# Karl Fischer Titrator - Volumetric & Coulometric KF Moisture Analyzer - 3 µg-250 mg Water

Model **MSTITR-50VCSWISS** | Brand **Master Science**





The Master Science Karl Fischer Titrator brings volumetric and coulometric KF titration together in one instrument, so the same unit can measure percent-level water and trace moisture down to a few micrograms. A 7-inch high-contrast touchscreen guides each method from titer determination to the final result.

### KEY HIGHLIGHTS

- One instrument, two techniques
- Trace and high moisture covered
- Safer reagent handling
- Accurate results

### AT A GLANCE

| | |
|---|---|
| **100 µg to 250.0 mg**<br>VOLUMETRIC WATER RANGE | **3.0 µg to 200 mg**<br>COULOMETRIC WATER RANGE |
| **0 to 2000 mV / 0.1 mV**<br>MV RANGE / RESOLUTION | **±0.5 %, fluctuation ±0.2 %/10 min**<br>GENERATOR CURRENT ACCURACY |

**Request a Quotation**
Contact us for pricing, configuration options and delivery details.

support@themsci.com
www.themsci.com

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## Overview

Oven sampling is supported for solids, gases and samples that do not dissolve readily, and a sealed solvent manager handles filling, draining and burette cleaning safely.

> For acid-base and redox titrations, see the Master Science automatic potentiometric titrator.

## Overview

- Auto titration and titer determination
- Oven and oven blank methods
- Solvent manager fills, drains and cleans the burette

## Overview

- Trace water down to 3 µg
- Oven, blank and coefficient correction methods
- Generator electrode included

## Key Benefits

**One instrument, two techniques**
the Master Science Karl Fischer Titrator switches between volumetric and coulometric KF without a second unit.

**Trace and high moisture covered**
water from 3 µg to 250 mg is measured with ≤ 0.3 % repeatability.

**Safer reagent handling**
the solvent manager uses leak-proof and anti-spill bottles.

**Accurate results**
automatic drift compensation corrects for moisture ingress.

**Compliance support**
user levels, GMP logs and GLP storage track every result.

## Technical Specifications

### GENERAL

| | |
|---|---|
| Brand | Master Science |
| Model Number | MSTITR-50VCSWISS |
| SKU | MSTITR-50VCSWISS |
| Titration Types | Volumetric and coulometric Karl Fischer |
| Volumetric Water Range | **100 µg to 250.0 mg** |
| Volumetric Resolution | 1 µg |
| Coulometric Water Range | **3.0 µg to 200 mg** |
| Coulometric Resolution | 0.1 µg |
| Water Repeatability | ≤ 0.3 % |
| Units | µg, mg, %, ppm, µg/mL, mg/L |
| mV Range / Resolution | **0 to 2000 mV / 0.1 mV** |
| Methods | Auto titration, titer determination, oven, oven blank, coefficient correction |
| Drift Correction | Automatic or manual |
| User Management | Three levels with passwords |
| Drift from ambient humidity | automatic drift correction keeps results accurate. |

### POWER

| | |
|---|---|
| Polarisation Current | 1 to 200 µA, ±3 %, fluctuation ±2.5 %/30 min |
| Generator Current Accuracy | **±0.5 %, fluctuation ±0.2 %/10 min** |
| Power Supply | AC 100 to 240 V, 47 to 63 Hz |

| DISPLAY & DATA | |
|---|---|
| Data Storage | 2000 titration records (GLP) |
| Interfaces | RS232 printer, USB PC, U-disk CSV/PDF, barcode scanner, oven, balance |
| Display | 7-inch color touchscreen |
| Data integrity requirements | GMP logs and user control are available. |

| DIMENSIONS & WEIGHT | |
|---|---|
| Dimensions | 240 × 370 × 270 mm |
| Net Weight | About 4 kg |

| COMMON LABORATORY PROBLEMS AND HOW THIS KF TITRATOR HELPS | |
|---|---|
| Common Laboratory Problems and How This KF Titrator Helps | How the Master Science Karl Fischer Titrator helps with typical moisture testing problems: |
| Need for two separate KF instruments | both techniques run on one unit. |
| Spills of KF reagents | sealed solvent handling protects staff. |
| Insoluble samples | oven sampling releases water before titration. |

## Applications

The Master Science Karl Fischer Titrator is used for water determination in: Pharmaceutical APIs and excipients Petroleum products, oils and transformer oil Plastics, polymers and powders Food ingredients and edible oils Solvents and fine chemicals

## Data

- 2000 stored results
- CSV and PDF export
- PC, printer, barcode and balance connection

## Standard Accessories Included

- Solvent manager
- 10 mL burette
- Volumetric titration vessel with measuring electrode
- Coulometric titration vessel with measuring electrode
- Generator electrode

## Optional Accessories

- KF oven
- GMP software
- Printer, barcode scanner and balance