Conductivity, TDS and Salinity

Method

Conductivity (or Specific Conductance) is a measure of water's capability to pass electrical current and is directly related to the concentration of ionized dissolved solids in water. The conductivity of pure water is very low and increases proportionally to the level of contamination present. Accurate conductivity measurement is extremely important in industrial water treatment applications. Conductivity is also frequently tested for in environmental applications.

Total Dissolved Solids (TDS) and salinity concentrations of a water sample are often derived from the conductivity measurement. Although TDS is not considered a primary pollutant, for aesthetic considerations, the National Secondary Drinking Water Standard for TDS is 500 ppm. Water salinity influences the types of organisms that will thrive in a body of water as well as the plants that will grow on land fed by a particular water source.

Method of Operation

The 3-in-1 CTSTestr™ combination meter measures Conductivity, TDS, and Salinity. To operate, switch the meter on, select measurement parameter, and immerse the probe in the sample. After the reading stablizes, take the measurement. The CTSTestr™ can be used for a wide variety of applications including aquaculture, fresh water aquariums, swimming pools, industrial water treatment and wastewater treatment.

Instrument

Ranges:
Conductivity: 0.0-200.0 µS, 200-2000 µS, 2.00-20.00 mS
TDS: 0.0-100.0 ppm, 100-1000 ppm, 0.10-10.00 ppt
Salinity: 0.00-10.00 ppt

	Cat#
CTSTestr™* (Conductivity, TDS and Salinity)	**I-1400**
Meter comes in a plastic storage case and includes an electrode and sensor cap, four AAA batteries and instructions.	

Components and Accessories

Description	Cat#
Conductivity/TDS *Singles,* 1413 µS, Shelf life 3 months	A-0178
Electrode for I-1400 CTSTestr™	A-0212
Sensor Cap for I-1400 CTSTestr™	A-0213

Instructions are posted on our website.

Resolution:

Conductivity: 0.1 µS, 1 µS, 0.01 mS

TDS: 0.1 ppm, 1 ppm, 0.01 ppt

Salinity: 0.10 ppt

Accuracy: ±1% full scale

Conductivity Calibration: Automatic or Manual

Ambient Operating Temperature: 5 to 45°C (41 to 113°F).

Power and battery life: Four AAA 1.5 V alkaline batteries (supplied). >150 hours.

Warranty: 1 year

FEATURES

- Replaceable electrode
- Waterproof, Dustproof
- Easy interface navigation for quick setup and calibration
- Automatic Temperature Compensation (ATC)
- Auto shut-off

CTSTestr is a trademark of Oakton Instruments.
Instruments are manufactured and guaranteed by Oakton Instruments, Inc.

Copper (soluble)

Method

Copper is naturally present in the earth's crust and in seawater. Copper-containing fungicides are used to control biological growth in water supplies. The Maximum Contaminant Level Goal for copper is 1.3 mg/L in drinking water.

The measurement of copper is an important means of monitoring the corrosion of condensate systems and heat exchangers.

The Bathocuproine Method

Reference: APHA Standard Methods, 23rd ed., Method 3500-Cu C - 1999.

CHEMetrics' test kits employ the bathocuproine reagent. Bathocuproine disulfonate forms an orange-colored chelate with copper. The method measures total soluble copper as ppm (mg/L) Cu. The test kits are applicable for analysis of drinking water, surface waters, groundwater, wastewater and seawater.

Visual Kit

Range: 0-1 & 1-10 ppm
MDL: 0.05 ppm / Method: Bathocuproine

	Cat#
CHEMets Kit	**K-3510**
CHEMets Refill, 30 ampoules	R-3510
Low Range Comparator 0, 0.1, 0.2, 0.3, 0.4, 0.6, 0.8, 1.0 ppm	C-3501
High Range Comparator 1, 2, 3, 4, 5, 6, 7, 8, 10 ppm	C-3510
Kit comes in a plastic case and contains everything needed to perform 30 tests: Refill, Low and High Range Comparators, 25 mL sample cup and instructions.	

Instrumental Kit

Multi-Analyte Photometers
V-2000 / V-3000
(See page 14 for instrumental features)

Range: 0-12.00 ppm / Spec: 0-7.00 ppm
Method: Bathocuproine

	Cat#
Vacu-vials Kit	**K-3503**
Kit comes in a cardboard box and contains everything needed to perform 30 tests: thirty ampoules, 25 mL sample cup, ampoule blank, and instructions.	

Vacu-vials Kits require the use of a CHEMetrics Direct-Readout Photometer (photometers sold separately) or a spectrophotometer capable of accepting a 13 mm diameter round cell. See page 14 for details.

Components and Accessories

Description	Cat#
Sample Cup Pack, 25 mL (6 ea)	A-0013
Ampoule Blank Pack (5 ea)	A-0023
* Sample Zeroing Accessory Pack	A-0503

*** For use when testing colored or turbid samples. See page 13 for details.**

Instructions and SDSs are posted on our website.
If no shelf life is listed for a product, then the shelf life is at least 1 year.