

# Infitek

## TITRATOR

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## Infitek

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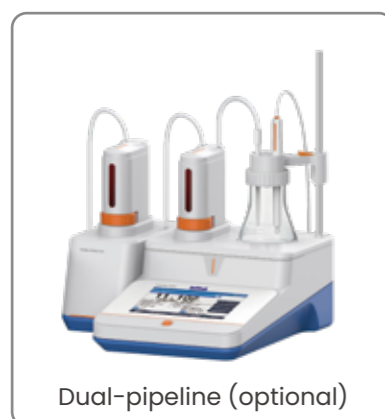


# Potentiometric Titrator

## TITR-A51

### Selling point

-  7.0-inch high-contrast color LCD touchscreen
-  Potential titration and measurement of pH, pX, ion concentration.
-  Smart operation, auto-recognition and high throughput



Dual-pipeline (optional)



### Features

- Color High contrast LCD touchscreen, 7.0 inches.
- Potential titration and measurement of pH, pX, ion concentration.

### Smart Operation, Auto-Recognition, High Throughput

Intelligent operation system provides features including user management, method management, sensor management, titrant management, data management and GMP management etc.

User four-level authority management and password management.

Method management function, built-in titration method (potentiometric titration method 200 sets) and measurement method (direct reading concentration method, known increment method, GRAN method), support custom method.

Connection with auto sampler to realize the automatic measurement and batch detection of samples.

### Titration

Detection module expansion of dead stop titration, conductometric titration, photometric titration and temperature titration analysis.

Replaceable burette with high-accuracy (5mL, 10 mL or 20 mL selectable).

1 extra burette driver can be installed (optional), support for dosing or titration.

Burette line using acid and alkali resistance, perchloric acid resistance, organic reagent corrosion resistant material, can be non-aqueous titration.

Support upper mixer and lower mixer.

Support the following titration modes: DET (dynamic equivalence point titration), MET (monotone equivalence point titration), SET (Preset Endpoint titration), constant pH titration, constant speed titration, Blank titration, and MAT (manual titration).

Support acid-base titration, non-aqueous phase acid-base titration, REDOX titration, precipitation titration and complex titration and other titration methods.

Displays the test method, titration curve and measurement results in real time.

Formula editor can display calculation results directly.

Supports recalculation of original data.

## pH

1-3 points calibration with Standard Recognition.

Selectable pH buffer groups, including NIST, DIN, GB.

Automatic electrode diagnosis with pH slope and offset display.

## Ion

1-3 points calibration.

Selectable measurement unit, including  $\mu\text{g/L}$ ,  $\text{mg/L}$ ,  $\text{g/L}$ ,  $\text{mmol/L}$ ,  $\text{pX}$ ,  $\text{ppm}$  and  $\text{ppb}$ .

Measurement modes are supported, including Direct Reading mode, Standard Addition mode, and GRAN mode.

Over 10 methods are built-in, including  $\text{F}^-$ ,  $\text{Cl}^-$ ,  $\text{Br}^-$ ,  $\text{I}^-$ ,  $\text{NO}_3^-$ ,  $\text{BF}_4^-$ ,  $\text{NH}_4^+$ ,  $\text{K}^+$ ,  $\text{Na}^+$ ,  $\text{Ca}^{2+}$ ,  $\text{Cu}^{2+}$ ,  $\text{Pb}^{2+}$ ,  $\text{Ag}^+$ , etc. User-defined method is supported.

## Data Management, Audit Trail

Data Storage 1000 sets for each parameter (GLP-compliant).

Support for GMP management, the GMP logs achieve the tracking and analysis of the data.

Support for RS-232 communication for print and the print format can be alternate.

Support for USB communication for PC software.

Support for U disk for method export and import.

Support for U disk for data export with CSV or PDF format.

Support for barcode scanner and balance (Specific model).

It needs GMP software to implement GMP management functions.

## Includes

- 10mL burette
- 231-01 pH indicator electrode
- 213-01 platinum electrode
- 216-01 silver electrode
- 232-01-D reference electrode
- 217-01-D reference electrode
- T-818-Q Temperature probe
- pH standard powder(4.01, 7.00, 10.01)



## Specification

Model		TITR-A51
Repeatability		$\leq 0.2\%$
Burette	Accuracy	5mL Burette: $\pm 0.010\text{mL}$ 10mL Burette: $\pm 0.020\text{mL}$ 20mL Burette: $\pm 0.030\text{mL}$
	Resolution	1/480000
Measuring Unit	Range	(-2000.00~2000.00)mV (-5.000~20.000)pH pX: (-2.000~20.000)pX Ion: (1.000e-9~9.999e+9) $\mu\text{g/L}$ , $\text{mg/L}$ , $\text{g/L}$ , $\text{mol/L}$ , $\text{mmol/L}$ , $\text{ppm}$ , $\text{ppb}$
	Resolution	pH: 0.001pH pX: 0.001pX Ion: Up to 4 significant digits mV: 0.01mV
	Accuracy	pH: $\pm 0.002\text{pH}$ mV: $\pm 0.03\%$ or $\pm 0.2\text{mV}$
	Fluctuation	$\pm 0.3\text{mV}/3\text{h}$
Temp. Compensation	Repeatability	$\leq 0.1\text{mV}$
	Range	(-10.0~135.0) $^{\circ}\text{C}$
	Resolution	0.1 $^{\circ}\text{C}$
General	Accuracy	$\pm 0.1^{\circ}\text{C}$
	Power Supply	AC 80~250V, 47~63Hz
	Dimensions	240×370×270mm
	Net Weight	About 4kg

