

Portable Multi-Parameter Water Quality Analyzer

ATE3000Pro

Features

- Portable All-in-One Water Analyzer – Field-ready with built-in battery.
- 360° Rotating Colorimetry – 10× more stable.
- 100k-hr Solid-State Light Source – Imported, stable output.
- Glos Smart System – Simple, intelligent operation.
- 14-Channel Optical Control – Auto-switching.
- Dual Colorimetry – Tube & cuvette compatible.
- Custom Curves – User-definable calibration.
- 8" IPS Touch (1024×768).
- USB Data/Update.
- Built-in Thermal Printer – Auto/batch print.
- ABS Case – Strong, corrosion/heat-resistant.
- 6-Well Digester – Fast COD/TP/TN prep.
- Biohit Pipettes – Minimizes handling error.
- Pre-made Reagents – Just add sample.

Applications

Widely applied in scientific research, universities, wastewater treatment plants, water environment monitoring, industrial wastewater self-inspection, and other fields.

Description

ATE3000pro Portable Multi-Parameter Water Quality Analyzer is a professional-grade field-portable water quality analysis instrument. Equipped with a built-in lithium battery, it operates without external power supply. The measurement principles for its detection parameters comply with environmentally recognized industry standards. It features imported light sources and sensors, along with an advanced optical structure design. The instrument supports both tube colorimetry and cuvette colorimetry methods, with its tube colorimetry utilizing a 360° rotating colorimetric approach, enhancing data stability by 10 times and effectively minimizing measurement errors caused by tube wall scratches. The device is equipped with an 8-inch IPS high-definition touchscreen running the Glos Water Quality Detection System, which integrates multiple applications including water quality analysis, photometric measurement, custom curve building, batch data printing, batch data export, guided detection, and batch detection.



1. Parameter

1.1 Technical Parameters

Product Model	ATE3000pro Portable Multi-Parameter Water Quality Analyzer			
Detection Parameters	COD	Ammonia Nitrogen	Total Phosphorus	Total Nitrogen
Measurement Standard	HJ/T399-2007	HJ535-2009	GB11893-89	Alkaline persulfate digestion photometric method
Measuring Range	0-15000mg/L	0-50mg/L	0-16mg/L	0-250mg/L
Chloride Interference Resistance	2000mg/L	-		
Detection Limit	5mg/L	0.05mg/L	0.02mg/L	0.05mg/L
Digestion Temperature	165°C,20min	No Digestion Required	150°C,15min	120°C,30min
Detection Time	25 minutes per batch	5 minutes per batch	20 minutes per batch	35 minutes per batch
Repeatability	$\leq \pm 1\%$			
Indication Error	$\leq \pm 3\%$			
Optical Stability	$\leq \pm 0.001 \text{ Abs}/20 \text{ minutes}$ (100,000-hour lifespan)			
Colorimetric Method	Dual colorimetric cell system, supporting both 360° rotating tube colorimetry and multi-specification cuvette colorimetry.			
Printer	Micro Thermal Printer			
Operating System	Equipped with Glos Intelligent Water Quality Detection System			
Screen Display	8-inch 1024×768 resolution IPS high-definition capacitive touchscreen			
Device Functions	Water Quality Analysis, Photometric Measurement, Data Management, Custom Coefficient Curve Creation, Custom Calibration Curve Creation, PC Connectivity, USB Updates, etc.			
Standard Measurement Configuration	COD, Ammonia Nitrogen, Total Phosphorus, Total Nitrogen			
Batch Processing Capacity	6 tubes			
Instrument Power Supply	DC12V, 5A			
Instrument Charging	12V Charger			
Operating Environment	5-40°C, $\leq 85\%$ RH (non-condensing)			

