

TITRO4

Automatic Potentiometric Titrator · DET / MET / SET / MAT Titration Modes

TITRO4 Automatic Potentiometric Titrator is a professional laboratory titration system for automated titrimetric analysis using pH or mV endpoint detection. It supports dynamic equivalence point titration, monotone equivalence point titration, preset endpoint titration and manual titration workflows for acid-base, redox, precipitation and complexometric methods.

AUTOMATIC TITRATION

POTENTIOMETRIC ENDPOINT

DET / MET / SET / MAT

PH 0.00–14.00

MV ±1800.0

RSD ≤0.2%

10 / 20 ML BURETTE

GLP DATA

RS-232 / USB

Document type: **Technical Specification Sheet**

Product family: **Laboratory Titration / Water Quality / Electrochemistry**

Model: **TITRO4 / Ti-40** · SKU: **PRO6103**

Product page: colo.si/product/titro4-automatic-potential-titrator/

Format: **A4 landscape** · **COLO.Science TechSpec v2.4** with navigation links



TITRO4 · automatic potentiometric titrator · main instrument

MODEL / SKU

TITRO4 / Ti-40
PRO6103

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TITRATION KNOWLEDGE

TITRO4 · technical specification

Automatic titration platform for potentiometric pH and mV endpoint methods

MODEL TI-40

REPEATABILITY $\leq 0.2\%$

PH 0.00–14.00

MV –1800.0 TO +1800.0

TEMP. –5.0 TO 105.0°C

— Automated titration for routine laboratory analysis and method development

Product Overview

Application profile

Routine titrimetric analysis: supports acid-base, redox, precipitation and complexometric titration workflows.

Water and environmental laboratories: suitable for alkalinity, acidity, chloride and selected ion determinations using appropriate methods and electrodes.

Food, pharmaceutical and petrochemical QC: designed for automated endpoint detection, data recording and repeatable dosing.

Education and method development: DET, MET, SET and MAT modes allow comparison of automated and manual titration strategies.

Key features

Titration modes: DET, MET, SET and MAT for dynamic equivalence, monotone equivalence, preset endpoint and manual titration.

Measurement ranges: pH 0.00–14.00 and mV –1800.0 to +1800.0 for potentiometric endpoint workflows.

Repeatability: RSD $\leq 0.2\%$ for routine titration performance when method and sample preparation are controlled.

Burette accuracy: 10 mL ± 0.025 mL; 20 mL ± 0.035 mL.

pH function: built-in pH calibration and pH measurement support.

Connectivity: RS-232 data transfer and full PC control via USB or RS-232.

Design and handling advantage

Guided operation: LCD display and smart guide system support intuitive titration setup and operation.

Visible method output: titration methods, curves and results are displayed in detail on screen.

Replaceable burette: selectable 10 mL or 20 mL high-accuracy burette configuration.

GLP workflow: stores titration results and supports data transfer to PC or printer workflows.

Core technical summary

Parameter	Specification
Product	TITRO4 Automatic Potentiometric Titrator
SKU	PRO6103
Model	Ti-40
Instrument type	Automatic titrator for potentiometric pH / mV endpoint methods
Repeatability	$\leq 0.2\%$
Burette accuracy	10 mL ± 0.025 mL; 20 mL ± 0.035 mL
pH range	0.00–14.00 pH
mV range	–1800.0 to +1800.0 mV
Data storage	Up to 50 titration data sets; latest titration curve
Communication	RS-232; USB / RS-232 for PC control

REPEATABILITY

RSD $\leq 0.2\%$

BURETTE

10 / 20 mL

MODES

DET / MET / SET / MAT

CONNECTIVITY

RS-232 / USB



Technical Specifications

Measurement ranges and titration performance

Parameter	Specification
Model	Ti-40
Product / SKU	TITRO4 · PRO6103
Titration type	Automatic potentiometric titration
Supported modes	DET, MET, SET and MAT
Titration methods	Acid-base, redox, precipitation and complexometric titration workflows
Repeatability	RSD ≤0.2%
Burette accuracy	10 mL ±0.025 mL; 20 mL ±0.035 mL
Mechanical unit resolution	1 / 14000
pH measuring range	0.00–14.00 pH
pH resolution	0.01 pH
pH accuracy	±0.01 pH
mV measuring range	–1800.0 to +1800.0 mV
mV resolution	0.1 mV
mV accuracy	±0.05% FS
Fluctuation	±0.3 mV / 3 h
Temperature compensation range	–5.0 to 105.0°C
Temperature resolution / accuracy	0.1°C / ±0.3°C