## Potentiometric Titrator

### TITR-A41

#### Includes

- 10mL burette
- 231-01 pH indicator electrode
- 213-01 platinum electrode
- 216-01 silver electrode
- 232-01-D reference electrode
- 217-01-D reference electrode
- T-818-Q Temperature probe
- pH standard powder(4.01, 7.00, 10.01)



#### Specification

Model		TITR-A41
Repeatability		≤0.2%
Burette	Accuracy	10mL Burette: ±0.025mL 20mL Burette: ±0.035mL
	Resolution	1/50000
Measuring Unit	Range	(-2000.00~2000.00)mV (-2.000~20.000)pH
	Resolution	pH: 0.001pH mV: 0.01mV
	Accuracy	pH: ±0.005pH mV: ±0.05% or ±0.3mV
	Fluctuation	±0.3mV/3h
	Repeatability	≤0.2mV
Temp. Compensation	Range	(-5.0~110.0) °C
	Resolution	0.1 °C
	Accuracy	±0.2 °C
General	Power Supply	AC 80~250V, 47~63Hz
	Dimensions	240×370×270mm
	Net Weight	About 4kg

#### Features

-  ● Color High contrast LCD touchscreen, 7.0 inches.
-  ● Potential titration analysis.
-  ● Replaceable burette with high-accuracy (10mL or 20mL selectable).
-  ● Support upper mixer and lower mixer.
-  ● Burette line using acid and alkali resistance, perchloric acid resistance, organic reagent corrosion resistant material, can be non-aqueous titration.
-  ● Support the following titration modes: DET (dynamic equivalence point titration), MET (monotone equivalence point titration), SET (Preset Endpoint Titration), constant pH titration, Blank titration, and MAT (manual titration).
-  ● Formula editor can display calculation results directly.
-  ● It has titrant management.
-  ● 1-3 points calibration with Standard Recognition.
-  ● Selectable pH buffer groups, including NIST, DIN, GB.
-  ● Displays the test method, titration curve and measurement results in real time.
-  ● Support acid-base titration, non-aqueous phase acid-base titration, REDOX titration, precipitation titration and complex titration and other titration methods.





#### Data Management

- Data Storage 1000 sets (GLP-compliant).
- User password management.
- Support for RS-232 communication for print and the print format can be alternate.
- Support for U disk for data export with CSV or PDF format.

# Automatic Potential Titrator

## TITR-A40

### Selling point

-  LCD display screen and smart guide system.
-  pH calibration and measurement are supported.
-  Titrator can be controlled by computer via USB or RS-232 communication interface.
-  Store up to 50 titration data sets (GLP-compliant) and 1 latest set of titration curve.

### Features

- LCD display screen and smart guide system.
- Titration methods, curves and results are displayed in detail.
- Replaceable burette with high-accuracy (10 ml or 20 ml selectable).
- pH calibration and measurement are supported.
- Titrator can be controlled by computer via USB or RS-232 communication interface.
- Data can be easily transferred to printer via RS-232 communication interface.
- Store up to 50 titration data sets (GLP-compliant) and 1 latest set of titration curve.
- Support titration modes: DET (dynamic equivalence point titration), MET (monotone equivalence point titration), SET (Preset Endpoint Titration) and MAT (manual titration).



### Description

- Compared with indicator titration, potentiometric titration has the advantages of objective reliability, high accuracy, easy automation, and is not limited by the color and turbidity of the solution. It is an important analytical method.
- According to the indication principle and the chemical reaction that occurs, the indication methods often used in titration analysis can be generally classified into: potentiometric titration, coulomb titration, permanent stop titration, conductometric titration, photometric titration, and temperature titration.



- TITR-A40 Automatic Potential Titrator 1 Set**
- 232-01 Reference electrode 1 Piece
  - 213-01 Platinum electrode 1 Piece
  - 216-01 Silver electrode 1 Piece
  - 217-01 Reference electrode 1 Piece
  - 231-01 pH Glass Electrode 1 Piece
  - T-818-B-6 Temperature probe 1 Piece
  - Dropper and Infusion tube (fluoro plastic) (SC5.462.023) (Installed on the 12th valve unit) 1 Piece
  - Solution cup (SC8.219.010) 3 Pieces
  - Solution cup (SC8.463.001) 3 Pieces
  - Ejector tool (SC8.227.126) 1 Piece
  - Burette valve device 10mL (SC5.461.044) 1 Set
  - Stirring bar(Small) 3 Pieces
  - Electrode stand device (SC5.108.022) 1 Set
  - Infusion tube (fluoro plastic)  $\phi 3.2$  (import) ( Installed on the 12th valve unit) 1 Piece
  - Fittings nuts GS-14A, B 3 Sets
  - 1000mL solution bottle(SC5.810.003) (Including dryer) 1 Set
  - Fuse  $\phi 5 \times 20(3A)$  2 Pieces
  - European standard power cord(3VTJ2) 1 Piece
  - USB communication cable 1 Piece
  - Standard pH Buffer Powder (pH4.01, 7.00, 10.01) 1 Piece each
  - Instruction manual and application examples 1 Piece each

## Specifications

Model	TITR-A40	
Burette	Titrimetric Repeatability	0.20%
	Accuracy	10ml Burette: $\pm 0.025\text{ml}$
		20ml Burette: $\pm 0.035\text{ml}$
Resolution	10ml Burette: $1\mu\text{l}$	
	20ml Burette: $2\mu\text{l}$	
Mechanical Unit	Resolution	1/10000
Measuring Unit	Range	(-1800.0 ~ 1800.0) mv, (0.00 ~ 14.00)pH
	Resolutions	0.1mV, 0.01pH
	Accuracy	pH: $\pm 0.01\text{pH}$ , mv: $\pm 0.03\%\text{FS}$
	Fluctuation	( $\pm 0.3\text{mV} \pm 1\text{bit}$ ) /3h
Temp. Compensation	Range	(-5.0 ~ 105.0) $^{\circ}\text{C}$
	Resolutions	0.1 $^{\circ}\text{C}$
General	Accuracy	$\pm 0.3$ $^{\circ}\text{C}$
	Electricity	AC Adapter, 100-240V AC input, DC24V output
	Dimension (mm)& Weight (kg)	340×400×400, 10

