

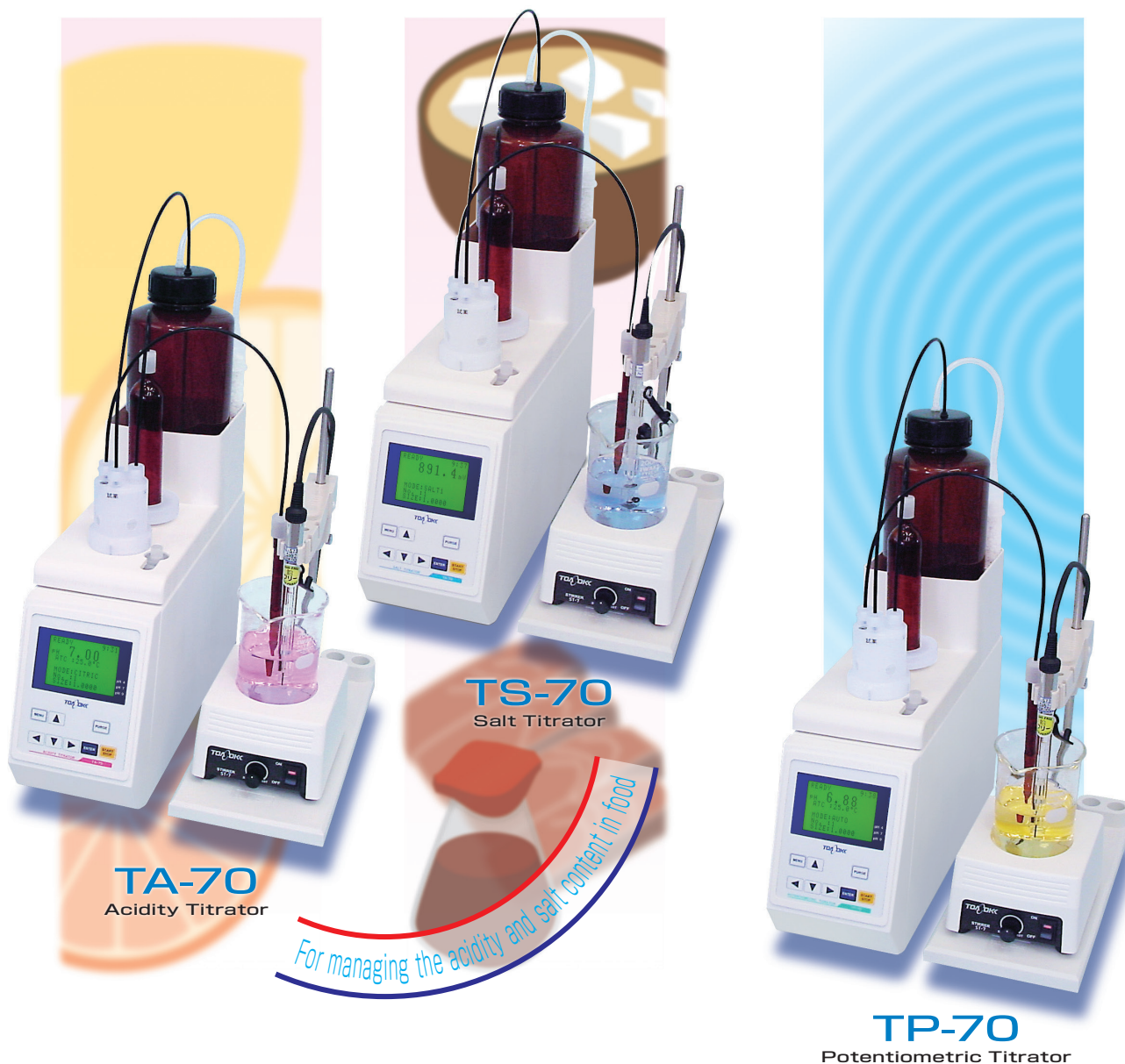
Easy to Use
&
Affordable

TA-70 Acidity Titrator

TS-70 Salt Titrator

TP-70 Potentiometric Titrator

**A lineup of three models
in the dedicated machine series.**



Easy to Use & Affordable

For Routine Analysis



TA-70
Acidity Titrator



TS-70
Salt Titrator

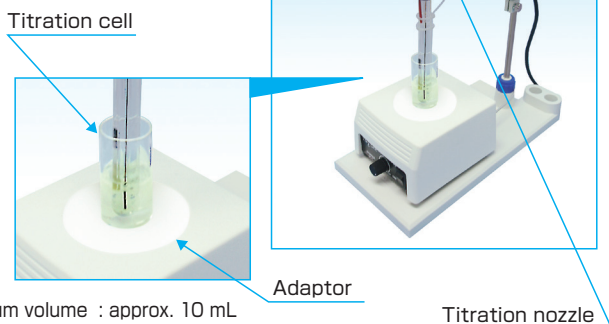


TP-70
Potentiometric Titrator

Micro Volume Titration Kit (option)

Micro volume titration kit combined with pH electrode for micro solutions.