Instrument Dimensions	420mm×340mm×180mm
Instrument Weight	5.2kg

1.2 Monitoring Items

No.	Detection Item	Detection Range	Detection Limit	Reference Standard
1	COD	0-15000mg/L	5mg/L	HJ/T399-2007 Determination of Chemical Oxygen Demand in Water - Rapid Digestion Spectrophotometric Method
2	Ammonia Nitrogen - Nessler's Method	0-50mg/L	0.05mg/L	HJ535-2009 Determination of Ammonia Nitrogen in Water - Nessler's Reagent Spectrophotometric Method
3	Ammonia Nitrogen - Salicylate Method	0-10mg/L	0.01mg/L	HJ535-2009
4	Total Phosphorus	0-16mg/L	0.02mg/L	GB/T11893-1989 Determination of Total Phosphorus in Water - Ammonium Molybdate Spectrophotometric Method
5	Total Nitrogen	0-250mg/L	0.05mg/L	Alkaline Persulfate Digestion Photometric Method (EPA)
6	Chrominance	0-500PCU	5PCU	GB/T11903-1989 Determination of Color in Water - Platinum-Cobalt Colorimetric Method
7	Turbidity	0-100NTU	1NTU	GB/T13200-1991 Determination of Turbidity in Water
8	Suspended Solids (SS)	0-500mg/L	1mg/L	GB/T11901-1989 Determination of Suspended Solids in Water - Gravimetric Method (Modified)
9	Copper - Bicinchoninate Method	0-1mg/L	0.04mg/L	Bicinchoninate Method (also known as Bicinchoninic Acid Method)
10	Nickel - Ultra-Low Range	0-1mg/L	0.002mg/L	PAN Spectrophotometric Method
11	Nickel - National Standard Method	0-4mg/L	0.1mg/L	GB 11910-89 Determination of Nickel in Water - Dimethylglyoxime Spectrophotometric Method
12	Iron - Phenanthroline Method	0-5mg/L	0.1mg/L	HJ/T 345-2007 Determination of Iron in Water - Phenanthroline Spectrophotometric Method
13	Zinc - Zincon Method	0-4mg/L	0.2mg/L	GB/T5750.6-2006
14	Hexavalent Chromium (Cr(VI))	0-1mg/L	0.01mg/L	Hexavalent Chromium (Cr(VI))
15	Total Chromium	0-1mg/L	0.01mg/L	GB 7466-87 Determination of Total Chromium in Water
16	Cobalt - PAN Method	0-2mg/L	0.02mg/L	PAN Spectrophotometric Method
17	Cobalt - National	0-0.5mg/L	0.01mg/L	HJ 550-2015 Determination of Cobalt

	Standard Method			
18	Manganese - Potassium Periodate Method	0-16mg/L	0.02mg/L	GB11906-1989
19	Manganese - Formaldoxime Method	0-6mg/L	0.025mg/L	HJ/T344-2007
20	Permanganate Index - Direct Spectrophotometry	0.5-5mg/L	0.25mg/L	GB 11892-89 Determination of Permanganate Index in Water
21	Permanganate Index - Chloride-Resistant Spectrophotometry	0.1-4.5mg/L	0.25mg/L	GB 11892-89 Determination of Permanganate Index in Water
22	Aniline	0-3mg/L	0.03mg/L	GB 11889-89 N-(1-Naphthyl)ethylenediamine Azo Spectrophotometric Method
23	Sulfide	0-1mg/L	0.01mg/L	HJ 1226-2021 Determination of Sulfide in Water - Methylene Blue Spectrophotometric Method
24	Volatile Phenols	0-2mg/L	0.01mg/L	HJ 503-2009 Determination of Volatile Phenols in Water - 4-Aminoantipyrine Spectrophotometric Method
25	Cyanide	0-0.5mg/L	0.01mg/L	HJ 484-2009 Determination of Cyanide in Water - Isonicotinic Acid-Barbituric Acid Spectrophotometric Method
26	Fluoride	0-1.6mg/L	0.02mg/L	HJ 488-2009 Determination of Fluoride in Water - Fluor Reagent Spectrophotometric Method
27	Chloride	0-15mg/L	0.1mg/L	GB/T 13580.9-1992 Thiocyanato Mercury Spectrophotometric Method
28	Silicon Dioxide	0-5mg/L	0.01mg/L	GB/T 12149-2017 Silicon Molybdenum Blue Spectrophotometric Method
29	Residual Chlorine	0-3mg/L	0.02mg/L	HJ 586-2010 Determination of Free Chlorine and Total Chlorine in Water - DPD Method
30	Total Residual Chlorine	0-3mg/L	0.02mg/L	HJ 586-2010 Determination of Free Chlorine and Total Chlorine in Water - DPD Method
31	Chlorine Dioxide	0-5mg/L	0.05mg/L	GB/T 5750.11-2006 On-site Determination Method for Free Chlorine and Total Chlorine in Water - DPD Method
32	Nitrite	0-0.2mg/L	0.003mg/L	GB 7439-87 Determination of Nitrite in Water - Ethylenediamine Dihydrochloride Spectrophotometric Method
33	Nitrate Nitrogen	0-20mg/L	0.1mg/L	Chromotropic Acid Spectrophotometric Method (Approved by U.S. EPA)
34	Phosphate	0-1.6mg/L	0.02mg/L	GB/T 11893-1989 Determination of Total Phosphorus in Water - Ammonium Molybdate

