

EURO TECH

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Fast Response COD Analysis System

HJ/T399-2007

For surface water, groundwater, and wastewater

PRINCIPLE

In this procedure, the sample is heated for 15 minutes with a strong oxidizing agent, potassium dichromate. Oxidizable organic compounds react, reducing the dichromate ion ($\text{Cr}_2\text{O}_7^{2-}$) to green chromic ion (Cr^{3+}). When the 15–150 mg/L colorimetric method is used, the amount of Cr^{6+} remaining is determined. When the 100–1000 mg/L colorimetric method is used, the amount of Cr^{3+} produced is determined. Test results for the 15 to 150 mg/L range are measured at 420 nm. Test results for the 100 to 1000 mg/L COD range are measured at 610 nm.

PROCESS

Add 2.00 ml of sample to the vial



1

Heat the vials for 15 minutes



2

Select the program and read the results



3

ET3150B Reactor

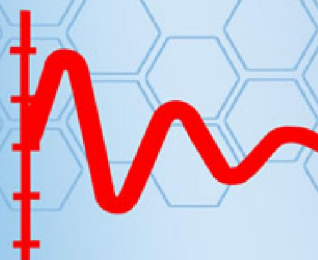
For COD(165°C) and TP/TN(105°C)

Capacity: 24 16×100mm



- ◆ Timer: 1-1680 minutes(31 hours) with audible alarm and automatic shutoff mode
- ◆ Warm-up Time: 20minutes
- ◆ Temperature Stability: $\pm 1^\circ\text{C}$
- ◆ Accuracy: $\pm 1^\circ\text{C}$
- ◆ With transparent protective lid

- ◆ Range Adjustment: $105-165\pm 1^\circ\text{C}$, shortcuts for 105°C and 150°C
- ◆ Ambient Operating Temperature: 0 to 50°C
- ◆ Dimension: $340\times 245\times 115\text{mm}$
- ◆ Power Requirements: $220\pm 22\text{V}$, 50Hz, 300W
- ◆ Weight: 3.5kg



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ET1151M



The ET1151M spectrophotometer is a microprocessor-controlled, LED-sourced filter photometer suitable for colorimetric testing in the laboratory or the field. The instrument is precalibrated for COD, TP and TN measurements and includes convenient calibration capability for user-entered methods.

	Wavelength	Range	Resolution
COD/LR	420nm	15~150mg/L	1mg/L
COD/HR	610nm	100~1000mg/L	1mg/L
TN/LR	420nm	0~25mg/L	0.1mg/L
TN/HR	420nm	5~150mg/L	0.1mg/L
TP/LR	610nm	0.02~2.00mg/L	0.01mg/L
TP/HR	610nm	0.5~10.0mg/L	0.1mg/L
TP/UHR	610nm	1~20mg/L	1mg/L

- ◆ Wavelength Range: 420nm, 610nm
- ◆ Wavelength Accuracy: $\pm 3\text{nm}$
- ◆ Wavelength Selection: Automatic
- ◆ Accuracy: $\pm 8\%$
- ◆ Reproducibility: $\leq 3\%$
- ◆ Stability: $< 0.005A$ (20 minutes)
- ◆ Readout Modes: % Transmittance, Absorbance, Concentration
- ◆ Source Lamp: Light Emitting Diode (LED)

TN measuring principle: An alkaline persulfate digestion converts all forms of nitrogen to nitrate. Nitrate then reacts with chromotropic acid under strongly acidic conditions to form a yellow complex with an absorbance maximum at 420 nm.

TP measuring principle: Phosphates are converted to orthophosphates by heating with acid and persulfate. Orthophosphate reacts with molybdate in an acid medium to produce a mixed phosphate/molybdate complex. Ascorbic acid then reduces the complex, giving an intense molybdenum blue color. Test results are measured at 610 nm.

REAGENT

- ◆ Add the sample to the packaged reagent directly.
- ◆ Use the digest vial to test, which simplifies the process.
- ◆ The operation is safe, efficient and convenient.
- ◆ We also support bottled reagent.



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