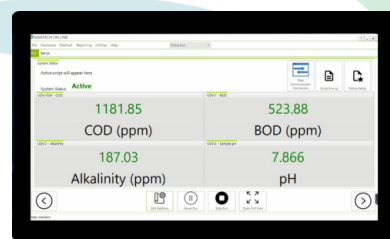




MANTECH

OPTIMIZE YOUR RESULTS. PROTECT OUR ENVIRONMENT.



MO1000 ONLINE PROCESS ANALYZER FOR COD/BOD ANALYSIS

REAL TIME, HANDS FREE RESULTS

MANTECH's MO1000 Online PeCOD® analyzer utilizes the patented PeCOD® nanotechnology based photoelectrochemical method. As an autonomous system, users enjoy hands-free sampling and analysis.

OPTIMIZE PROCESS CONTROL



ONLINE PE COD® ANALYZER BENEFITS



Rapid & Empirical Results

- Results strongly correlated to traditional COD and BOD results.



Simple Run Set-up

- Schedule sampling frequency at user-selected intervals.
- Automated calibration & QC.



Minimal System Interaction

- Receive emailed results and alerts for reagent and consumable replacements.



User-friendly Software

- Easily view past and current results.
- Export reports as CSV files.



Communication Protocol Supported

- Modbus TCP.



Add additional parameters such as pH, alkalinity, conductivity, ammonia and more!



COMPATIBLE MATRICES:

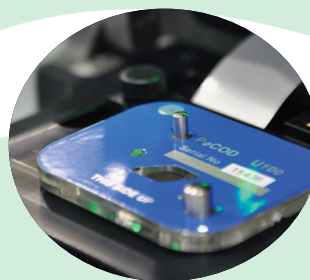
DRINKING WATER
WASTEWATER
GROUND WATER
SEA WATER
SURFACE WATER
ELECTROPLATING BATHS

NANOTECHNOLOGY BASED METHOD

MANTECH's PeCOD® analyzer utilizes a nanotechnology-based method which obtains empirical results unlike optical or surrogate methods used to measure the oxidizability of organic matter in water.

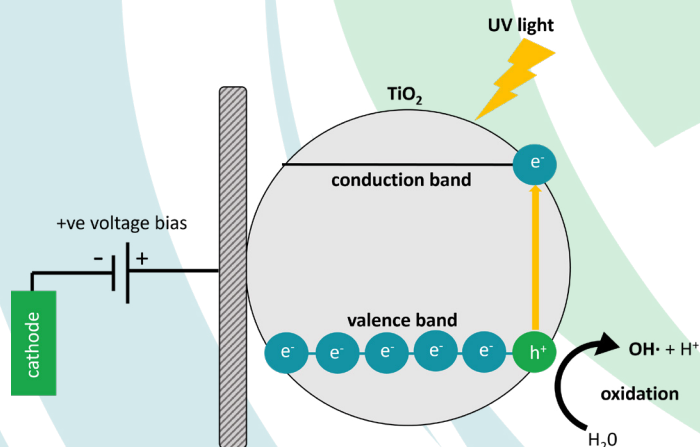
Rapid, Safe & Green Analysis

- Performs rapid advanced oxidation coupled with green electrochemistry to measure oxygen demand.
- No mercury or dichromate required.
- No hazardous waste produced.
- Protects health of people and environment.
- Oxidation efficiency parameters can be tuned for both COD and BOD using the same sample.



SENSOR

PECOD® ANALYZER



Core Technology in the PeCOD® Sensor

- UV-activated nanoparticle TiO_2 (titanium dioxide) photocatalyst
- Coupled to an external circuit

Powerful oxidation potential ensures

- Rapid results
- Complete oxidation of virtually all species
- A true measure of COD and BOD

MULTIPLE CONFIGURATIONS, SAME TECHNOLOGY



- Troubleshoot your process with a benchtop PeCOD at a fraction of its price
- Efficiently measure multiple treatment points to diagnose cause
- Results in 10 minutes or less!