				Spectrophotometric Method
35	Sulfate	8-200mg/L	2mg/L	HJ/T 342-2007 Determination of Sulfate in Water - Barium Chromate Spectrophotometric Method
36	Anionic Surfactants	0-2mg/L	0.02mg/L	GB/T 7494-87 Methylene Blue Spectrophotometric Method
37	Formaldehyde in Water - Acetylacetone Method	0-3mg/L	0.05mg/L	HJ 601-2011 Acetylacetone Method
38	Ozone	0-1mg/L	0.01mg/L	GB/T5750.11-2023
39	Hydrogen Peroxide	0-50mg/L	0.5mg/L	GB5009.226-2016
40	Total Alkalinity	5-300mg/L	5.0mg/L	Spectrophotometric Method
41	Total Hardness	5-100mg/L	5.0mg/L	Spectrophotometric Method
42	Urea	0-10mg/L	0.5mg/L	GB/T18204.2-2014
43	Cyanuric Acid	5-50mg/L	5.0mg/L	CJ244-2007
44	Silver in Water	0-0.7ng/L	0.015mg/L	HJ489-2009
45	Lead in Water	0-6mg/L	0.125mg/L	Xylenol Orange Spectrophotometric Method
46	Thiocyanate in Water	0-20mg/L	0.2mg/L	Ferric Salt Spectrophotometric Method
47	Ammonia Gas in Air	0-25ug	0.4ug	GBZ/T 160.29-2004 Chlorine - Nessler's Reagent Spectrophotometric Method
48	Chlorine Gas in Air	0-8ug	0.08ug	GBZ/T 160.37-2004 Chlorine Gas - Methyl Orange Spectrophotometric Method
49	Hydrogen Chloride in Air	0-40ug	1.6ug	GBZ/T 160.37-2004 Hydrogen Chloride and Hydrochloric Acid - Thiocyanato Mercury Spectrophotometric Method
50	Hydrogen Sulfide in Air	0-5ug	0.05ug	GBZ/T 160.33-2004 Hydrogen Sulfide - Silver Nitrate Colorimetric Method
51	Sulfur Dioxide in Air	0-12ug	0.12ug	GBZ/T 160.33-2004 Sulfur Dioxide - Formaldehyde Buffer-Para-Rosaniline Hydrochloride Spectrophotometric Method
52	Formaldehyde in Air	0-5ug	0.02ug	GB/T 18204.2-2014 Phenol Reagent Spectrophotometric Method
53	Calcium	5-100	5	o-Cresolphthalein Complexone Photometric Method
54	Magnesium	5-100	5	GB/T6900-2006
55	Phosphate - Vanadium Molybdenum Yellow Method (as P)	0-30	0.05	Vanadium Molybdenum Yellow Spectrophotometric Method
56	Phosphate - Vanadium Molybdenum Yellow Method (as P)	0-30	0.05	Vanadium Molybdenum Yellow Spectrophotometric Method

57	Copper - Bicinchoninate Method	0-5	0.1	GB/T223.91-2021
58	Volatile Fatty Acids (VFA)	0-60mmol/L	0.5mmol/L	Ferric Iron Photometric Method

2. Packing List

No.	Name	Quantity
1	Main Unit	1 unit
2	Power Cord	1 piece
3	Standard Four-Parameter Reagents	1 set each
4	Test Tube Rack	1 piece
5	Cleaning Cloth	2 pieces
6	Digestion Colorimetric Tubes	18 pieces
7	Gloves	2 pairs
8	Dilution Cups	4 pieces
9	User Manual / Certificate of Conformity	1 copy
10	Dedicated Pipette	2 pieces