This kit features low sample volume consumption and reduced waste water.
(Not available for some applications.)



Minimum volume : approx. 10 mL
Maximum volume : approx. 20 mL

The kit consists of the following items :

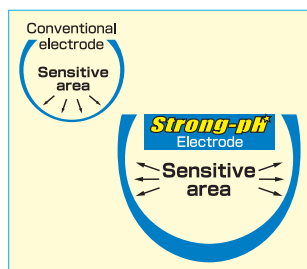
Adaptor, Titration nozzle, Titration cell (50 pcs.),
O-ring P5 (2 pcs.), O-ring P12 (2 pcs.) , Stirring bar (2 pcs.)

Care-free Operation with Durable Glass Electrode

Strong & Float-pH electrodes.

Strong : Tip part is reinforced.
(more than ten times tougher than our conventional one)

Float : Built-in float enables recognition of inner solution concentration at a glance.



System Expandability for Enhanced Efficiency

Multi sample titration system is available by connecting Turntable (TTT-710)

Extensive Data Storage Features

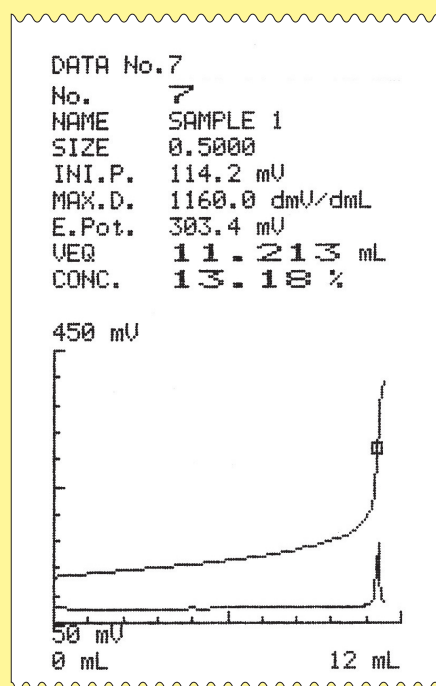
Re-analysis available for 100 data sets

Fast Titration Mode

The titration time can be reduced.
(Not available for some applications.)

External Printer Available (Optional)

Print Sample (TS-70)



Printing items can be set.

Automated Continuous Multiple Sample Measurement Capability

Turntable TTT-710

Easy maintenance

Electrode cleaning tank and electrode storage tank are placed on the front of the unit.

This enables easy maintenance of tubes, electrodes, etc.

Wide-range of electrode cleaning modes available

Pure water shower cleaning comes as a standard feature. Chemical cleaning, bubbling cleaning, and air blow modes are also available as optional features.



Specifications

Number of samples/ Beakers used	12 samples	200mL beaker, 300mL tall beaker (Our recommendation: Glass beakers manufactured by AGC TECHNO GLASS CO., LTD. or HARIO CO., LTD.)
	18 samples	100mL tall beaker (Our recommendation: Glass beakers manufactured by AGC TECHNO GLASS CO., LTD. or HARIO CO., LTD.)
	36 samples	30mL beaker, 50mL tall beaker (Our recommendation: Glass beakers manufactured by AGC TECHNO GLASS CO., LTD.)
	60 samples	20mL dedicated beaker (H-20 beaker manufactured by NICHIDEN RIKA-GLASS CO., LTD.)
	100 samples	20mL dedicated beaker (H-20 beaker manufactured by NICHIDEN RIKA-GLASS CO., LTD.)
Stirring method		Standard: Magnetic stirring Option: Propeller stirring
Cleaning mode		(1) Pure water shower → Air blow (2) Pure water bubbling → Pure water shower → Air blow (3) Chemical shower → Pure water shower → Air blow (4) Chemical bubbling → Pure water shower → Air blow (5) Chemical bubbling → Pure water bubbling → Pure water shower → Air blow (6) Chemical bubbling → Chemical shower → Air blow (7) Chemical shower → Air blow (8) Chemical bubbling → Pure water bubbling → Chemical shower → Air blow Note: · Air blow cleaning is available when the optional air pump box is installed. · Bubbling cleaning is available when the optional air pump box and waste water valve are installed. · Please contact us for details about chemical cleaning.
Cleaning time		0 to 9999 seconds
Detection of final sample		Possible by using end detection pin or defining the final sample number by key operation
Performance-guaranteed temperature		5 to 40 °C
Power source		100 to 240V AC, 50/60Hz
Power consumption	Standard	When 100V AC is applied: Approx. 60VA at the maximum When 240V AC is applied: Approx. 90VA at the maximum
	When optional product is connected	When 100V AC is applied: Approx. 100VA at the maximum When 240V AC is applied: Approx. 130VA at the maximum