Current benchtop user? Upgrade to an online system with your existing PeCOD!

The PeCOD® analyzer is used by a variety of industries including:

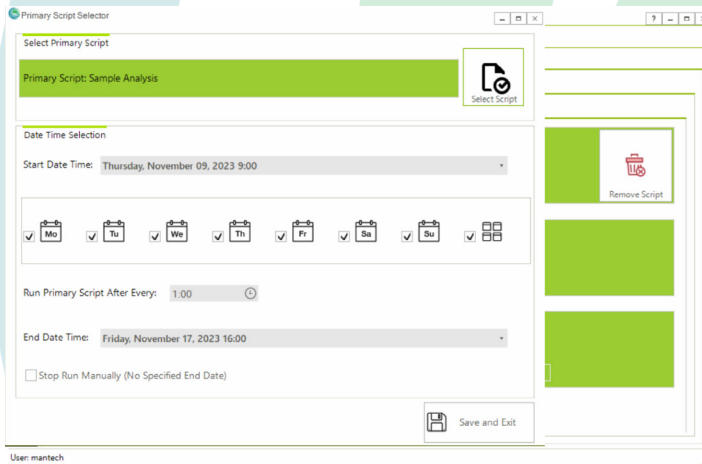
- Industrial & Municipal Wastewater Treatment Plants
- Drinking Water Treatment Plants
- Pulp & Paper Mills
- University and College Laboratories
- Food & Beverage Producers



USER-FRIENDLY SOFTWARE

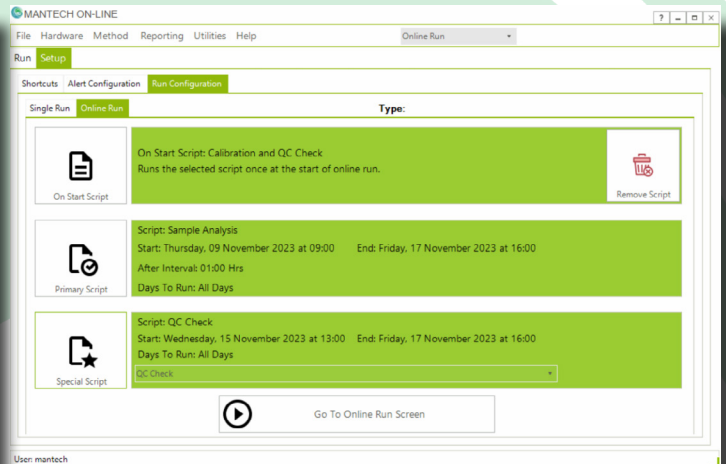
Simple, Clear, & Concise

Our software is intuitively designed to make set-up, data viewing and data management easy to navigate.



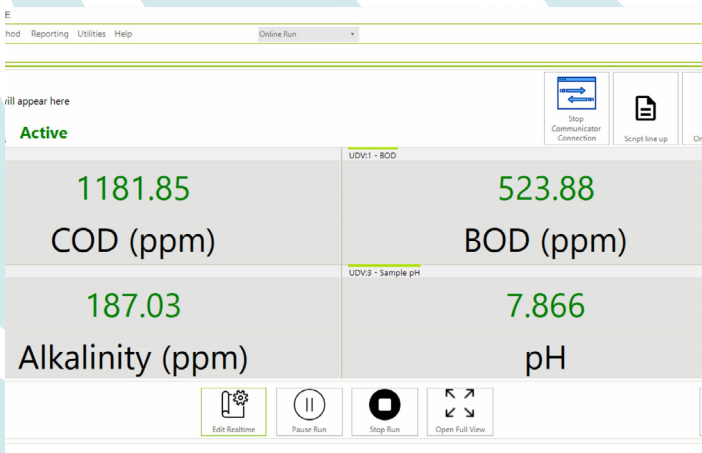
SAMPLING FREQUENCY

Schedule sampling for every hour or at user-selected frequency.



