



INNOVATIVE  
YEARS

*of*

TECHNOLOGICAL CONTRIBUTION TO THE NATION

**WATER TESTING SOLUTIONS**

PRODUCT  
BROCHURE



3.4

million deaths every year due to  
water borne diseases

SOURCE : WORLD HEALTH ORGANISATION

1.8

million deaths every year due to  
Diarrhoea

SOURCE : UNICEF

780

million people do not have access  
to clean water

SOURCE : UNESCO

21%

of the diseases reported in India  
are related to water

SOURCE : WORLD BANK REPORT

ELICO's genesis in 1960 laid the foundation for the Analytical Instrumentation Industry in India. As a pioneer, Elico has distinguished itself by achieving leadership in the indigenous development and production of Analytical instruments, mainly due to its path-breaking research and innovation. Over the last six decades, Elico has created a wealth of intellectual property, which has contributed to enhancing competitiveness among its clients, enabling them to fulfill statutory and regulatory compliances, thereby contributing to a healthier and sustainable environment.

Our Organization consistently endeavours towards gaining knowledge and value to add to our legacy of scientific innovation.

**OUR MISSION**

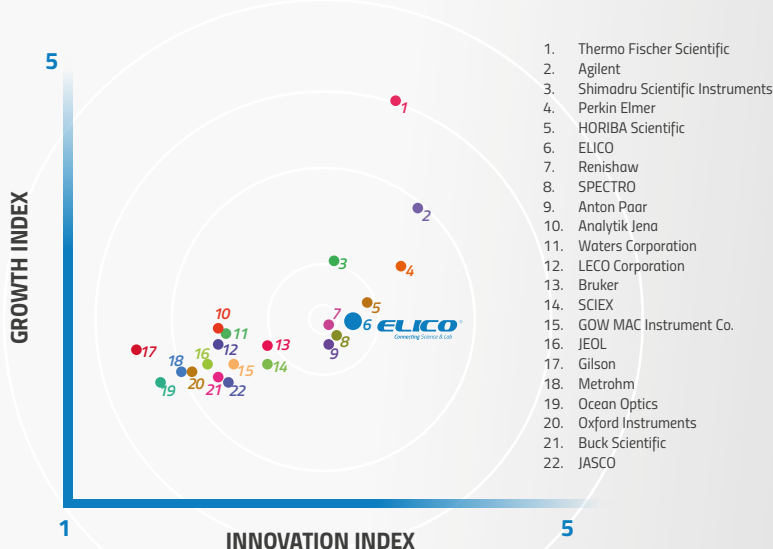
To Provide Innovative Technologies in Water Quality Monitoring to address the Current & Future Challenges.

**#TransformingIndia #MadeinIndia**

**We are making Water Testing**

**Economical  
Faster  
User friendly  
Anywhere Data Access**

**THE FROST RADAR - Global Laboratory Analytical Instrumentation Market**



**OUR SOLUTIONS**

**Online & IoT Instruments  
Mobile Solutions  
Laboratory Instruments  
Water Sensors  
Water Reagents  
Field Test Kits**

# Awards & Recognitions

**CII Industrial Intellectual Property Awards 2020**  
Best Patent Portfolio SME  
(Manufacturing / Engineering)



**10<sup>th</sup> CII Design Excellence Awards 2020 Winner** "Mobility Design"



**10<sup>th</sup> CII Design Excellence Awards 2020 Winner** "Special Purpose Vehicle"



**NATIONAL AWARD**  
for  
R&D Effort from DSIR,  
Ministry of Science and  
Technology

**NATIONAL AWARD**  
for  
R&D Effort from  
Department of Electronics  
(Ministry of Electronics & IT)

**NATIONAL AWARD**  
for  
Quality Products from  
Ministry of Small Scale  
Industries

2019  
Global Laboratory Analytical Instrumentation  
Innovation Excellence  
**FROST RADAR AWARD**



# Our Prolific Journey

2020

- NIR with Machine Learning (ML) & Artificial Intelligence (AI)
- COVID-19 Hospital Water Quality Monitoring Station
  - ICP-MS
  - Automated Mobile Water Testing Laboratories
    - IoT Cloud based Fully Automated Multiparameter Water Quality Analyzer
    - Development of CWA Detectors for DRDE
      - Photoacoustic spectroscopy



2010

- Mobile Soil Testing Laboratories
- HPLC
  - Worldwide Launch of OEM AAS & Online Silica Analyzer through MNCs in USA
  - Certified for ISO 14001 (EMS) & ISO 27001 (ISMS)
    - Diode Array Spectrophotometer



2000

- Signing the 1<sup>st</sup> R&D Contract with MNC in USA
- Starting of Healthcare IT & ITES Operations
- Certified for ISO 9001 (QMS)
- 1<sup>st</sup> Patent Applied



## PC based Analytical Instruments

- Atomic Absorption Spectrophotometer (AAS)
- NIR Spectrophotometer
- Spectrofluorometer

1990

## Microprocessor based Instruments

- Visible Spectrophotometer
- UV-VIS Spectrophotometer

1980

- Visible Spectrophotometer
- UV-VIS Spectrophotometer
- Electromechanical Switches

1970

- Flame photometer
- Conductivity Meter
- Colorimeter

1960

## India's 1<sup>st</sup> Indigenous pH Meter

Founded by Mr D.V.S.Raju, the company started its operations with the objective of Developing Indigenous Technologies



# ELICO® WATER TESTING SOLUTIONS

Municipal Corporations



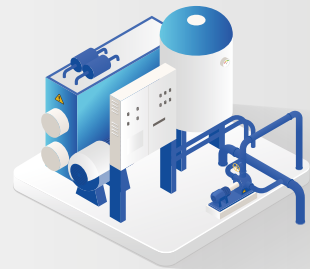
Public Health Engineering Departments (PHED)



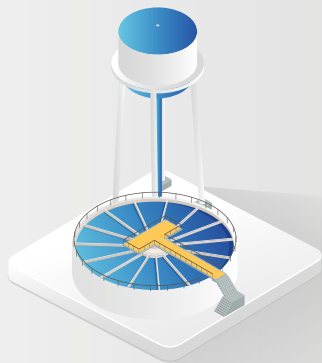
Smart Cities



Water Distribution Systems



Wastewater Treatment Plants



Water Treatment Plants



Water Testing Laboratories



Aquaculture



# Online, IoT and Cloud based Instruments

## AquaSense® Series

Elico's AquaSense Series of Online Analyzers are IoT & Cloud based SMART devices, that monitor various water quality parameters.

Real Time alerts notify the end-user, so that requisite interventions are made. Data can be uploaded and stored on the cloud and can be used for a wide range of analytics to gain insights.