# Potential Titrator

## TITR-A20



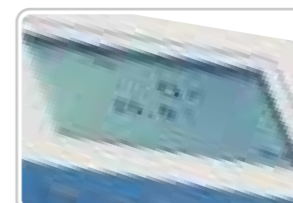
### Description

- Compared with indicator titration, potentiometric titration has the advantages of objective reliability, high accuracy, easy automation, and is not limited by the color and turbidity of the solution. It is an important analytical method.



- TITR-A20** Potential Titrator 1 Set  
 217-01 Reference electrode 1 Piece  
 213-01 Platinum electrode 1 Piece  
 216-01 Silver electrode 1 Piece  
 E-201F pH composite electrode 1 Piece  
 JB-10 Stirrer 1 Set  
 Solenoid valve parts(SC5.461.049)(With 1 fastening screw) 1 Piece  
 International universal power cord 1 Piece  
 Fuse tube BGXP-1  $\phi 5 \times 20$  0.5A 2 Pieces  
 YW-904W 9V/800mA Regulated power supply, European plug 1 Piece  
 Electrode rod A part (SC8.100.249, With 1 electrode rod bushing) 1 Piece  
 Electrode rod B (SC8.100.250) 1 Piece  
 Capillary dropper (SC8.403.008) 1 Piece  
 Clip Parts (SC5.100.045, With 1 fastening screw) 1 Piece  
 Piece Support parts (SC8.022.106) 1 Piece  
 Elastic Set Clip (SC8.214.090) 1 Piece  
 Electrode holder (SC5.108.019, With 1 fastening screw) 1 Piece  
 Fluoro elastomer tube(ID  $\phi 3$  OD  $\phi 6$ , L=500mm) 2 Pieces  
 Stirring bar(Small) 3 Pieces  
 Standard pH Buffer Powder (pH4.01, 7.00, 10.01) 1 Piece each  
 RS232 printing cable 1 Piece  
 Instruction manual 1 Piece

### Features



- LCD display screen.



- Support titration modes: SET (Preset Endpoint Titration) and MAT (Manual titration).



- Stirrer is included.



- Glass burette can be used for volume measurement (prepared by user).

### Specifications

Model	TITR-A20	
Measuring Unit	Range	(0~ $\pm 1400$ ) mV, (0~14.00)pH
	Resolutions	1mV, 0.01pH
	Accuracy	pH: $\pm 0.03$ pH mV: $\pm 5$ mV
	Fluctuation	$\pm 0.01$ pH /3h
General	Electricity	AC Adapter, 200-240 VAC input
	Dimension (mm)& Weight (kg)	300 $\times$ 235 $\times$ 100; 3

# Auto Titrator

TITR960 BASIC    TITR960 Pro



## Overview

T960 series can be used in food, drug testing, disease control, commodity inspection, water treatment, petroleum, chemical, Marine, electric power, environmental protection, new energy, education, scientific research and other fields.



## Description

### Mixed synchronous inlet system:

The world's leading Mixed synchronous inlet system with 4-channel sample inletting simultaneously. Totally automatic in adding titrant, any combination of additives or auxiliary agents.

### Built-in burette:

The most secure built-in burette, which is built in the instrument and can be observed through the window during the test to avoid the harmless chemical leak. Burette volume is optional: 1ml/5ml/10ml/25ml

### Cloud Service:

With ethernet interface, it can store the database to the cloud server and lead the laboratory instruments to Cloud generation.

### Titration platform diversification:

Flexible to work with independent titration stand or 16 auto-sampler, multi-tasking operating through 16 auto-sampler can be fully automated, and the whole process without staff to monitor, so the device has higher work efficiency.

## Features



Titrator is a high-precision laboratory analytical instrument for volumetric analysis, according to potentiometric titration, dead-stop titration, Karl Fischer, or other titration methods.

Like acid base, REDOX, precipitation, complexometric, dead-stop, Karl Fischer titration, etc. It has the functions of constant titration, micro titration, endpoint titration, volume titration and mode titration, etc.

At the same time, the users can set up special titration mode according to the actual needs.

## Specifications

Model	TITR960 BASIC	TITR960 Pro
Type	potentiometric titration	potentiometric titration, dead-stop titration
MV measuring range	±2000MV	
MV measuring Resolution	Resolution 0.1MV , Accuracy 0.1MV	
pH measuring range	-20.000PH ~ +20.000PH	
pH measurement	Resolution 0.001PH , Accuracy 0.003PH	
Temperature measuring range	-5 ~ 120 °C	
Temperature measuring accuracy	±0.1 °C	
Interface	2xUSB, RS232, Ethernet	
Max titration station	4	
Max liquid filling module	4	
Burette	1ml, 5ml, 10ml, 25ml (Optional)	
Burette resolution	1/15,0000	
Time the burette charging	16 seconds (100% charging speed)	
User ID classify	3 levels	
PC control	yes	
Electrode connector type	mv/pHmeasurement electrode connetor、reference electrode connector、PT1000 temperature electrode connector	mv/pHmeasurement electrode connetor、reference electrode connector、PT1000 temperature electrode connector, polarized electrode connector
Auto-Sampler ( Optional )	1 position independent titration table, three kinds of auto sampler is optional: 16 position 100mL sampler; 12 position 250mL sampler; 18 position 50mL sampler	
Package Dimension (W*D*H)(mm)	480*410*410	
G.W.(kg)	15	