System, data and connectivity

Parameter	Specification
Display	LCD display screen with smart guide system.
On-screen information	Titration methods, titration curves and results displayed in detail.
Burette configuration	Replaceable high-accuracy burette, 10 mL or 20 mL selectable.
pH function	Built-in pH calibration and pH measurement.
Data capacity	Up to 50 titration data sets; one latest titration curve.
GLP support	GLP-compliant data storage support.
Data transfer	RS-232 communication for data transfer.
PC control	Full PC control via USB or RS-232.
Power supply	AC adapter 100–240 V input; DC 24 V output.
Instrument dimensions	340 × 400 × 400 mm.
Net weight	10 kg.
Gross weight / carton	12 kg; carton 540 × 490 × 480 mm.
Product page	Open TITRO4 product page
Expected PDF	Open TITRO4 PDF

Specification note

Method dependence: final performance depends on selected electrode, titrant, sample preparation, dosing parameters and endpoint criterion.

Configuration: delivered burette volume, electrodes and accessories should be confirmed in the official quotation.

Terminology: the instrument is technically a potentiometric titrator, using pH or mV signal for endpoint/ equivalence-point detection.

Technical values are provided for product selection and orientation. Final delivered configuration, accessory set, electrode compatibility and documentation should be confirmed through the official COLO.Science quotation or manufacturer-confirmed offer.

Titration Modes, Delivery Scope and Visual Support



TITRO4 · automatic potentiometric titrator for pH and mV endpoint methods

Titration modes explained

DET — Dynamic Equivalence Point Titration: dosing adapts as the equivalence point approaches; suitable for high-precision automated endpoint detection.

MET — Monotone Equivalence Point Titration: equal dosing steps provide reproducible linear dosing behavior for method validation and routine control.

SET — Preset Endpoint Titration: titration stops at a predefined pH or mV endpoint; useful for routine methods with known endpoint criteria.

MAT — Manual Titration: operator-controlled dosing with continuous potential recording; useful for teaching, troubleshooting and method development.

Typical included components

10 mL burette: standard burette for routine titration workflows.

Electrodes: 232-01 reference electrode, 213-01 platinum electrode, 216-01 silver electrode, 217-01 reference electrode and 231-01 pH indicator electrode.

Temperature probe: T-818-B-6 temperature probe.

Calibration standards: NIST pH standard solutions 4.01, 7.00 and 10.01; 50 mL per vial.

Navigation note — this specification is linked back to COLO.Science

This technical specification contains direct links to the product page, quotation request page, COLO.Science home page and water-quality knowledge area. If a user opens this document directly from Google or on a mobile device, the page remains connected to the main website and quotation path.

Selection and Use Notes

For method selection

Endpoint type: define whether the method uses pH endpoint, mV endpoint or equivalence point detection.

Dosing strategy: select DET, MET, SET or MAT according to required speed, robustness and method validation needs.

For electrode selection

Sample matrix: electrode choice should match acidity, solvent system, temperature and chemical compatibility.

Reference system: confirm electrode type for redox, precipitation, pH or complexometric titration method.

For GLP workflows

Records: use stored titration data, curve review and PC export to support traceable documentation.

Validation: verify repeatability with standards, blanks and controlled sample preparation before routine release.

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MANUFACTURER AND SUPPORT

COLO Lab Experts

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Selection guidance: Send the sample matrix, titration method, endpoint type, expected concentration range, electrode requirement and preferred burette volume. COLO.Science can help confirm the correct TITRO4 configuration, electrode set and accessory package for the analytical workflow.

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 [TITRO4 product page](#)

COLO.SCIENCE · TITRO4 AUTOMATIC POTENTIOMETRIC TITRATOR SUPPORT

Need help selecting the correct TITRO4 titration configuration?

Send the titration method, sample type, concentration range, endpoint requirement, electrode type and reporting workflow. COLO.Science can help confirm whether TITRO4 is the correct configuration for your water quality, QC, environmental or laboratory titration application.

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Official configuration and manufacturer-confirmed specification notice:

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