Improve Water Quality Monitoring



Predict Failures



Reduce Maintenance costs



Reduce Downtime

## PRODUCTS

**AquaSense**

**AquaSense RC**

**AquaSense WTP**

**AquaSense STP**

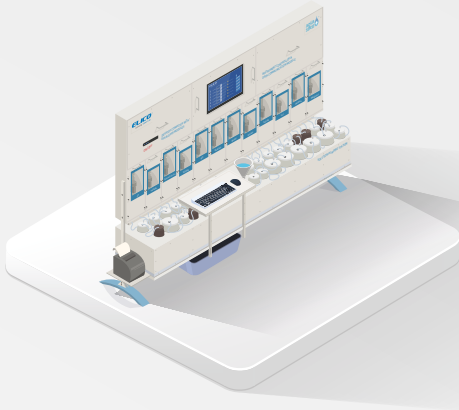
**AquaSense HWMS**



**LoRaWAN®**  
(Optional)

Online, IoT and Cloud based Instruments

# AQUA SENSE



## Automated Multiparameter Water Analyzer

Conventional approaches in water quality testing, which are time consuming, rely on manual monitoring of laboratory instruments and is often prone to errors in judgment and analysis.

Elico's state of the art, technologically advanced IoT & Cloud based Automated Multiparameter Water Analyzer, reduces time as well as cost and provides reliable results by mitigating human intervention.

The Analyzer is designed to bring convenience and compactness replacing a number of stand-alone instruments which may clutter the lab environment.



Simple to Use,  
One Touch Operation



Simultaneous  
Analysis



Faster Analysis  
< 15 Min



Remote  
Data Transfer 4G



Low Reagent  
Consumption



Minimal Sample  
< 1.5 Liters

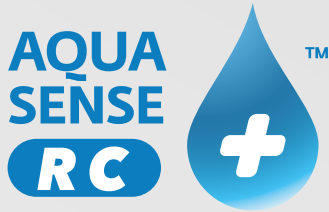
### PARAMETERS

pH  
Turbidity  
Residual Cl  
Ammonia  
TDS  
Alkalinity  
Nitrate (NO<sub>3</sub>)  
Chloride  
Fluoride  
Iron (Fe)  
Hardness  
Sulphate  
Nitrite (NO<sub>2</sub>)  
Calcium



**LoRaWAN**<sup>®</sup>  
(Optional)





## Residual Chlorine Analyzer

Aquasense RC enables the user to measure online residual chlorine with a high level of accuracy and stability in drinking water applications. The analyzer operates on proven Colorimetric DPD Chemistry, which requires minimal maintenance with low cost of ownership.



Stable and long-life optics



Reliable, Low maintenance design



Measuring range of 0 to 5 ppm



Realtime SMS Alerts



Integrated GPS & 4G Modules



Analysis and Reporting



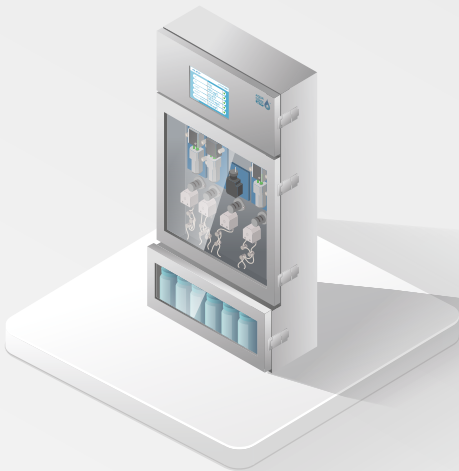
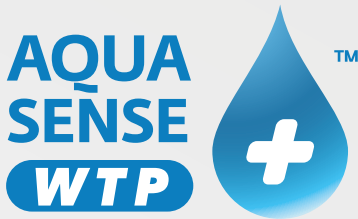
Solar Power (Optional)



(Optional)



Online, IoT and Cloud based Instruments



## Multiparameter Analyzer for Water Treatment Plants

Potable and Palatable water needs to be supplied in requisite quantities to communities around water treatment plants and Elico's AquaSense WTP - Multi parameter Analyzer is a convenient tool to monitor water quality at Water Treatment Plants (WTP).

The Five essential parameters that can be tracked and analysed simultaneously are pH, TDS, Turbidity, Residual Chlorine (RC) and Alkalinity.

A Web-based configurable dashboard is available, to observe round the clock, with data outputs at specified time intervals. Data sets can be stored locally and uploaded automatically to a cloud server. The water sample trends can be monitored to gain insights.



Simultaneous measurement of all the 5 parameters



7" color touch panel  
Auto Ranging & Calibration



Reliable, Low maintenance design



Programmable Relays and Alarms



Integrated GPS & 4G Modules

**LoRaWAN®**

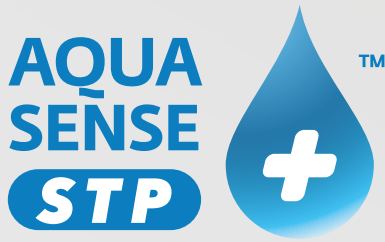
(Optional)



### PARAMETERS

pH	Residual Chlorine
TDS	Alkalinity
Turbidity	

Online, IoT and Cloud based Instruments



## Multiparameter Analyzer for Sewage Treatment Plants

AquaSense STP - Multi parameter Analyzer is a robust instrument that monitors water quality at Sewage Treatment Plants (STP). Designed for all-weather conditions and environments, the analyzer measures Flow, pH, COD, BOD and TSS in water samples.

While data is stored locally, it can be automatically uploaded to a cloud server and the analytics can be monitored through a web-based configurable dashboard.



Designed for dusty and humid indoor/ outdoor/ industrial conditions



Ultrasonic non-contact & Capacitive level techniques for Flow Measurement



Reliable Measurements without reagents



Innovative Long-life UV-Led Technology



Automatic air jet cleaning for all sensors



Integrated GPS & 4G Modules

**LoRaWAN**<sup>®</sup>

(Optional)



### PARAMETERS

Flow	BOD
pH	TSS
COD	

Online, IoT and Cloud based Instruments

**AQUA  
SENSE  
HWMS**



## Hospital Water Quality Monitoring Station

Water supply to Hospitals and Healthcare facilities are frequently an overlooked area, and yet essential for safe patient care. Numerous healthcare associated outbreaks have been linked to contaminated water, that is used for patient care departments as well as general handwashing and cleaning of medical devices.

Water, Sanitation and Hygiene (WASH) program from WHO has published guidelines for safe water by which all hospitals and healthcare facilities are evaluated.

Elico's AquaSense HWMS is a robust tool that can be used to monitor the required water quality parameters.



Simple to use –  
One Touch Operation



Remote Data  
Transfer 4G



Integrated 4G Modules  
for remote data transfer and  
storing the data on secure cloud



Central Water  
Quality Dashboard

**LoRaWAN**<sup>®</sup>

(Optional)

### PARAMETERS

Temperature  
pH  
TDS  
Turbidity  
Residual Chlorine  
Nitrate

# Mobile Solutions

Mobile testing solutions are intended to cover rapid testing of the basic water quality parameters. Mobile laboratories provide support during surveillance of rural & urban areas, natural disasters, epidemics, large scale emergencies, and refugee camps.

