

BENCHTOP TURBIDITY METER · ISO 7027 OPTICS

VIKING257 Benchtop Turbidity Meter

VIKING257 is a smart benchtop turbidity meter for routine laboratory water-quality analysis, environmental monitoring, wastewater checks and industrial process control. The instrument combines **850 nm LED nephelometric 90° detection**, dual photodiodes, selectable NTU / FNU / EBC units, multi-point Formazin calibration and USB / RS-232 data communication.

0-1000 NTU

0.001 / 0.01 / 0.1 NTU

±1% + 0.01 NTU

ISO 7027 · 850 nm LED

90° nephelometric

1-6 point calibration

USB / RS-232

2000 data sets

Document data

Document ID	COL-TEC-VIK257-EN
Model	VIKING257
SKU	PRO5782
Document type	Technical specification · product orientation and quotation support



Image used for VIKING250 series representation. Final supplied appearance and branding may vary by confirmed configuration.

VIKING257

MEASUREMENT PLATFORM

Optical system, calibration and data handling

Optical measurement principle

VIKING257 uses a near-infrared **850 nm LED** light source and the **nephelometric 90° scattered-light principle**. The optical system uses two photodiodes: one for reference and one for scattered-light measurement, supporting stable operation across routine turbidity workflows.

- ✓ 850 nm LED cold light source with narrowband interference filtering.
- ✓ 90° detection for nephelometric turbidity measurement.
- ✓ Dual-photodiode design for reference and measurement stability.
- ✓ Special high-precision filter system for measurement consistency.

Calibration workflow

The instrument supports **1–6 point calibration** using Formazin standards or zero water. User-defined piecewise curves and coefficients can be configured according to the measurement range, supporting GLP-oriented repeatability and documentation.

- ✓ Formazin or zero-water calibration workflow.
- ✓ User-definable curve coefficients for different concentration ranges.
- ✓ Up to 2000 stored calibration curves / data sets.
- ✓ User ID, date/time and calibration parameters supported.

Reporting units

Selectable turbidity units support routine method reporting.

- ✓ NTU
- ✓ FNU
- ✓ EBC

Data transfer

Stored data can be transferred for reporting and documentation.

- ✓ USB 2.0
- ✓ RS-232
- ✓ PC data export

Laboratory use

Designed for stable benchtop operation in routine quality-control workflows.

- ✓ 4.3" color LCD
- ✓ 220 V ±10%, 50 Hz
- ✓ 5–40 °C ambient use

TECHNICAL SPECIFICATIONS

VIKING257 specification table

Model	VIKING257
Instrument type	Benchtop laboratory turbidity meter
Application positioning	Smart turbidity measurement for variable sample levels and routine laboratory workflows
Measuring principle	Nephelometric principle with 90° detection
Detector system	2 high-precision photodiodes: reference and 90° scattered-light detection
Light source	850 nm LED cold light source, narrowband interference, lifetime up to 100,000 hours
Units	NTU, FNU, EBC selectable
Measuring range	0–1000 NTU
Readout	0.001 / 0.01 NTU basic readout; range-dependent resolution up to 0.1 NTU

Range / resolution	0–10 NTU: 0.001 NTU 0–100 NTU: 0.01 NTU 0–1000 NTU: 0.1 NTU
Accuracy	±1% of reading + 0.01 NTU, 0–1000 NTU
Repeatability	±1% of reading or ±0.01 NTU, whichever is greater, under reference conditions
Allowed error	±2% of reading
Calibration	1–6 point calibration using Formazin standards or zero water
Data capacity	Up to 2000 calibration curves / measurement data sets
Display	4.3" color LCD, illuminated and protected display
Communication	USB / RS-232 data transfer
Ambient temperature	5–40 °C
Power supply	220 V ±10%, 50 Hz
Approx. weight	3.5 kg net / 4.5 kg gross

Configuration note: Technical data are prepared from available COLO.Science product information and VIKING250 series catalogue data. Final supplied accessories, calibration standards, communication options and exact manufacturer configuration should be confirmed in the official quotation.

WORKFLOW AND USE CASES

Applications, kit contents and configuration logic

Drinking water

Routine low-turbidity monitoring, treatment verification and laboratory water-quality checks where stable calibration and repeatable NTU / FNU reporting are required.

Wastewater and effluent

Turbidity checks in wastewater, effluent and process-water workflows where variable sample levels require a wide measurement range up to 1000 NTU.

Environmental analysis

Surface water, rivers, lakes and environmental monitoring applications where robust near-infrared optics and clear reporting units support field-linked laboratory workflows.

Typical laboratory workflow

- ✓ Prepare clean turbidity cuvettes and avoid fingerprints, bubbles and scratches.
- ✓ Select the required unit: NTU, FNU or EBC.
- ✓ Perform zero / Formazin calibration according to the selected method and range.
- ✓ Measure sample turbidity using the 90° nephelometric optical system.
- ✓ Store results with user/date/time fields and export data via USB or RS-232 when needed.

Standard delivery package

Instrument	VIKING257 main unit
Standards	Calibration standard set, typically 0.02 NTU, 10 NTU and 1000 NTU
Cuvettes	5 high-precision glass turbidity cuvettes
Protection	Dust protection cover and light-tight measuring slot
Power	Power cord, 220 V / 50 Hz
Documentation	Instruction manual; USB cable, RS-232 optional on request

Optional accessories and checks

- ✓ Additional calibration standards for application-specific turbidity ranges.
- ✓ Replacement cuvettes and cuvette-handling accessories.
- ✓ Bluetooth module and additional communication options where available.
- ✓ Alternative calibration standard sets depending on workflow, regulation and sample type.
- ✓ Final supplied kit should always be confirmed through the official COLO.Science quotation.

Applications and supplied kit · configuration should be quotation-confirmed

COLO.SCIENCE SUPPORT

Configure the correct turbidity meter for your sample range

Request VIKING257 configuration and quotation

COLO.Science can support selection of the correct turbidity meter configuration, calibration standard set, cuvette package and data-transfer workflow for drinking water, wastewater, industrial process water, environmental and research laboratory applications.

[Product page](#)

[HTML specification](#)

[PDF specification](#)

[Contact COLO.Science](#)

Recommended document links

- Product page: [on colo.si](https://colo.si)
- HTML path: /wp-content/images/TechSpec/WaterQualityP/VIKING257.html
- PDF path: /wp-content/images/TechSpec/WaterQualityP/VIKING257.pdf
- Image asset: /wp-content/uploads/2022/01/VIKING255-E-600x550.jpg

COLO.Science

Laboratory equipment, technical specification support and product configuration.

Email	sales@colo.si
Phone	+386 64 222 724
Website	colo.si

Technical disclaimer: This COLO.Science technical specification is prepared for product orientation, quotation preparation and preliminary comparison only. Technical characteristics, supplied accessories and configuration options may vary depending on the confirmed offer, manufacturer documentation and selected model. Only the official quotation, order confirmation and manufacturer-approved specification should be treated as definitive for procurement, tender or contractual use.

Suggested short product line: VIKING257 is a benchtop laboratory turbidity meter for 0–1000 NTU measurement with 850 nm LED optics, 90° nephelometric detection, smart range-dependent resolution, 1–6 point calibration, GLP data storage and USB / RS-232 communication.