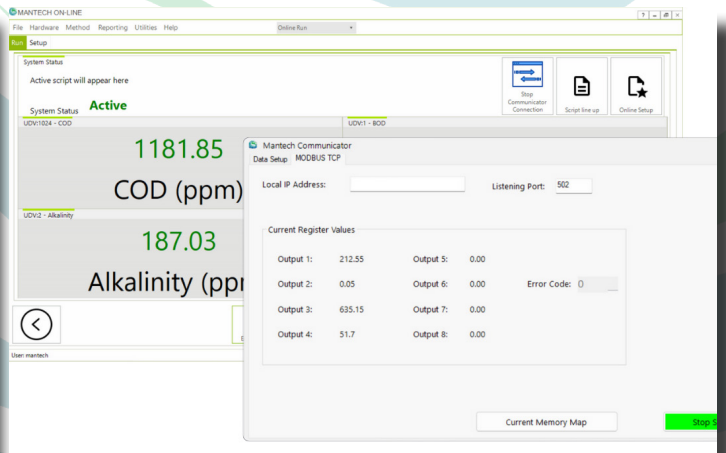
RUN SET-UP

Set up sample analysis with automated calibrations and quality control checks.



MONITOR DISPLAY

Review current and past results quickly on the home screen.



DATA OUTPUT

Modbus TCP, export reports in CSV format and/or receive emailed results.

MINIMAL SYSTEM INTERACTION

Built-in features minimize human interaction required with the system.

Simply set sample frequency and system operates under full autonomous control.



Send results straight to SCADA, network and your inbox.



No pre-filtration needed. Built-in automated homogenizer included if particles present.



Reminder alerts for low reagents and consumables.



PeCOD cost per sample= \$3.10-\$3.79.

PARAMETER ADD-ONS

Measure multiple parameters from a single system. Additional hardware added as needed.

- pH
- Alkalinity
- Conductivity
- Turbidity
- Fluoride
- Chlorine
- Nitrate
- Acidity
- Salinity
- Ammonia
- Color
- Hardness
- Permanganate Index for Oxidizability
- Langlier Saturation Index
- Oxygen Reduction Potential (ORP)
- "Optimized" TOC



100,000 step buret delivers titrant with +/- 0.2% accuracy

Online PeCOD® Specifications

COD Method	Photocatalytic TiO2 Oxidation
Measuring Range	0.7 – 15,000 mg/L
Auto-Dilution Capability	Extends Range >200,000 mg/L
Particle Size	<50µm, automated homogenizer built-in for >50µm
pH Range	4-10 after electrolyte addition
User Control	Fully Automated via Software and Touch Screen HMI
Calibration and QC	Automatic Timed Intervals
Method Precision	≤ +/- 10%
Compatible Matrices	Water, Wastewater, Process, Natural
Sampling Method	Tank or Split Stream Reservoir (not provided by MANTECH)
Rinsing Procedures	Potable or Deionized Water Required
Waste Disposal	Non-Hazardous, Floor Drain/Carboy
Installation Options	Wall or A Frame
System Dimensions (Cabinet)	30" x 36" x 16" 76cm x 91cm x 41cm
Enclosure Material	Corrosion-Resistant Steel
Operating Temperature	5 to 50 °C
Power Requirements	110-240V 50/60Hz
Parameter Add-Ons	pH, Conductivity, Alkalinity, Fluoride, Hardness, and more!
Data Output	MODBUS Connection for Data Transfer
Additional Capabilities	Multi-Stream Analysis
	Real-Time Alerts



5473 HIGHWAY 6 NORTH
GUELPH, ONTARIO, CANADA
N1H 6J2

+1 (519) 763-4245
INFO@MANTECH-INC.COM

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