A significant advantage of this mobile laboratory is that the tests are carried out on fresh samples whose characteristics have not been contaminated or otherwise compromised as a result of storage and transportation.

**10<sup>th</sup> CII Design  
Excellence Awards  
2020 Winner**  
"Mobility Design"



**10<sup>th</sup> CII Design  
Excellence Awards  
2020 Winner**  
"Special Purpose Vehicle"





## Automated Mobile Water Testing Laboratory for Analysis of chemical and bacteriological parameters

Automated Mobile Water Testing Laboratory is an effective surveillance of drinking water quality in rural & urban areas. The lab is capable of measuring different water quality parameters. The Mobile Lab helps in quickly identifying the water quality problem on the spot at site.



Real-time sample analysis at the site



Scalable system with configurable test parameters



Operational Alerts & Status Indicators



Vibration and Shock proof design



Built-in GPS for vehicle tracking



UPS - 7hrs of un-interrupted operation



RFID based Geo-tagging with unique identification and tracking of Sample



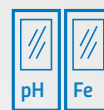
Faster Analysis: < 10 min



High Sample Data Integrity



Security: User Authentication and Access privileges



Complete in-situ solution for simultaneous multi parameter analysis



Upload real time sample data along with Geo location to Centralized server



State-of-the-Art Mobile Water Testing Laboratory Van launched in Haryana capable of measuring different water quality parameters and will provide an effective mode of surveillance on drinking water quality in the remotest corner of the State. #TransformingIndia

### Lab on Wheels: Driving Towards Quality Drinking Water

State-of-the-Art Mobile Water Testing Laboratory Van Launched in Haryana

- Uniquely designed & fully loaded with the latest technologies & features
- GPS enabled, computerised lab with fully automated sensor-based analysis & instant display of the results
- Capable of measuring different water quality parameters like pH, alkalinity, TDS, hardness, etc. of water samples
- Will provide an effective mode of surveillance of drinking water quality at the remotest corner of the State



10:06 AM · Oct 14, 2020 · Twitter Web App



Graphical visualization of water quality trends geographically

# Laboratory Instruments

Water quality can no longer be taken for granted. There are many variables that can come into play: contaminated water, aging water distribution system, source of groundwater, home plumbing, etc.

Water for Industry, agriculture, domestic purposes must be tested regularly in order to keep the source of water safe and free from potential health and environmental risks.

Thanks to technological advances in modern instrumentation, thousands of harmful chemicals and biological matters can be detected in water at very low concentration levels.

Water testing results can provide instant insights and aid in determining the best course of action for any type of water sources such as rivers, lakes, ground water, process effluents, municipal water and sewage.

Water testing is not only a vital element for preserving a safe public drinking supply and a healthy environment, but it can also improve industrial process efficiency for better products at reduced cost and in agriculture for healthier crops.

## PRODUCTS

**AquaSpec®  
(Spectrophotometer)**

**Portable Multiparameter  
Analyzer (e-Jal)**

**Atomic Absorption  
Spectrophotometer (AAS)**

**Flamephotometer**

**Ion Analyzer**

**Turbidity Analyzer**

**Water Quality Analyzer**

**pH & EC Analyzer**

**pH Analyzer**

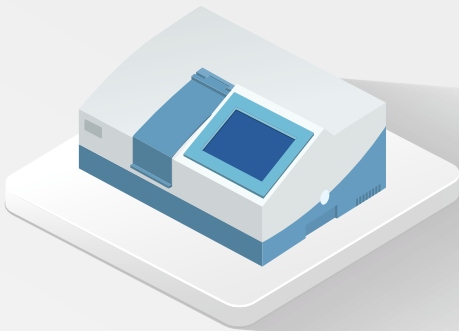
**Conductivity Analyzer**

**DO Analyzer**



# AquaSpec®

## SL 270



### AquaSpec® (Spectrophotometer)

Aquaspec is a powerful Double Beam UV-Visible Spectrophotometer designed to meet the requirements of water analysis. It comes with a high-resolution optics design with < 2 nm bandwidth and supports cuvettes upto 100mm path length. The instrument has more than 200 pre-programmed methods for Water Analysis.



7" Inch High Resolution Touch Screen Display



Pre-Programmed Methods



Double Beam Optics



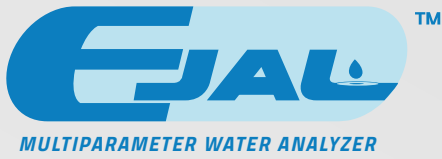
Pre-Calibrated



Multi Path Length & Round Vials







# PE 149



## Portable Multiparameter Water Quality Analyzer

Multiparameter Water Quality Analyzer covers all the important parameters of drinking water analysis. It is highly precise, robust, most useful for routine analysis.



In-Built Pre-Programmed Methods



Pre-Calibrated for Water Parameters



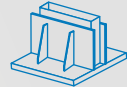
Supports Tablet Reagents



Portable & Battery Operated



5" Inch TFT



Multipath Length Holder



Support USB, Bluetooth, NFC



Online Data Transfer and Cloud Storage



Measures pH, EC, TDS, and Temperature simultaneously



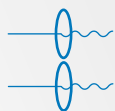
# Atomic Absorption Spectrophotometer

## SL 194



### Atomic Absorption Spectrophotometer for heavy metal analysis

Double Beam AAS, can be used for analysis of metals in Drinking Water & Wastewater Like Copper (Cu), Iron (Fe), Magnesium (Mg), Zinc (Zn), Arsenic (As), Calcium (Ca), Nickel (Ni) and Chromium (Cr) etc.