**TITR960 BASIC**

Automatic Titrator Main unit 1pc	pHStandard buffer reagent (pH=4.00) 5set
Magnetic stirring unit 1pc	pHStandard buffer reagent (pH=6.86) 5set
Titration unit 2pc	pHStandard buffer reagent (pH=9.18) 5set
Fixing rod 1set	50ΩResistance Q9 short connector 1pc
Electrode support 1set	Magnetic stirrer 1set
Simple Electrode support 1set	Four core control line 3pc
instructions 1pc	Burette tip cap 1pc
Plastic tube 2set	Titration pipeline fixing head 3pc
Plastic tube 2set	PH electrode, 1 pc
Power cord 1pc	
Power adapter 1pc	
Titration 1pcs	
USB transfer line 1pc	
DB9 transfer line 1pc	
USB Disk 1pc	
Solution bottle 1pc	
Burette nozzle assembly 1pc	
Packing list 1pc	
Inspection certificate 1pc	
Electrode support plug 1set	
Glass electrode cap 2pc	

**TITR960 Pro**




Automatic Titrator Main unit 1pc	pHStandard buffer reagent (pH=4.00) 5set
Magnetic stirring unit 1pc	pHStandard buffer reagent (pH=6.86) 5set
Titration unit 2pc	pHStandard buffer reagent (pH=9.18) 5set
Fixing rod 1set	50ΩResistance Q9 short connector 1pc
Electrode support 1set	Magnetic stirrer 1set
Simple Electrode support 1set	Four core control line 3pc
instructions 1pc	Burette tip cap 1pc
Plastic tube 2set	Titration pipeline fixing head 3pc
Plastic tube 2set	T9605 wifi module 1pc
Power cord 1pc	PH electrode, 1 pc
Power cord 1pc	
Power adapter 1pc	
Titration 1pcs	
USB transfer line 1pc	
DB9 transfer line 1pc	
USB Disk 1pc	
Solution bottle 1pc	
Burette nozzle assembly 1pc	
Packing list 1pc	
Inspection certificate 1pc	
Electrode support plug 1set	
Glass electrode cap 2pc	

# Karl Fischer Titrator

## TITR-50VC



### Selling point

-  7.0-inch high-contrast color LCD touch screen
-  Support Volumetric KF Titration and Coulometric KF Titration
-  Support oven sampling method, to meet the gas, solid, liquid in the constant moisture, trace moisture measurement.

### Features

- Color High contrast LCD touchscreen, 7.0 inches.
- Volumetric KF Titration and Coulometric KF Titration are supported.
- Support oven sampling method, to meet the gas, solid, liquid in the constant moisture, trace moisture measurement.

## Data Management



Auto/manual drift adjust ensures accurate results.



Selectable units including  $\mu\text{g}$ , mg, %, ppm, mg/L and  $\mu\text{g/mL}$ .



User three-level authority management and password management.



Support for USB communication for PC software.



Store up to 2000 titration data sets for volumetric and coulometric titration (GLP-compliant).



Support for RS-232 communication for print and the print format can be alternate.



Support for GMP management, the GMP logs achieve the tracking and analysis of the the data.

It needs GMP software to implement GMP management functions.



Support for U disk for method export and import.

Support for U disk for data export with CSV or PDF format.



Support for printer, barcode scanner, oven and balance (specific model).

## Includes

- Solvent manager
- 10mL burette
- Volumetric vessel
- Measuring electrode
- Coulometric vessel
- Measuring electrode
- Generator electrode



## Volumetric Karl Fischer Titration

Intelligent operation system provides features including user management, method management, sensor management, titrant management, data management and GMP management etc.

Support Auto Titration Method, KF Titer Determination Method, Oven Titration Method and Oven Blank Titration Method.

The solvent manager adopts anti-leakage liquid and anti-pour design of waste liquid bottle, supports to fill titrant, drain solution, feed solvent, mix titrant and clean burette, ensure safe handling of Karl Fischer chemicals.

## Coulometric Karl Fischer Titration

Intelligent operation system provides features including user management, method management, sensor management, data management and GMP management etc.

Support Auto Titration Method, Oven Titration Method, Oven Blank, and Coefficient correction Method.

The solvent manager adopts anti-leakage liquid and anti-pour design of waste liquid bottle, supports to drain solution and feed solvent, ensure safe handling of Karl Fischer chemicals.



## Specification

Model	TITR-50VC
<b>Karl Fischer Volumetric Titration</b>	
Water Range	100µg~250.0mg
Water Resolution	1µg
Water Unit	µg, mg, %, ppm, µg/mL, mg/L
Water Repeatability	≤0.3%
mV Range	(0~2000) mV
mV Resolution	0.1mV
Polarization Current Range	(1~200) µA
Polarization Current Accuracy	±3%
Polarization Current Fluctuation	±2.5%/30min
<b>Karl Fischer Coulometric Titration</b>	
Water Range	3.0µg~200mg
Water Resolution	0.1µg
Water Unit	µg, mg, %, ppm, µg/mL, mg/L
Water Repeatability	≤0.3%
mV Range	(0~2000) mV
mV Resolution	0.1mV
Polarization Current Range	(1~200) µA
Polarization Current Accuracy	±3%
Polarization Current Fluctuation	±2.5%/30min
Working Current Accuracy	±0.5%
Working Current Fluctuation	±0.2%/10min
<b>General</b>	
Power Supply	AC 100~240V, 47~63Hz
Dimensions	240×370×270mm
Net Weight	About 4kg




# Karl Fischer Titrator

TITR-50V TITR-50C



TITR-50V

## Selling point

-  7.0-inch high-contrast color LCD touch screen
-  Coulometric KF Titration
-  Support oven sampling method, to meet the gas, solid, liquid in the constant moisture, trace moisture measurement.

