
3. Troubleshooting
4. Calibration data manag.

## F5 (Miscellaneous functions)

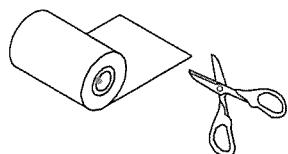
2. Time and date setting .
3. Auto statistic calculation
4. Manual statistic calculation
5. Statistic data item printout
6. Display mode selection



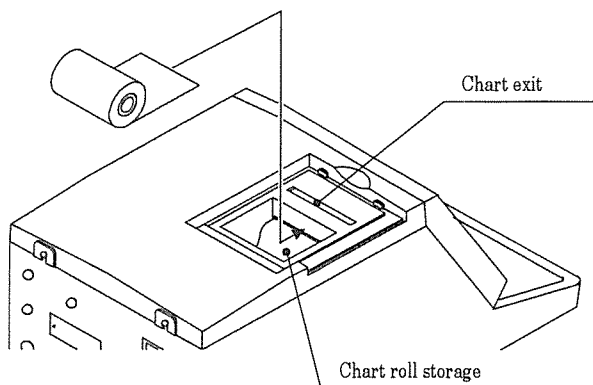
## ● FAMILIARIZATION WITH THE OPERATION PANEL

### ● PRINTER CHART ROLL LOADING

- ① Cut the end of chart at the right angle, not diagonally, with scissors.
- ② Put the chart roll in the chart storage of the printer. Unroll and extent the chart end so that it reaches the feeding roller.

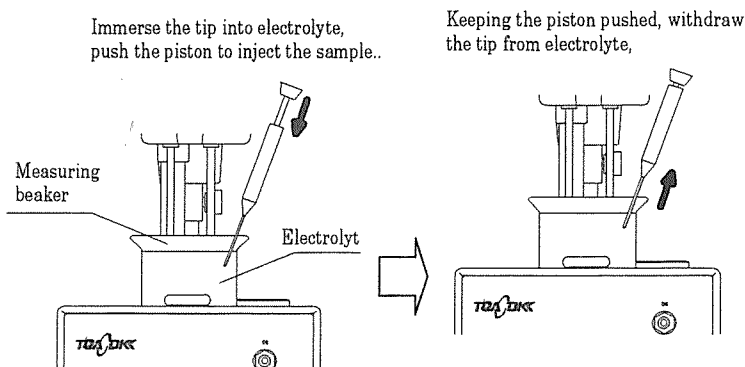


- ③ Press the FEED key as long as the chart end comes out of the chart exit.