Double Beam Optics



8 Lamp Turret



Auto Ignition



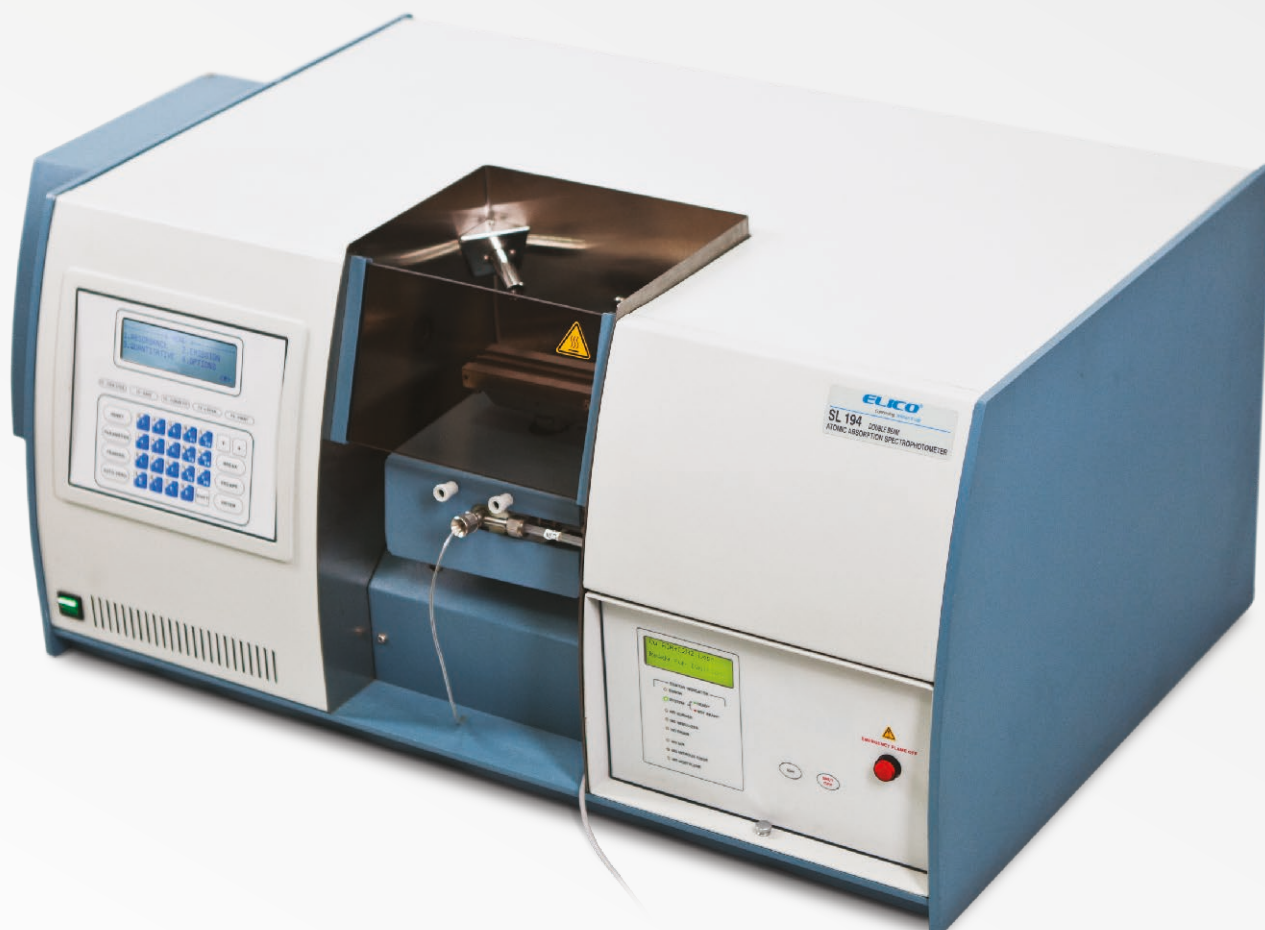
Auto Flame Control with all Safety Features



Hydride Generator

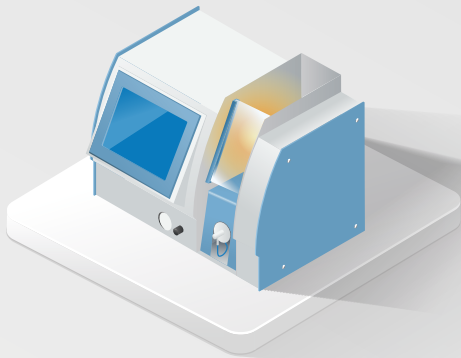


Auto Sampler



## Flamephotometer

### CL 378



## Flamephotometer for analysing Sodium and Potassium in water

Flame photometer (CL-378) is designed for determination of Sodium (Na) and Potassium (K) in water, Additional Filters are available for determination of Lithium (Li), Calcium (Ca) and Barium (Ba). The Instrument can simultaneously analyze all the elements in a single aspiration.



Tabletop



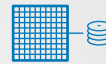
Auto Ignition



Simultaneous Analysis



Multiple Calibration Curves



800 Samples Saving facility

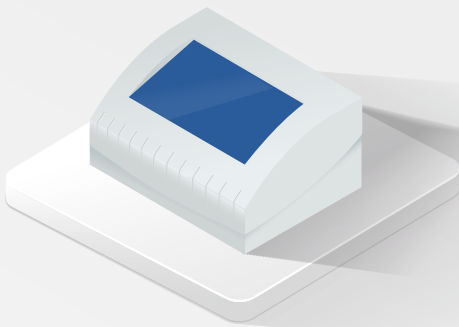


In-Built Compressor



# Ion Analyzer

## LI 126



## Ion – Analyzer

Multi-Channel Benchtop Ion Analyzer for concentration measurement with Ion Selective Electrodes. Direct Measurements of P<sub>x</sub>(Activity), pH, ORP, EMF, Concentration and Temperature



Benchtop



7" High-Resolution  
Touch Screen Display



10 Point  
Calibration



1000 Samples  
Storage



Analysis by Direct  
& Incremental Method



# Turbidity Analyser

## CL 52D



## Turbidity Analyser

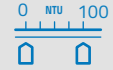
Measurement of Turbidity Levels of dispersant in Liquids by Scattering of Light. Useful for determination of Sulphate, Phosphate, Chloride, Zinc, Silver etc. by ASTM Procedure.



Portable



5" Inch High Resolution Display



0 to 1000 NTU



Rapid Single point calibration



Direct measurement of Turbidity



Data Storage 10,000 Points



# Water Quality Analyzer

## PE 138



## Portable Multiparameter Water Quality Analyzer

PE-138, Portable Multi-parameter water quality Analyzer enables measurement of pH, EC, TDS, DO, Salinity, mV, Temperature, Colorimetry (ABS/%T) and Turbidity in Water sample one at a time.