## Features

- Color High contrast LCD touchscreen, 7.0 inches.
- Coulometric KF Titration.
- Support oven sampling method, to meet the gas, solid, liquid in the constant moisture, trace moisture measurement.

## Data Management



Auto/manual drift adjust ensures accurate results.



Selectable units including  $\mu\text{g}$ , mg, %, ppm, mg/L and  $\mu\text{g/mL}$ .



User three-level authority management and password management.



Support for USB communication for PC software.



Store up to 2000 titration data sets (GLP-compliant).



Support for RS-232 communication for print and the print format can be alternate.



Support for GMP management, the GMP logs achieve the tracking and analysis of the the data.  
It needs GMP software to implement GMP management functions.



Support for U disk for method export and import.  
Support for U disk for data export with CSV or PDF format.



Support for printer, barcode scanner, oven and balance (specific model).

## TITR-50V



### Includes

- Solvent manager
- 10mL burette
- Volumetric vessel
- Measuring electrode

### Volumetric Karl Fischer Titration

Intelligent operation system provides features including user management, method management, sensor management, titrant management, data management and GMP management etc.

Support Auto Titration Method, KF Titer Determination Method, Oven Titration Method and Oven Blank Titration Method.

The solvent manager adopts anti-leakage liquid and anti-pour design of waste liquid bottle, supports to fill titrant, drain solution, feed solvent, mix titrant and clean burette, ensure safe handling of Karl Fischer chemicals.

## TITR-50C



### Includes

- Solvent manager
- Coulometric vessel
- Measuring electrode
- Generator electrode

### Coulometric Karl Fischer Titration

Intelligent operation system provides features including user management, method management, sensor management, data management and GMP management etc.

Support Auto Titration Method, Oven Titration Method, Oven Blank, and Coefficient correction Method.

The solvent manager adopts anti-leakage liquid and anti-pour design of waste liquid bottle, supports to drain solution and feed solvent, ensure safe handling of Karl Fischer chemicals.



### Specifications

Model	TITR-50V	TITR-50C
<b>Karl Fischer Volumetric Titration</b>		
Water Range	100µg~250.0mg	/
Water Resolution	1µg	/
Water Unit	µg, mg, %, ppm, µg/mL, mg/L	/
Water Repeatability	≤0.3%	/
mV Range	(0~2000) mV	/
mV Resolution	0.1mV	/
Polarization Current Range	(1~200) µA	/
Polarization Current Accuracy	±3%	/
Polarization Current Fluctuation	±2.5%/30min	/
<b>Karl Fischer Coulometric Titration</b>		
Water Range	/	3.0µg~200mg
Water Resolution	/	0.1µg
Water Unit	/	µg, mg, %, ppm, µg/mL, mg/L
Water Repeatability	/	≤0.3%
mV Range	/	(0~2000)mV
mV Resolution	/	0.1mV
Polarization Current Range	/	(1~200)µA
Polarization Current Accuracy	/	±3%
Polarization Current Fluctuation	/	±2.5%/30min
Working Current Accuracy	/	±0.5%
Working Current Fluctuation	/	±0.2%/10min
<b>General</b>		
Power Supply	AC 100~240V, 47~63Hz	AC 100~240V, 47~63Hz
Dimensions	240×370×270mm	240×370×270mm
Net Weight	About 4kg	About 4kg




# Karl Fischer Titrator

TITR-41V TITR-41C



TITR-41V

## Selling point

-  7.0-inch high-contrast color LCD touch screen
-  Coulometric KF Titration
-  Support oven sampling method, to meet the gas, solid, liquid in the constant moisture, trace moisture measurement.

## Features

- Color High contrast LCD touchscreen, 7.0 inches.
- Coulometric KF Titration.
- Support oven sampling method, to meet the gas, solid, liquid in the constant moisture, trace moisture measurement.

## Data Management



Auto/manual drift adjust ensures accurate results.



Selectable units including  $\mu\text{g}$ , mg, %, ppm, mg/L and  $\mu\text{g/mL}$ .



User password management.



Support for USB communication for PC software.



Store up to 200 titration data sets (GLP-compliant).



Support for RS-232 communication for print and the print format can be alternate.



It needs GMP software to implement GMP management functions.



Support for U disk for data export with CSV format.



TITR-41C

## TITR-41V



### Includes

- Solvent manager
- 10mL burette
- Volumetric vessel
- Measuring electrode

### Volumetric Karl Fischer Titration

Support Auto Titration Method, KF Titer Determination Method, Oven Titration Method and Oven Blank Titration Method.

The solvent manager adopts anti-leakage liquid and anti-pour design of waste liquid bottle, supports to fill titrant, drain solution, feed solvent, mix titrant and clean burette, ensure safe handling of Karl Fischer chemicals.

## TITR-41C



### Includes

- Solvent manager
- Coulometric vessel
- Measuring electrode
- Generator electrode

### Coulometric Karl Fischer Titration

Support Auto Titration Method, Oven Titration Method, Oven Blank, and Coefficient correction Method.

The solvent manager adopts anti-leakage liquid and anti-pour design of waste liquid bottle, supports to drain solution and feed solvent, ensure safe handling of Karl Fischer chemicals.