Dimensions	Main unit (not including table)	Approx. 440(W) × 409(H) × 391(D) mm
	When table is attached	Approx. 556(W) × 409(H) × 507(D) mm
	Maximum dimensions when in operation	Approx. 556(W) × 534(H) × 507(D) mm
Weight of main unit		Approx. 16 kg (without table plate attached), Approx. 18 kg (with table plate attached)

Standard Accessories

Table (Specify either for 12, 18, 36 or 60 samples)
Electrode cartridge (Specify a suitable type depending on the number of samples/purpose)
Cleaning water tank (10L, with liquid level sensor)
Waste water tank (10L, with liquid level sensor)
Cleaning water tube (3m)
Waste water hose (1.5m)
End detection pin
O-ring
Hoffman pinch cock (small)
Power cord
2P-3P conversion adapter
Disposable beaker (200mL)
Instruction manual

Options

Product	Code No.
Connection Cable for Turntable (2m)	7075670K
Dedicated connection cable for AUT-701, TA-70, TS-70, TP-70	7075670K
Air pump box (for air blow)	7400560U
Air pump box (for air blow and bubbling)	7401640U
Waste water valve for TTT-710 (pinch cock)	7401650U
Waste water valve for TTT-710 (solenoid valve)	7401660U
Propeller stirring unit (For 12 or 18-sample table)	7401670U
Propeller stirring unit (For 36-sample table)	7401680U
Propeller stirring unit (For 60 or 100-sample table)	7401690U

*For further information regarding chemical cleaning, please contact us.

PC Software for Data Management

Data Collection Software G-LOG2

Titration results* can be saved to a computer in text format via RS-232C.

*Only calculated results. No real-time titration data (titration volume - pH/mV).

For Printing Titration Results

External printer with connecting cable
EPS-R



Titration purpose and main electrodes

Purpose	Product name	Code	Remarks
Neutralization titration	pH combined electrode (general purpose) <i>Strong-pH</i>	GST-5731C	Electrode with acidity meter (TA-70) as standard accessories
	pH combined electrode (precision measurement) <i>Strong-pH</i>	ELP-035	
Redox titration	ORP combined electrode (general purpose)	PS-5111C	
Salinity titration	Silver combined electrode (general purpose)	ELX-006	Salt meter (TS-70) standard accessories included electrode/replaceable liquid junction
Non-aqueous titration	Glass electrode (general purpose)	HGS-2005	Electrode adapter for main unit connection (OJD00001) · electrode holder (S-HLD-S) are required separately.
	Reference electrode (double junction)	HS-305DS	

Other Parts

Product name	Code	Remarks
Micro volume titration kit	7075600K	Composition: Adaptor, Titration nozzle, Titration cell (50 pcs.), O-ring P5 (2 pcs.), O-ring P12 (2 pcs.), Stirring bar (2 pcs.)
Electrode adapter	OJD00001	This is required when using a single-purpose electrode.
Electrode holder	S-HLD-S	
Turntable connection cable (2m)	7075670K	For TTT-710 connection
RS-232C cable (2m)	118B604	For PC connection (D-sub9P)

Specifications

Standard Configuration/Titrator + Magnetic Stirrer ST-8

External printer is an optional.