Elegantly styled



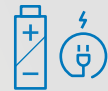
Highly Accurate & Stable



Memory Backup



Automatic / Manual Compensation



Operates on Rechargeable Battery & Mains Supply



### pH & EC Analyzer

LI 627



Measures pH, EC, TDS and Temperature Simultaneously



7" High-Resolution Touch Screen Display



Bench top



Single multiparameter Electrode with pH, Conductivity and TDS Sensors, Individually replaceable

### pH Analyzer

LI 622



Measures pH and Temperature Simultaneously



7" High-Resolution Touch Screen Display



Bench top



Range: -2 to 20 pH



Built-In NIST pH Standards

### EC/TDS Analyzer

LI 623



Measures pH and Temperature Simultaneously



Auto ranging



Benchtop



7" High-Resolution Touch Screen Display



5 Point Calibration

### DO Analyzer

PE 147



7" High-Resolution Touch Screen Display



Bench top



Easy to operate



Direct measurement of DO



# Water Sensors



## Aquasense SENCON

ELICO's Aquasense SENCON is a flexible and modular platform for Online Monitoring. The unique architecture allows to plug and play multiple sensors. It accepts upto 6 Water Sensors and displays all the parameters simultaneously on a 7" Inch high resolution color display. The controller module supports all the major communication protocols like MODBUS, Ethernet, WIFI, LoRa and others. The wide range of water sensors cover various techniques from Titration, ISE and Colorimetry



Plug and Play Sensors,  
Auto Connects up to  
6 Water Quality Sensors



Auto Cleaning Design,  
Less Maintenance



7" color display



Integrated GPS & 4G Modules  
for Location Tracking and  
Upload data to Cloud server



Supports Major  
communication protocols  
like MODBUS, Ethernet, WIFI



Cloud Based Platform  
for Configuration,  
Operation, Monitoring  
and Data Analysis



(Optional)





## Featured Parameters

	Parameters	Model	Method	Detection Limits
1	pH	OL504	Potentiometric	0 to 14 pH
2	Turbidity	OL531	Nephelometric	0 - 1000 NTU
3	Residual Cl	OL506	Colorimetric	0.01 to 4 mg/L
4	Ammonia	OL540	ISE	0.01 to 17000 mg/L
5	TDS	OL522	Conductivity (EC)	0 to 50,000 mg/L
6	Alkalinity	OL533	Potentiometric Titration	5 to 2000 mg/L
7	Nitrate (NO <sub>3</sub> )	OL505	ISE	0.1 to 14,000 mg/L
8	Chloride	OL551	ISE	1.8 to 35,500 mg/L
9	Fluoride	OL524	ISE	0.02 mg/L to saturation
10	Iron (Fe)	OL568	Colorimetric	0.1 to 3 mg/L
11	Hardness	OL542	Colorimetric Titration	5 to 1000 mg/L
12	Sulphate	OL560	Colorimetric	0 to 1000 mg/L
13	Nitrite (NO <sub>2</sub> )	OL511	Colorimetric	0.01 to 0.5 mg/L
14	Calcium	OL554	ISE	0.02 to 40,000 mg/L
15	Dissolved Oxygen (DO)	OL544	Polarographic/Optical	0 - 20 mg/L



**Turbidity Analyzer**

Range  
**0 - 1000 NTU**

Reproducibility  
**± 2% of Range**

Resolution  
**0.01**

Measurement Technique  
**Nephelometric**



**pH Analyzer**

Range  
**0 to 14 pH**

Reproducibility  
**± 2% of Range**

Resolution  
**0.01**

Measurement Technique  
**Potentiometric**



**Dissolved Oxygen Analyzer**

Range  
**0 to 20 ppm**

Reproducibility  
**± 0.1 ppm**

Resolution  
**0.1 ppm**

Measurement Technique  
**Polarographic Type**



## Chloride Analyzer

Range  
**1.8 to 35,500 mg/L**

Reproducibility  
**± 4% of Range**

Resolution  
**0.01**

Measurement Technique  
**ISE**



## Fluoride Analyzer

Range  
**0.02 to Saturation**

Reproducibility  
**± 2% of Range**

Resolution  
**0.01**

Measurement Technique  
**ISE**



## Hardness Analyzer

Range  
**5 to 1,000 mg/L**

Reproducibility  
**± 4% of Range**

Resolution  
**0.01**

Measurement Technique  
**Colorimetric Titration**



## Iron Analyzer

Range  
**0.1 to 3 mg/L**

Reproducibility  
**± 2% of Range**

Resolution  
**0.01**

Measurement Technique  
**Colorimetric**



## Ammonia Analyzer

Range  
**0.01 to 17,000 mg/L**

Reproducibility  
**± 2% of Range**

Resolution  
**0.01**

Measurement Technique  
**ISE**



## Sulphate Analyzer

Range  
**0 to 1,000 mg/L**

Reproducibility  
**± 2% of Range**

Resolution  
**0.01**

Measurement Technique  
**Colorimetric**



## Calcium Analyzer

Range  
**0.02 to 40,000 mg/L**

Reproducibility  
**± 2% of Range**

Resolution  
**0.01**

Measurement Technique  
**ISE**



## Nitrite Analyzer

Range  
**0.01 to 0.5 mg/L**

Reproducibility  
**± 2% of Range**

Resolution  
**0.01**

Measurement Technique  
**Colorimetric**



## Nitrate Analyzer

Range  
**0.1 to 14,000 mg/L**

Reproducibility  
**± 2% of Range**

Resolution  
**0.01**

Measurement Technique  
**ISE**



## Alkalinity Analyzer

Range  
**5 to 2,000 mg/L**

Reproducibility  
**± 2% of Range**

Resolution  
**0.01**

Measurement Technique  
**Potentiometric Titration**



## Residual Chlorine Analyzer

Range  
**0.01 to 4 mg/L**

Reproducibility  
**± 2% of Range**

Resolution  
**0.01**

Measurement Technique  
**Colorimetric**



## TDS Analyzer

Range  
**0 to 50,000 mg/L**

Reproducibility  
**± 2% of Range**

Resolution  
**0.01**

Measurement Technique  
**Conductivity (EC)**

# Software



## Aquasense Web Suite

Aquasense Web Suite is a Scalable, Collaborative Data Visualization Platform for Water Monitoring, specifically designed for real-time monitoring and control. It retrieves critical information from remote water sensors, analyzers and controllers; handles alerts and alarm notifications; provides historical data.



Connect Sensors  
in Real Time



Centralized  
Cloud Storage



Access Data  
Anytime and  
Anywhere



Get Insights with  
Customizable  
Dashboards



Visualize Water  
Data through  
maps

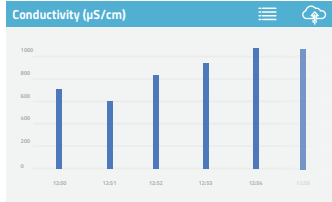
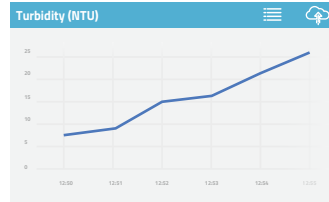
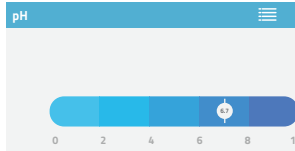


