



# TP-2100

Karl Fischer Water Content Tester

## Introduction

TP-2100 water content tester adopts the global recognized classical moisture testing method - Karl Fischer Coulometric Method which is the most accurate method with low cost. With the universal standard and analyzing method, it can quickly analyze the moisture content in liquid, solid and gas and directly display testing results, with testing range from 0.0001%(1ppm) to 100%. Therefore, this testing method has been widely used in institutions and enterprises of petroleum, chemical industry, power, pharmaceuticals, pesticide, railways, research, etc.

The whole testing process is automatically controlled by this tester itself. Its auto-stirring and analyzing would be finished within 60seconds, and results would be displayed directly. Totally closed titration system avoids damage to operator from reagent.

## Application Area

Liquid	Chemical Industry: alcohols, ethers, esters, alkenes, benzenes, amines, organic solvents, phenols and other organic products applicable to Karl Fischer Method for determination Petroleum and Power Industry: Insulation Oil, Transformer Oil, Turbine Oil, etc. Pharmaceutical Industry : medicine materials Pesticide Field: emulsifier Other Industry: electrolyte of lithium battery
Solid	Various mineral salt, citric acid, explosives, paraffin and other solids with good solubility
Gas	Natural gas, liquefied gas, Freon, butadiene, chloromethane, etc.

## Features

1. Powerful Itanium and double CPU; direct A/D conversion of testing electrode data.
2. 7 inch color touch LCD display in English. Function of reagent failure prompt, extending the service time of it.
3. Completely closed titration system avoids direct touch between people and the reagent as well as the influence of environmental humidity.
4. The outer shell is made of high-quality cold-rolled steel plate with electrostatic sprayed surface, anti-corrosion and easy to clean.
5. Auto-control and compensation of electrical current via MCU contributes to quick balance of reagent.
6. Auto-control electrolysis current within 430mA ensures high sensitivity and fast analyzing speed.
7. Preinstalled with cubature (including 3 pieces of formula), statistical calculation (including average calculation, standard deviation calculation and rate of change calculation) and elementary arithmetic, with the advantages of auto-analysis and calculation.
8. Automatically tests the sample, analyzes and displays results, and calculates the average value of several times of test.
9. Infinite capacity of results storage is convenient to consult previous testing data whenever necessary.
10. Automatically calculates and prints the following content: ug / ppm / percentage / mg/L / sample number / experimenter / testing date, etc.
11. Network management available by connection with laptop or computer communications through USB or RS232 interface.
12. Multilanguage display available. The program of tester can be upgraded accordingly if related national standard is revised.

## Technical Parameters

Method of Display	7 inch color touch LCD with English display
Method of Testing	MPU controlled electrolysis(Karl Fischer Coulometric Method)
Rate of Electrolysis	2.4mgH <sub>2</sub> O/min
Electrolysis Current	Auto-control within 430Ma
Testing Range	0.01ugH <sub>2</sub> O-200mgH <sub>2</sub> O
Water Content Range	0.0001% (1ppm) —100%
Sensitivity	0.01ugH <sub>2</sub> O
Accuracy	Water Content: 2ugH <sub>2</sub> O-100ugH <sub>2</sub> O; Deviations≤±1ug, Water Content: 100ugH <sub>2</sub> O-1000ugH <sub>2</sub> O; Deviations≤±2.9ug, Water Content: > 1000ugH <sub>2</sub> O; Deviations≤±0.2%(excluding deviations of sample injection)
Drift Compensation	Auto-control via MPU
Stirring Speed	Adjustable and steerable
End-point Indication	LCD display /output via printing / voice warning / end-point indication light
Data Input	Input via touch screen
Sample Number	Numbered by users
Storage	Infinite storage capacity
Printer	Thermal printer, high-speed, low-consumption, with 44 millimeter-wide paper
Printing Content	ug / ppm / mg/L / sample number /experimenter / date
Calendar/Clock	automatic display and print analyzing time and date
Self-checking	Breakdown self-checking
Special Function	Work independently or connected with laptop or other computers
Power Consumption	<40W
Dimension	390×270×190mm
Working Environment	Temperature: 5°C-40°C, Humidity: <85%
Power Supply	AC220V±10% 50HZ±2.5HZ
Weight	About 7kg

## Accessories

No	Item	Quantity/Unit	No	Item	Quantity/Unit
1	Major engine	1 set	9	Magnetic stirring rod	1 piece
2	Electrolytic cell bottle	1 piece	10	Sample injector(0.5uL)	1 piece
3	Electrolusis electrode	1 piece	11	Sample injector(50uL)	1 piece
4	Testing electrode	1 piece	12	Sample injector(100uL)	1 piece
5	Drying tube	1 piece	13	Sample injector(1mL)	1 piece
6	Grand	10 pieces	14	Instructions	1 brochure
7	Vacuum grease	1 box	15	Appendix	1 brochure
8	Power line	1 piece			

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