

# MODEL 6800T

## ALKALINITY ANALYZERS



The 6800T Series Analyzers are a family of on-line sequential sampling analyzers that use various automated analytical technologies to perform an analysis. When configured for alkalinity measurements, titration technology is used for the most cost effective, ease of use and low maintenance method.

## What is Alkalinity?

Alkalinity is a measure of the capacity of water to neutralize acids. Alkaline compounds such as bicarbonates, carbonates and hydroxides remove hydrogen ions and lower the acidity of the water. This is done by combining the Hydrogen ions to make new compounds. Alkalinity is influenced by rocks and soils, salts, certain plant activities and possible industrial wastewater discharges.

Total alkalinity is measured by measuring the amount of acid needed to bring the sample to a specified pH endpoint. At this pH, all the alkaline compounds in the sample are "used up". The result is reported as parts per million (ppm) or milligrams per liter (mg/l) of calcium carbonate (CaCO<sub>3</sub>).

## Advantages

### Easy Start Up and Use

The 6800T Alkalinity Analyzers are easy to start up and use. Simply connect the sample, waste and reagent lines and then power up the Factory Calibrated analyzer. Wall mounting hardware is standard but an optional bench top stand with a reagent holder is also available.

### User-Friendly Menu Structure

Accessing information or customizing an analysis routine is easily accomplished with the simple, user friendly menu structure and touch screen interface. The analyzer can be "web enabled" for remote monitoring and interfacing with personal hand-held devices and computers.

## How it Works

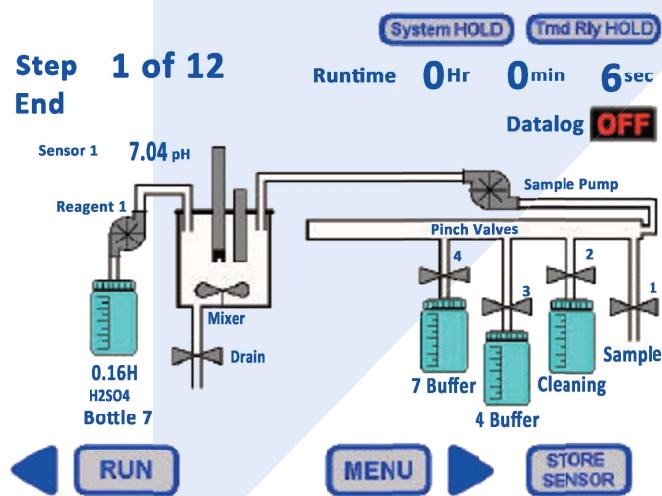
The 6800T Alkalinity Analyzer calculates alkalinity by accurately dispensing "shots" of a known concentration of titrant into the reaction cell. An accurately prepared sulfuric acid solution is typically used as the titrant. The pH is monitored throughout the analysis cycle by using the included pH sensor, and this is done until the sample reaches the pH endpoint. The 6800T analyzer uses the titrant concentration and the amount dispensed to calculate the result.

The 6800T typically makes a single measurement per analysis cycle. A Standard Program sequence consists of a cleaning cycle, sample acquisition, monitoring of pH, addition of titrant, mixing, calculation of results and data storage. Frequency of analysis between each cycle can easily be configured. Accessing information or customizing an analysis routine are easily accomplished with the simple user friendly menu structure and touch screen interface. 4 different ranges can be configured: 0-50ppm, 50-200 ppm, 200-1000ppm and 0 to >1000ppm. The analyzer comes with four 4-20 analog output, Ethernet digital output and 4 relays.

### Two Separated Enclosures

This analyzers has two separated enclosures with lockable doors. The Top enclosure, called the Electrical Enclosure, includes the main power supply, the controller PCB assembly and the touch screen interface. The bottom enclosure, called the Liquids Enclosure, includes all the components involved in the sample collection and analysis: pH sensor, reagent pump, sample pump and sample reaction cell.

Up to 4 different sample lines can be connected to the analyzer. Numerous analysis configurations can be easily setup and programmed depending on the specific application for control and/or compliance requirements.



# SPECIFICATIONS

<b>Method</b>	Titration of Single or Dual endpoints, pH inflection
<b>Ranges</b>	0 to 50, 50 to 200, 200 to 1000, 0 to >1000 ppm or mg/l
<b>Repeatability</b>	± 2%
<b>Pressure</b>	Inlet Sample: Atmospheric Outlet Sample: Atmospheric, waste tubing O.D. 3/8
<b>Response Time</b>	Dependent on the specific titration measurement
<b>Temperature</b>	Operating: 41° to 122°F (5° to 50°C) Sample: 41° to 158°F (5° to 70°C)
<b>Power</b>	110-220 VAC, 50-60 Hz, 80VA
<b>Mounting</b>	Wall mounting or with optional bench support
<b>Cabinet</b>	Non-Metallic
<b>Reagent Used</b>	Up to 2
<b>Data Logging</b>	Configurable Data Recording, Storage and Output
<b>Analog Output</b>	Four 4-20 mA outputs
<b>Alarms</b>	Four configurable relays SPDT 15A 250 VAC
<b>Sample Flow</b>	For Fast Loop Reservoir: 100-500 ml/min
<b>Connections</b>	To the fast loop reservoir with flexible tubing O.D. 1/4"
<b>Dimensions</b>	17"L x 32"H x 9"D (43 x 81 x 23 cm) Approximately 30 lbs (14 kg)





# TELEDYNE ANALYTICAL INSTRUMENTS

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