Automatic Realtime  
Alerts online by  
E-mail & SMS



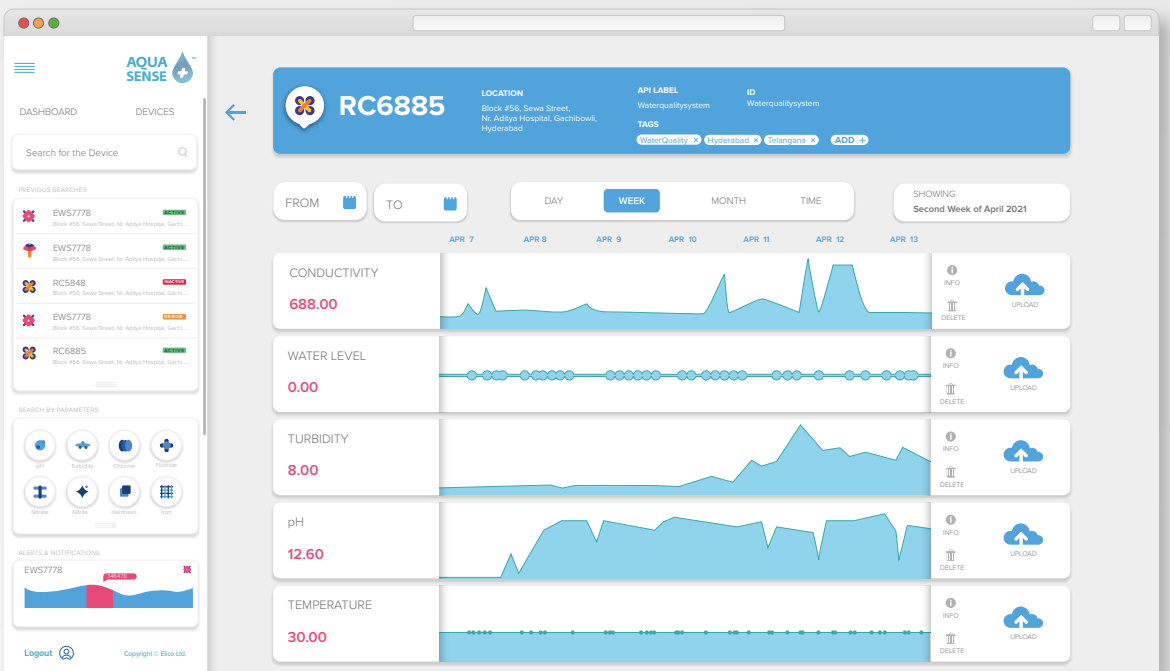
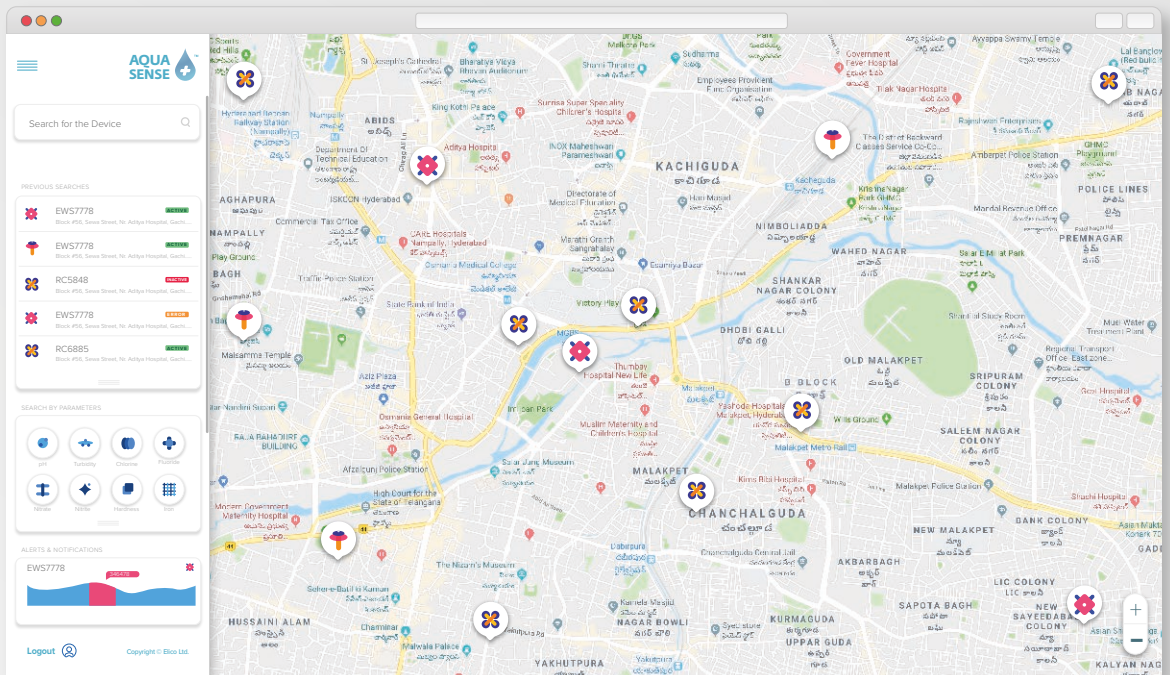
OPERATIONS

- VOLUMES
- QUALITY
- LOGBOOK
- INFORMATION
- PROFILE
- SENSORS
- WTP SETTINGS



**Temperature (Celcius)**

DATE	TEMPERATURE
April 10 2019 12:50:33	20
April 10 2019 12:51:36	15
April 10 2019 12:52:43	10
April 10 2019 12:53:55	5
April 10 2019 12:54:01	10



# Field Test Kit

The Water Quality Field Testing kits are extensively used for testing drinking water parameters quickly and rapidly. A simple water test enables you to find the quality of water in terms of its Physical, Chemical & Biological characteristics. The Test Kits are fully portable and self-contained and are designed to determine the safety of drinking water sources on-site, working in remote locations away from laboratories. The test kits have a provision to track the usage through a mobile app.



Parameter	Principle	Range of measurement in mg./lit.	Method /Reagents & chemicals
<b>pH</b>	Colour Comparison	2.0 to 13.0.	Universal Indicator having range
<b>Total Alkalinity</b>	Acid –Base titration	0– 1000 as CaCO <sub>3</sub>	Diluted HCL
<b>Total Hardness</b>	Complexo-metric titration	0 – 1000 as CaCO <sub>3</sub>	EDTA
<b>Fluoride</b>	Colour comparison with charts	(0.0, 0.5, 1.0,1.5, 2.0 3.0)	Xylenol –Orange (liquid form in amber colored bottle)
<b>Nitrate as NO<sub>3</sub></b>	Colour comparison with charts	(0.0,25.0, 50.0, 75.0, 100.0, 125.0, 150.0)	NEDA/ Cadmium Reduction
<b>Chloride</b>	Titration method	(0- 1000)	Argentometric Method AgNO <sub>3</sub>
<b>Iron</b>	Colour comparison with charts	(0.0, 0.2, 0.3, 0.4, 0.5, 1.0, 1.5,)	1,10 Phenanthroline Method (Powder /Table form in amber colored bottle)
<b>Residual Free Chlorine</b>	Colour comparison with charts	(0.0, 0.2, 0.5, 1.0, 1.5, 2.0, 3.0)	N, N-diethyl-p-phenylenediamine (D.P.D.) method (Green Chemistry)
<b>Ammonia</b>	Colour comparison with charts	0 – 10	Nessler
<b>Phosphate</b>	Colour comparison with charts	0 - 5	Molybdenum Blue
<b>Arsenic</b>	Test Strips Method, Colour card comparison	0.005 , 0.01, 0.025, 0.05, 0.075, 0.1, 0.25 , 0.5 mg/l as As3+/5+	Silver Diethyldithiocarbamate (Reference: IS: 3025 Part 37)
<b>Coliform/E.Coli</b>			

Field Test Kit

**AQUA  
SENSE  
FTK**

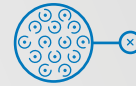


## Field test Kit for Water Analysis

Auqasense – FTK, Test kits are based on methods of Analysis of Water & Waste Water (EPA) & Standard Method for Water & Wastewater (AWWA). Each field kit contains equipment and consumables for 100 samples.