Titrator Specifications

Product name	Acidity Titrator TA-70	Salt Titrator TS-70	Potentiometric Titrator TP-70
Display	LCD with back light		
Titration method	Potentiometric titration		
Number of titration steps	Single step		
Titration mode	①citric acid ②tartaric acid ③acetic acid ④malic acid ⑤lactic acid ⑥factor mode ⑦blank mode	①salinity-1 ②salinity-2 ③factor mode ④blank mode	①inflection point detection ②set point titration mode ③pH adjustment mode
Measuring item/ range	pH : 0.00 to 14.00 mV : 0.0 to ±2000.0mV Temperature : 0.0 to 100.0°C Acidity : 0 to 100%	mV : 0.0 to ±2000.0mV Salinity : 0 to 100% (NaCl)	pH : 0.00 to 14.00 mV : 0.0 to ±2000.0mV Temperature : 0.0 to 100.0°C Conc., factor : depends on unit setting
Unit	%, No calculation (mL)	%, No calculation (mL)	%, mg/L, g/L, No calculation (mL) Factor (W), Factor (V), Blank
Resolution	pH : 0.01pH mV : 0.1mV Temperature : 0.1°C Acidity : 4 digits (minimum display resolution: 0.001%)	mV : 0.1mV Salinity : 4 digits (minimum display resolution: 0.001%)	pH : 0.01pH mV : 0.1mV Temperature : 0.1°C Conc. : 4 digits (minimum display resolution: 0.001%)
Number of electrode inputs	1ch		
Data memory	100 sets (re-analysis available)		
Printer	External printer EPS-R (option)		
Printing items	Date, time, titration mode, titration condition, sample No., sample name, sample quantity, initial potential, equivalent potential, titration volume, concentration, graph (Print ON/OFF setting available for each item)		
External control input / output (optional auxiliary equipment)	RS-232 x 2 For PC, external printer EPS-R and Turntable		
Syringe	20 mL amber syringe with precision-polished inner barrel		
Burette accuracy	Total volume error : ±0.1% Dispensing repeatability: ±0.01mL		
Using tube	Black PTFE tubing, 2 mm I.D. × 3 mm O.D.		
Wetted materials	PTFE, PCTFE, hard glass		
Minimum dropping volume	0.01mL		
Ambient temp. & RH	5 to 35 °C, 85% or less (without condensation)		
Power source	100V AC 50/60Hz		
Power consumption	Max. 33VA		
Dimensions & weight	Approx. 110(W) × 396(H) × 346(D) mm. Approx. 5.6 kg		

Standard Accessories	pH electrode GST-5731C* pH4.01 standard solution, 500mL 143F191 pH6.86 standard solution, 500mL 143F192 Internal solution for reference electrode, 50mL Electrode attachment (J) OIB00005 Electrode attachment (N) OIB00008	Silver combined electrode ELX-006* Internal solution for reference electrode, 50mL Reference electrode outer chamber solution RE-2 (100mL) 143F238 Electrode attachment (J) OIB00005 Electrode attachment (N) OIB00008	Electrode attachment (G) OIB00004 Electrode attachment (J) OIB00005 Electrode attachment (N) OIB00008
	Magnetic stirrer ST-8 Electrode holder OIB00001 Electrode stand w/ stopper 6948810K Syringe unit stand (for 1-20 mL) 7075610K (including test tubes for nozzle stand) Reagent bottle 7075630K (1L semi-transparent amber plastic bottle)	Carbon dioxide adsorbent w/ tube 7075640K 20mL brown syringe AUT-045P Syringe attachment AUT-066P Degassing nozzle (for 1-20mL syringe) P000070 Nozzle cleaning attachment AUT-067P Black PTFE tube, 2m AUT-022P	Nozzle purge tube P000108 Power cord 118C025 2P conversion adapter 102A991 Ground wire(2m) XL600697 Instruction manual

* When no electrode is specified, it is not attached.

Specifications of Magnetic Stirrer ST-8

Usable beaker	Up to 200mL beaker
External connection terminal	Power for overhead rod type stirrer
Power source	DC5V (dedicated cable/dedicated AC adapter AC100 to 240V 50/60Hz optional)
Power consumption	Max. 5VA(100V AC) Max. 9VA(240V AC) (Adapter DC output DC5V 5VA)
Dimensions & weight	Approx. 110(W) x 73(H) x 135(D)mm, Approx. 0.8 kg
Standard Accessories	Stirring bar (φ8 X 25mm) 107D039



DKK-TOA CORPORATION



CAUTION

Please read the operation manual carefully before using products.

Overseas Sales Division:
DKK-TOA Corporation
29-10, 1-Chome, Takadanobaba, Shinjuku-ku, Tokyo 169-8648 Japan
Tel : +81-3-3202-0225 Fax : +81-3-3202-5685
E-mail : intsales@dkktoa.com

<https://www.toadkk.com/english>

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