### ● SAMPLE SOLUTION INJECTION WITH MICRO DISPENSER

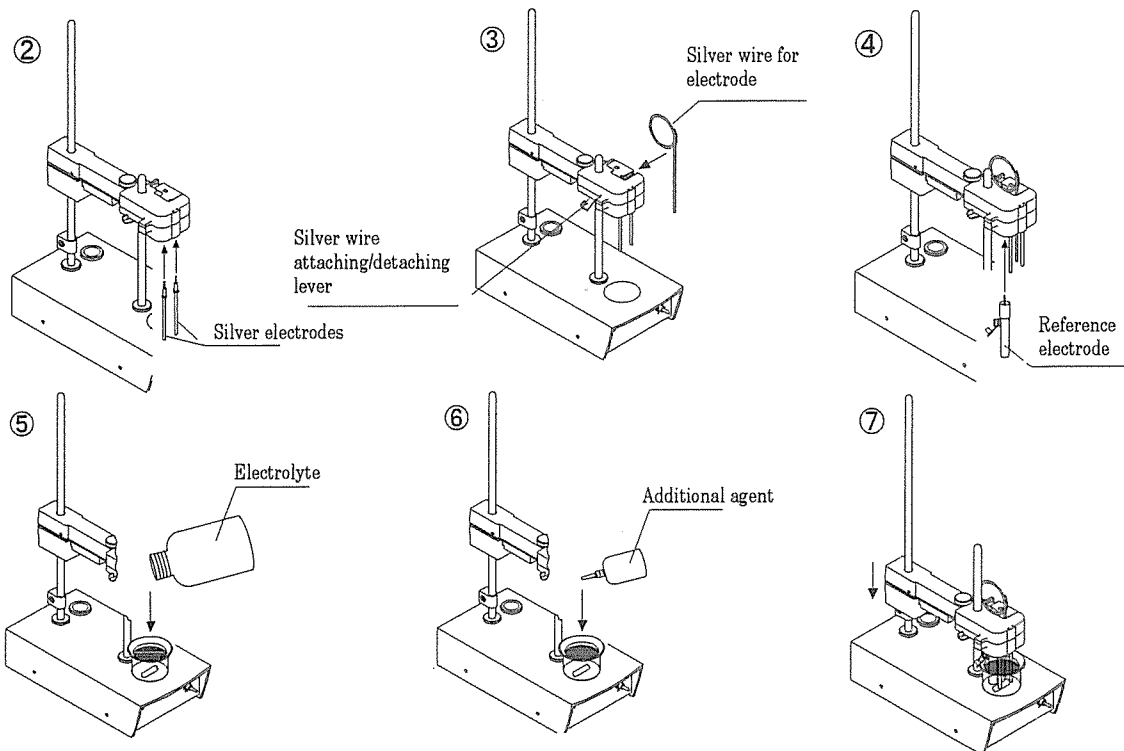
- ① Immerse the tip of micro dispenser into the sample solution, and suck it. Visually check that sucked solution does not contain air babbles and solid components.
- ② Wipe off the sample around the glass capillary with tissue paper.
- ③ Immerse the dispenser tip in the electrolyte in measuring beaker, and push the piston to dispense the sample into electrolyte.
- ④ Keeping the piston in the pushed position, withdraw the dispenser tip from electrolyte.



## ● BASIC OPERATION

### 1. Preparation before Analysis

- ① Polish the tips of silver electrodes and silver wire for electrolysis with tissue paper moistened with the solution 'Polish of Ag Probe'. After polishing, wipe off dust with dry tissue paper.
- ② Attach the silver electrodes to the electrode holder.
- ③ Attach the silver wire for electrolysis to the electrode holder.
- ④ Remove the protective cap of the reference electrode. Open the replenishing port cap. Attach the electrode to the electrode holder.
- ⑤ Place the stirring bar in the measuring beaker. Pour approx. 20 mL of electrolyte into the beaker (up to 80% of capacity).
- ⑥ Add approx. 0.7 mL or 20 drops of the additional agent in to the electrolyte.
- ⑦ Lower the electrode holder to immerse electrodes into electrolyte.



- ⑧ Turn on the power switch of the salt analyzer main unit After 10 seconds, auto electrolysis starts. When it is completed, the Ready screen is indicated.
- ⑨ Press the VOLUME key, and set the sample volume to inject. If the previously set sample value is used again, this procedure can be omitted.
- ⑩ Perform a few trial analyses with NaCl standard (calibration) solution

### 2. Preparation before Analysis

- ① Press the **CAL** key to set the standard solution calibration mode.
- ② Inject the standard solution. A standard solution analysis automatically starts.
- ③ Repeat procedure ② until the 'Calibration OK' message is indicated on the LCD screen.
- ④ When the 'Calibration OK' message is obtained, the sample analysis mode automatically established, and sample analysis is ready.

### 3. Sample Analysis

- ① Inject the sample in the micro dispenser. Analysis automatically starts.
- ② Upon completion of the analysis, the printer starts to print the resultant data.
- ③ When the 'INJ OK' message is shown in the lower right of screen, the next sample injection can be done.

### 4. Routine Maintenance after Analyses

- ① Turn off the power switch.
- ② Lift the electrode holder until the electrodes become out of electrolyte. Detach electrodes and wire.
- ③ Polish the silver wire and electrodes by using the identical manner used before attaching.
- ④ Wash the tip of reference electrode in running deionized water. Close the replenishing port. Put the cap on.
- ⑤ Discard the used electrolyte in the beaker. Wash the beaker in running deionized water.