Portable and easy to carry



Eliminates complex tests and equipment that are difficult to use in the field



Enables on-spot testing of key indicators for ongoing water quality monitoring



# Water Reagents



## Water Reagents in Tablet, Powder and Liquids

ELICO offers a wide range of water reagents, in tablet, powder and liquid form to support all your testing needs.



Easy to Handle



Precise Dosing



Long Shelf Life



Green Chemistry  
(For Specific Products)



# Measuring Range

TEST NAME	MEASURING RANGE	CHEMICAL METHOD
Alkalinity-m T	5 - 200 mg/l CaCO <sub>3</sub>	Acid/Indicator
Alkalinity-m HR T	5-500 mg/l CaCO <sub>3</sub>	Acid/Indicator
Alkalinity-p T	5-300 mg/l CaCO <sub>3</sub>	Acid/Indicator
Aluminium-T	0.01-0.3 mg/l Al	Eriochrome cyanine R
Aluminium PP	0.01-0.25 mg/l Al	Eriochrome cyanine R
Aluminium T*	0.03 - 0.2 mg/l Al	Eriochrome cyanine R
Ammonia T*	0.02-1 mg/l N	Indophenol blue
Ammonia PP	0.01-0.8 mg/l N	Salicylate
Ammonia LR TT	0.02-2.5 mg/l N	Salicylate
Ammonia HR TT	1-50 mg/l N	Salicylate
Arsenic	0.02-0.6 mg/l As	Silver diethyldithiocarbamate
Arsenic*	0.005-0.05 mg/l As	Silver diethyldithiocarbamate
Bromine T	0.05-1 mg/l Br	DPD
Bromine T	0.1-3 mg/l Br	DPD
Bromine T	0.05-6.5 mg/l Br	DPD
Boron T	0.1-2 mg/l B	Azomethine
Cadmium TT	0.025-0.75 mg/l Cd	Cadion
Cadmium TT*	0.002-0.500 mg/l Cd	Cadion
Chloride T	0.5-25 mg/l Cl	Silver nitrate/turbidity
Chloride T	5-250 mg/l Cl	Silver nitrate/turbidity
Chloride L	5-60 mg/l Cl	Iron (III)-thiocyanate
Chlorine 24 T	0.01-6 mg/l Cl <sub>2</sub>	DPD
Chlorine 50 T	0.02-0.5 mg/l Cl <sub>2</sub>	DPD
Chlorine 10 T	0.1-6 mg/l Cl <sub>2</sub>	DPD
Chlorine 24 T	0.02-3 mg/l Cl <sub>2</sub>	DPD
Chlorine HR (DPD)	0.1-10 mg/l Cl <sub>2</sub>	DPD
Chlorine HR (KI) T	5-200 mg/l Cl <sub>2</sub>	KI/Acid
Chlorine L	0.02-3 mg/l Cl <sub>2</sub>	DPD
Chlorine PP	0.02-2 mg/l Cl <sub>2</sub>	DPD
Chlorine dioxide T	0.02-11 mg/l ClO <sub>2</sub>	DPD/Glycine
Chlorine dioxide T	0.05-1 mg/l ClO <sub>2</sub>	DPD/Glycine
Chlorine dioxide T	0.05-2.5 mg/l ClO <sub>2</sub>	DPD/Glycine
Chromium 50 PP	0.005-0.5mg/l Cr	1,5-Diphenylcarbozide
Chromium 16 PP	0.02-2 mg/l Cr	1,5-Diphenylcarbozide
COD LR	0-150 mg/l O <sub>2</sub>	Dichromate/H2SO4
COD MR	0-1500 mg/l O <sub>2</sub>	Dichromate/H2SO4
COD HR	0-15000 mg/l O <sub>2</sub>	Dichromate/H2SO4
Copper 50 T	0.05-1mg/l Cu	Biquinoline
Copper T*	0.02-5 mg/l Cu	Biquinoline
Copper 24 T	0.5-5 mg/l Cu	Biquinoline
Copper PP	0.05-5 mg/l Cu	Biquinoline
Cyanide 24 L	0.01-0.5 mg/l CN	Pyridine-barbituric acid
Cyanide 50 L	0.005-0.2 mg/l CN	Pyridine-barbituric acid
Fluoride*	0.05 - 1.5 mg/l F	SPADNS
Formaldehyde TT	0.1-5 mg/l HCHO	H2SO4/Chromotropic acid
Formaldehyde 10 L	1 - 5 mg/l HCHO	H2SO4/Chromotropic acid
Formaldehyde 50 L	0.02 - 1.0 mg/l HCHO	H2SO4/Chromotropic acid
Hardness, total T	2-50mg/l CaCO <sub>3</sub>	Metalolphthalein
Hardness, total HR T	20-500 mg/l CaCO <sub>3</sub>	Metalolphthalein
Hydrazine PP	0.05-0.5 mg/l N <sub>2</sub> H <sub>4</sub>	Dimethylamino-benzaldehyde
Hydrazine L	0.005-0.6 mg/l N <sub>2</sub> H <sub>4</sub>	Dimethylamino-benzaldehyde
Hydrogen peroxide 50 T	0.01-0.5 mg/l H <sub>2</sub> O <sub>2</sub>	DPD/Catalyst