### Specifications

Model	TITR-41V	TITR-41C
<b>Karl Fischer Volumetric Titration</b>		
Water Range	(0.1~250.0)mg	/
Water Resolution	1µg	/
Water Unit	µg, mg, %, ppm, µg/mL, mg/L	/
Water Repeatability	≤0.5%	/
mV Range	(0~2000)mV	/
mV Resolution	1mV	/
Polarization Current Range	/	/
Polarization Current Accuracy	±3%	/
Polarization Current Fluctuation	±2.5%/30min	/
<b>Karl Fischer Coulometric Titration</b>		
Water Range	/	10.0µg~200mg
Water Resolution	/	0.1µg
Water Unit	/	µg, mg, %, ppm, µg/mL, mg/L
Water Repeatability	/	≤1%
mV Range	/	(0~2000)mV
mV Resolution	/	0.1mV
Polarization Current Range	/	/
Polarization Current Accuracy	/	±3%
Polarization Current Fluctuation	/	±2.5%/30min
Working Current Accuracy	/	±0.5%
Working Current Fluctuation	/	±0.2%/10min
<b>General</b>		
Power Supply	AC 100~240V, 47~63Hz	AC 100~240V, 47~63Hz
Dimensions	240×370×270mm	240×370×270mm
Net Weight	About 4kg	About 4kg

# Karl Fischer Titrator

## TITR-40VC

### Selling point



LCD display screen.



Titration methods, curves and results are displayed in detail.



Volumetric KF Titration and Coulometric KF Titration are supported.



- Data analysis feature helps user review and compare results.
- Data can be easily transferred to printer via RS-232.



### Description

- Karl Fischer moisture measurement method has been recognized as the most accurate method by many international standards, such as ISO, ASTM, DIN, BS, and JIS. This method is suitable for the determination of moisture content of various substances.
- Therefore, Karl Fischer moisture analyzers applying its principle have a wide range of applications for solid, liquid and gas samples.

### Features

#### GENERAL FEATURES

- LCD display screen.
- Titration methods, curves and results are displayed in detail.
- Volumetric KF Titration and Coulometric KF Titration are supported.
- Data analysis feature helps user review and compare results.
- Data can be easily transferred to printer via RS-232 communication interface.
- Reset feature automatically resumes all settings back to factory default options.

#### Volumetric Karl Fischer Titration

- Support KF Titration Mode and Titer Detection Mode.
- Features of auto-filling, auto-purging and auto-mixing of the reagents ensure safe handling of Karl Fischer chemicals.
- Automatic/manual background drift correction ensures accurate results.
- Selectable units including mg, mg/L, %, ppm, etc.
- Settable parameters, including measurement unit, polarization current, stirring rate, titration rate, stop volume, endpoint potential, stop criterion and etc.
- Store up to 200 titration data sets (GLP-compliant).

#### Coulometric Karl Fischer Titration

- Generator cell with diaphragm.
- Automatic/manual background drift correction ensures accurate results.
- Selectable units including  $\mu\text{g}$ , mg, %, ppm, mg/L,  $\mu\text{g}/\text{mL}$ , etc.
- Settable parameters, including measurement unit, polarization current, stirring rate, generator current, endpoint potential, stop criterion and etc.
- Store up to 200 titration data sets (GLP-compliant).

### Specification

Model	TITR-40VC	
Volumetric Titration	Range	(0.1mg~250.0)mg
	Unit	mg, mg/L, %, ppm
	Polarization Current	(1±0.2) $\mu\text{A}$ , (50±10) $\mu\text{A}$
	Accuracy	-
	Repeatability	≤0.5%
Coulometric Titration	Range	10 $\mu\text{g}$ ~20mg
	Unit	$\mu\text{g}$ , mg, %, ppm, mg/L, $\mu\text{g}/\text{mL}$
	Polarization Current	(1±0.2) $\mu\text{A}$ , (50±10) $\mu\text{A}$
	Working Current	for 10.72mA, 20 mA, 53.61mA, 107.2 mA
	Working speed	1 $\mu\text{g}(\text{H}_2\text{O})/\text{s}$ , 1.86 $\mu\text{g}(\text{H}_2\text{O})/\text{s}$ , 5 $\mu\text{g}(\text{H}_2\text{O})/\text{s}$ , 10 $\mu\text{g}(\text{H}_2\text{O})/\text{s}$
	Working speed	≤3min for 1000 $\mu\text{g}$ water
	Accuracy	± (5% of point +3) $\mu\text{g}$
General	Repeatability	≤3%
	Power Supply	AC Adapter, 100-240 V AC input
	Dimensions	340*400*400 mm
	Net Weight	10kg

# Karl Fischer Coulometer

## TITR-20V



### Description

- Karl Fischer moisture measurement method has been recognized as the most accurate method by many international standards, such as ISO, ASTM, DIN, BS, and JIS. This method is suitable for the determination of moisture content of various substances.
- Therefore, Karl Fischer moisture analyzers applying its principle have a wide range of applications for solid, liquid and gas samples.



- TITR-20V** Karl Fischer Coulometer 1 Set  
JB-II stirrer 1 Piece
- Electrolytic cell (including 1 Piece inlet screw nut and 1 Piece puncture-resistant silicone sheet) 1 Piece
- Electrolysis electrode (includes 1 set of film holder) 1 Piece  
Indicator electrode 1 Piece  
Dryer (SC5.111.007) 1 Set  
European standard power cord (3VTJ2) 1 Piece  
Printer connection cable 1 Piece  
Fuse 0.5A 2 Pieces  
YW-904W 9V/800mA Regulated power supply, european plug 1 Piece  
Electrolytic cup fixed ring (SC5.108.020) 1 Piece  
Stirrer bar (Small) 3 Pieces  
Fixed rod (SC8.123.035) 1 Piece  
Puncture resistant silicone sheet (SC8.370.298) 20 Pieces  
Micro sampler (1mL) 1 Piece  
Micro sampler (0.1mL) 1 Piece
- Membrane frame (SC5.156.017)  
(With 1 Piece O-ring fluoro rubber each) 2 Sets
- Vacuum silicone (Great wall 7501) 1 Piece  
Alcohroic silica gel 1 Piece  
Instruction manual (TITR-20V, JB-II) 1 Piece

### Features

- LCD display screen.
- Data can be stored and easily transferred to printer via RS-232 communication interface.
- Settable parameters, including measurement unit, polarization current, generator current, endpoint potential, stop criterion and etc.
- Reset feature automatically resumes all settings back to factory default options.
- Generator cell with diaphragm.
- Selectable units including  $\mu\text{g}$ ,  $\text{mg}$ ,  $\%$ ,  $\text{mg/L}$ ,  $\text{g/L}$ , etc.






### Specifications

Model	TITR-20V	
Coulometric Ttration	Range	10 $\mu\text{g}$ ~20mg
	Polarization Current Accuracy	$\pm 0.2\mu\text{A}$
	Working Current	10mA, 20 mA, 50 mA, 100 mA
	Working Current Accuracy	0.5%
	Accuracy	$\pm (5\%+3) \mu\text{g}$
General	Repeatability	$\pm 3\%$
	Electricity	AC Adapter, 200~240 VAC input
	Dimension (mm) & Weight (kg)	300×235×100; 3

# Karl Fischer Titrator

## TITR-40C

### Selling point

-  LCD display screen.
-  Support KF Titration Mode and Titer Detection Mode.
-  Features of auto-filling, auto-purging and auto-mixing of the reagents.
-  Store up to 200 titration data sets (GLP-compliant).
-  Data can be easily transferred to printer via RS-232 communication interface.



### Features

- LCD display screen.
- Store up to 200 titration data sets (GLP-compliant).
- Settable parameters, including measurement unit, polarization current, stirring rate, titration rate, stop volume, endpoint potential, stop criterion and etc.
- Reset feature automatically resumes all settings back to factory default options.
- Selectable units including mg, mg/L, %, ppm, etc.
- Data can be easily transferred to printer via RS-232 communication interface.
- Support KF Titration Mode and Titer Detection Mode.
- Features of auto-filling, auto-purging and auto-mixing of the reagents ensure safe handling of Karl Fischer chemicals.

### Description

- Karl Fischer moisture measurement method has been recognized as the most accurate method by many international standards, such as ISO, ASTM, DIN, BS, and JIS. This method is suitable for the determination of moisture content of various substances.
- Therefore, Karl Fischer moisture analyzers applying its principle have a wide range of applications for solid, liquid and gas samples.



**TITR-40C** Karl Fischer Titrator 1 Set  
 External devices 1 Set  
 500mL solution Bottle including cap and connector (GL45) 2 Sets  
 Anti-diffusion capillary DFAQ-6-1543-200 1 Piece  
 Ejector tool (SC8.227.126) 1 Piece  
 Burette device 10mL (SC5.461.050) 1 Set  
 Stirring bar (Small) 3 Pieces  
 5 L polyethylene bucket 1 Piece

Infusion tube (fluoro plastic, White casing)  $\phi 3.2 \times 0.5$  (L=150mm)  
 Already installed on the instrument 1 Piece

Infusion tube (Fluoro plastic, Green casing)  $\phi 3.2 \times 0.5$  (L=900mm)  
 Already installed on the instrument 1 Piece

Infusion tube (Fluoro plastic)  $\phi 3.2 \times 0.5$  (L=450mm)  
 Already installed on the instrument 1 Piece

A solution infusion tube  
 (Fluoro plastic, Blue casing, L= 800mm,  $\phi 5 \times \phi 3$ ) 1 Piece

Drip infusion tube (Fluoro plastic, Red casing, L= 800mm,  $\phi 5 \times \phi 3$ )  
 1 Piece

Drain infusion tube (Fluoro plastic, Red casing, L= 900mm,  $\phi 5 \times \phi 3$ )  
 1 Piece

Silicone tube  $\phi 6 \times \phi 3$  (L=350mm 2 Pieces, L=800mm 1 Piece)  
 3 Pieces

Silicone tube  $\phi 6 \times \phi 3$  (Spare) 1.5 Meters

Fittings nuts GS-14A, B (White) Note: Installed on the valve  
 and titration device 3 Sets

Casing 008NF32-YC6B (Black) Note :  
 Installed on the Anti-diffusion capillary 1 Piece

Taper gasket 008CZ32 1 Piece  
 Micro sampler (100 $\mu$ L, 1mL) 1 Piece each  
 Vacuum silicone (Great wall 7501) 1 Bottle  
 Allochroic silica gel (500g) 1 Bottle  
 Fuse  $\phi 5 \times 20$  (3A) 2 Pieces  
 European standard power cord (3VTJ2) 1 Piece  
 The cable between the external device and the host 1 Piece  
 USB communication cable 1 Piece  
 Instruction manual 1 Piece

### Specifications

Model	TITR-40C	
Volumetric Titration	Range	0.1mg~250mg
	Polarization Current Accuracy	0.1mg
	Working Current	1 $\mu$ A $\pm$ 0.2 $\mu$ A; 50 $\mu$ A $\pm$ 10 $\mu$ A
	Repeatability	$\pm$ 0.5%
General	Electricity	AC Adapter, 100-240 V AC input
	Dimension (mm) & Weight (kg)	340 $\times$ 400 $\times$ 400; 10

# Karl Fischer Titrator

## TITR-K5



### Description

It has the advantages of high measurement accuracy, good repeatability, and low test cost. It is widely used in petroleum, chemical, pharmaceutical, electric power, scientific research, and education sectors, and can be used to measure trace moisture in various liquids, solids, and gases.