TEST NAME	MEASURING RANGE	CHEMICAL METHOD
Hydrogen peroxide 24 L	0.03-1.5 mg/l H <sub>2</sub> O <sub>2</sub>	DPD/Catalyst
Iodine T	0.05-3.6 mg/l I	DPD
Iron 10 T	0.1-1 mg/l Fe	PPST
Iron 50 T	0.01-0.5 mg/l Fe	PPST
Iron PP*	0.1-3 mg/l Fe	1,10-Phenanthroline
Iron PP	0.1-1.8 mg/l Fe	TPTZ
Lead 10 L	0.1-5 mg/l Pb	4-(2-Pyridylazo)-resorcine
Lead 50 L*	0.01-5 mg/l Pb	4-(2-Pyridylazo)-resorcine
Lead TT	0.1-5 mg/l Pb	4-(2-Pyridylazo)-resorcine
Manganese T	0.2-4 mg/l Mn	Formalldoxime
Manganese LR PP*	0.01 - 0.7 mg/l Mn	PAN
Manganese HR PP	0.1 - 18 mg/l Mn	Periodate Oxidation
Magnesium*	30 - 150 mg/l Mg	Metalolphthalein
Molybdate/Molybdenum T	1-30 mg/l MoO <sub>4</sub>	Thioglycoate
Molybdate/Molybdenum HR PP	0.5-66 mg/l MoO <sub>4</sub>	Mercaptoacetic acid
Molybdate/Molybdenum LR	0.5-5.0 mg/l MoO <sub>4</sub>	Mercaptoacetic acid
Nickel 50 L	0.02-1 mg/l Ni	Dimethylglyoxime
Nickel 24 L	0.2-7.0 mg/l Ni	Dimethylglyoxime
Nitrate TT	1-30 mg/l NO <sub>3</sub> - N	Chromotropic acid
Nitrate LR TT	0.5-14 mg/l NO <sub>3</sub> - N	2,6-Dimethylphenol
Nitrate L*	10 - 45 mg/l NO <sub>3</sub> -N	UV screening
Nitrite PP	0.01-0.3 mg/l NO <sub>2</sub> - N	Diazotation
Nitrite T	0.01-0.5 mg/l NO <sub>2</sub> -N	N-(1-Naphthyl)-ethylenediamine
Nitrite TT	0.03-0.6 mg/l NO <sub>2</sub> -N	Sulfanilic/naphthylamine
Nitrite TT	0.3-3 mg/l NO <sub>2</sub> -N	Sulfanilic/naphthylamine
Nitrite LR T*	0.1-3 mg/l NO <sub>2</sub> -N	Sulfanilic/naphthylamine
Nitrogen LR TT	0.5-25 mg/l N	Persulphate digestion method
Nitrogen HR TT	5-150 mg/l N	Persulphate digestion method
Nitrogen 16 TT	0.5-14 mg/l N	2,6-dimethylphenol 2,3
Nitrogen 16 TT	5-140 mg/l N	2,6-dimethylphenol 2,3
Oxygen, active T	0.1-10 mg/l	DPD
Ozone 50 T	0.02-0.5 mg/l O <sub>2</sub>	DPD/Glycine
Ozone 24 T	0.02-1 mg/l O <sub>2</sub>	DPD/Glycine
Phenols T	0.1-5.0 mg/l C <sub>6</sub> H <sub>5</sub> OH	4-aminoantipyrine
Phosphate ortho HR T	1-80 mg/l PO <sub>4</sub>	Vanadomolybdate
Phosphate L*	0.5 - 5 mg/l PO <sub>4</sub>	Vanadomolybdate
Phosphate ortho TT	3-60 mg/l PO <sub>4</sub>	Vanadomolybdate
Phosphate ortho PP	0.06-2.5 mg/l PO <sub>4</sub>	Phosphomolybdenum blue/Ascorbic acid
Phosphate ortho 16 TT	0.06-5 mg/l PO <sub>4</sub>	Phosphomolybdenum blue/Ascorbic acid
pH value T	6.5-8.4 pH	Phenol red
pH value L	6.5-8.4 pH	Phenol red
Potassium T	1-10 mg/l K	Tetraphenylborate-turbidity
Silica T	0.05-3 mg/l SiO <sub>2</sub>	Silicomolybdate
Silica HR PP	1-100 mg/l SiO <sub>2</sub>	Silicomolybdate
Sulphate VARIO PP	2-100 mg/l SO <sub>4</sub>	Bariumsulphate turbidity
Sulphate T	5-100 mg/l SO <sub>4</sub>	Bariumsulphate turbidity
Sulphate T*	200-400 mg/l SO <sub>4</sub>	Bariumsulphate turbidity
Sulphide T	0.04-0.5 mg/l S	DPD/Catalyst
Sulphite 10 T	0.1-10 mg/l SO <sub>3</sub>	DTNB
Sulphite 24 T	0.05 - 4 mg/l SO <sub>3</sub>	DTNB
Zinc T	0.02-0.5 mg/l Zn	zincon/EDTA
Zinc T*	5 - 15 mg/l Zn	zincon/EDTA

\* Reagents as per BIS Limits



# Social Impact

## Human Health

Provide safe drinking water by monitoring quality in real time at different Geo locations.

## Environmental Safety

Pre-programmed methods for minimal reagent consumption.

## Scalability

Modular system tailored to analyse different parameters

## Effective Surveillance

of Water Quality parameters for necessary actions.

## High Productivity

Automated, Simultaneous analysis of multiple parameters saves time, money & space, increases the productivity effectively.

## Low cost of operation

Low skilled resources to perform Tests.  
Optimized Analytical Methods- Use low volume of reagents

# ELICO®



## INNOVATIVE YEARS

*of*

TECHNOLOGICAL CONTRIBUTION TO THE NATION

Celebrating 60 years  
of our Journey



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B-90, A.P.I.E., Sanathnagar, Hyderabad 500 018, Telangana., India  
Tel +91 40 44451234 Fax +91 40 23771639 [info@elico.co](mailto:info@elico.co)

**Ahmedabad**

[ahm@elico.co](mailto:ahm@elico.co)  
+91 98241 75321

**Bengaluru**

[blr@elico.co](mailto:blr@elico.co)  
+91 99000 28741

**Bhopal**

[bpl@elico.co](mailto:bpl@elico.co)  
+91 99930 96876

**Bhubanewswar**

[bbr@elico.co](mailto:bbr@elico.co)  
+91 7337442098

**Chennai**

[chn@elico.co](mailto:chn@elico.co)  
+91 98402 65797

**Cochin**

[kel@elico.co](mailto:kel@elico.co)  
+91 81291 84400

**Delhi**

[del@elico.co](mailto:del@elico.co)  
+91 98710 06104

**Guwahati**

[gau@elico.co](mailto:gau@elico.co)  
+91 91211 77451

**Hyderabad**

[hyd@elico.co](mailto:hyd@elico.co)  
+91 99896 25457

**Kolkata**

[kol@elico.co](mailto:kol@elico.co)  
+91 91211 77452

**Lucknow**

[lku@elico.co](mailto:lku@elico.co)  
+91 91980 01666

**Mumbai**

[mum@elico.co](mailto:mum@elico.co)  
+91 77100 96111

**Patna**

[pat@elico.co](mailto:pat@elico.co)  
+91 91211 77450

**Visakhapatnam**

[vtz@elico.co](mailto:vtz@elico.co)  
+91 99899 94532