### Features

- 7-inch color touch LCD screen display, high-efficiency microprocessor, real-time display of instrument working status;
- The time and state trend curves are displayed on the screen of the instrument, which can more intuitively reflect the change of moisture;
- Using single-chip and computer composite control system, dual CPU design, intelligent analysis and determination of moisture;
- Dual power channels separate the electrolytic electrode from the measuring electrode, and the instrument can automatically suppress various interferences, greatly improving the precision of the test results;
- Built-in a variety of calculation formulas, the user can choose the appropriate test method, the instrument will automatically calculate the moisture value according to the selected formula;
- Comes with a delay titration function, which can be set to count down from 0 to 100 seconds, which is convenient for adding a Karl Fischer headspace sampler or purging and complementing instrument later, and is more cost-effective;
- Automatically calculate and print  $\mu\text{g}/\text{ppm}/\text{percent content}/\text{formula}/\text{date and time, etc.}$
- Automatic data storage, can store experimental data, easy to check historical records.
- The blank current microprocessor automatically controls the compensation, and the reagent can quickly reach the equilibrium state;
- With self-test function, if there is a short circuit or open circuit fault in the electrode, the instrument will automatically prompt the user;
- 0-430mA large electrolytic current, high detection sensitivity and fast analysis speed;
- The surface is electrostatically sprayed, anti-corrosion and easy to clean;
- Perpetual calendar function, year, month, day, week, hour, minute, second, automatically stored after power failure.

### Specifications

Model	TITR-K5
Measurement Method	Karl Fischer Coulomb Method
Display Measurement Range	0.1 $\mu\text{g}$ water—9999.9999mg water
Water Content Range	0.0000001%-100% (the min. resolution of the printed result is 0.0001%) or 0.001ppm—10 <sup>6</sup> ppm
Resolution	0.1 $\mu\text{g}$ water
Display	LCD color 7-inch large screen display
Accuracy	When the water content is 3-1000 $\mu\text{g}$ water, the error of the measured value is $\leq \pm 2\mu\text{g}$ ; When the water content is above 1000 $\mu\text{g}$ water, the error of the measured value is $\leq \pm 0.2\%$ (excluding the error of sampling)
End Point Indication	Screen display/sound warning/printout/end point light prompt
Blank Processing	The blank current microprocessor automatically controls the compensation to ensure that the blank can be accurately deducted within the sample enrichment time of 10 minutes.
Stirring Speed	Adjustable control
Drift Compensation	Automatic microprocessor control
Data Input	Touch screen operation
Sample No.	User defined
Electrolysis Speed	Peak value: 2.4 mg water/min
Electrolytic Current	0-430mA
Storage	Can store historical data
Printing	Built-in thermal high-efficiency printer, 56mm paper width
Print Content	$\mu\text{g}/\text{ppm}/\text{percent content}/\text{formula}/\text{date and time}$
Display State	Real-time drawing of colored titration curves
Self-check Function	Automatic diagnosis of instrument faults
Calendar/Clock	Analysis time, date display and printout (not lost when power off)
Power Consumption	<100W
Electricity	220V $\pm 10\%$ , 50Hz $\pm 2.5\text{Hz}$
Use Environment	Temperature 5—40 °C, humidity <85%
Optional Function	Automatic liquid filling and draining function
Dimension	350*260*198mm
N.W./G.W.(kg)	10kg/14.6
Package Dimension (W*D*H)(mm)	450*450*300



Automatic Potential Titrator **TITR-K5 1**

- Electrolytic cell bottle 1
- Electrolytic electrode 1
- Measuring electrode 1
- Dry glass tube 2
- Electrolytic electrode sealing plug 1
- Electrolytic cell sealing plug 1
- Sealing plug of drying tube 1
- Teflon injection cock 1
- Silicone gasket 1
- Dry silica gel particles 1
- Magnetic stirrer 1
- Embedded printer 1
- Sealing grease 1
- Funnel 1

- 0.5µl sampler 1
- 50µl sampler 1
- 1ml sampler 1
- 2ml sampler 1
- 5ml sampler 1
- 1ml glass injector 1
- 9# syringe needle 1
- Karl fischer reagent (500ml) 1
- Power cord 1
- Printing paper 1
- Fuse 2
- Glove 1
- User manual 1
- Packing list 1
- Test report 1

# Electronic Titrator

dTITR

## Features

- Electronic control provides a fatigue-free operation
- Remote control panel prevents manual disturbance during operation
- High quality motor with excellent precision and accuracy
- Built-in magnetic stirrer for a complete and easy operation



- Titrating pipe 1
- Titrating pipe cover 1
- dTITR 1**
- AC Adapter 1
- Controller 1
- Controller cable USB 2
- Bottle Adapter 5 (GL32; GL38; GL28; GL25; S40)
- Magnetic Stirrer 1
- Remote Titrating pipe 1
- Remote Control Handle 1
- Stirrer Bar (20mm) 1
- Filling valve 1
- Dispensing valve 1
- Filling pipe 2
- Installation tools 1
- Stander 1

## Specifications

Model	dTITR
Volume Range	0.01mL-99.99mL
Max piston lift	10mL
resolution	10µL
Volume Accuracy	R=0.2% CV=0.07%
Velocity	16 stages Operating
Temperature Range	10℃ -30℃
Quality Control	DIN EN ISO 8655
Control Type	External control including the stirrer and the burette program