

# MDS-900H Portable Rapid Analyzer



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## Product Overview

The MDS-900H Portable Multi-Parameter Rapid Water Quality Analyzer is developed in accordance with national testing standards (GB) and environmental protection industry standards (HJ). Designed based on Chinese operators' habits, it aims to enable simpler and more accurate testing for frontline inspection personnel. This portable rapid water quality testing instrument features a 3.0-inch industrial-grade high-definition screen for intuitive data display, a compact and portable design, and a 5000mAh rechargeable high-capacity lithium battery with a standby time of up to 3 months. It is widely used in water quality rapid inspection scenarios such as environmental supervision, environmental management, outdoor scientific research, river monitoring, ecological surveys, and aquaculture.

## Features & Benefits

1. Supports 80 detection parameters including COD, ammonia nitrogen, total phosphorus, total nitrogen, turbidity, suspended solids, etc.
3. Compact and lightweight design (fully equipped in a single case) for easy portability and mobile rapid testing. Features the independently developed MADSUR® Intelligent Water Quality Detection System, enabling easy operation without professional personnel.
4. Comes with a portable touchscreen 6-channel intelligent digester, which heats up quickly and offers high temperature control accuracy. Pre-programmed with standard procedures for one-touch operation without additional setup.
5. Step-by-step guided prompts prevent operational errors, truly simplifying detection. Equipped with a 3.0-inch industrial high-definition display and an intelligent guided UI design for intuitive operation and enhanced testing experience.
6. High-precision pipettes are included to minimize sampling errors, ensuring fast, accurate, and stable test results.
7. Optional Bluetooth printer allows direct printing of test data or batch printing of historical records.
8. Built-in Wi-Fi connectivity enables real-time viewing and printing of test and historical data.
9. Integrated Type-C, Bluetooth, and Wi-Fi data connectivity for linking to data acquisition systems to edit and save test data.
10. Dual colorimetric detection system supports both 16mm and 25mm cuvettes, expanding the range of detectable parameters.
11. Optional Bluetooth printer allows direct printing of test data or batch printing of historical records.
12. More eco-friendly and efficient detection methods reduce reagent consumption by 30% compared to competitors, lowering testing costs.
13. Convenient reagent usage: Over 95% of factory-supplied reagents are liquid form for direct use, ensuring safety and accuracy.

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## Technical Parameters

Parameter	Specification
Instrument Weight & Dimension	500g; 230×90×90 mm
Measurement Error	≤ ±5%
Repeatability Error	≤ ±3%
Wavelength Accuracy	±1 nm
Optical Stability	≤ ±0.001A/20 min (Lifespan: 100,000 hours)
Colorimetric Method	Dual colorimetric detection system (supports 16mm & 25mm cuvettes)
Wavelength Selection	Automatically selected based on test parameter
Wavelength Calibration	Automatic calibration
Light Source	Imported solid-state cold light source
Data Display	Concentration, Transmittance (%), Absorbance (A)
Operating System	MADSUR® Intelligent Water Quality Detection System
Data Transmission	Type-C, Wi-Fi, Bluetooth
Data Printing	Bluetooth printer (optional)
Data Processing	50,000 data records, 200 curves (including self-expansion)
Display	3-inch industrial-grade color screen
Operating Environment	5–45°C, ≤50% RH, non-condensing
Power Supply	5V = 2.5A
Battery Capacity	5000 mAh

## Configuration List

Portable Multi-Parameter Water Quality Analyzer	1 pcs
High-end Pipettes	2 pcs
Portable 6-hole Intelligent Digester	1 pcs
Protective Cover	1 pcs
1ml Pipette Tips	300 pcs
5ml Pipette Tips	100 pcs
Optional Reagent Sets	5 pcs
Each of the COD, Ammonia Nitrogen, Total Phosphorus, and Total Nitrogen Standard Solutions	1 pcs
Digestion and Colorimetric Integrated Tubes	40 pcs
SS Turbidity Colorimetric Bottles	2 pcs
Colorimetric Rack	1 pcs
Colorimetric Tube Cleaning Cloth	1 pcs
Charger	1 pcs
USB Data Cable	1 pcs
Power Adapter	1 pcs
User Manuals	1 pcs
Operation Flowchart	2 pcs
Certificate of Compliance / Warranty Card	1 pcs

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## Test Parameters

No.	Parameter	Range	MDL
1	COD	0-15,000 mg/L	5 mg/L
2	Ammonia Nitrogen	0-50 mg/L	0.05 mg/L
3	Ammonia Nitrogen (BHA)	0-25 mg/L	0.01 mg/L
4	Total Phosphorus	0-16 mg/L	0.02 mg/L
5	Total Phosphorus (Vanadomolybdate)	1-100 mg/L	1 mg/L
6	Total Nitrogen	0-100 mg/L	0.5 mg/L
7	Turbidity	0-1,000 NTU	10 NTU
8	Suspended Solids (SS)	0-500 mg/L	10 mg/L
9	Colority	0-500 degree	40 degree
10	Hexavalent Chromium	0-5 mg/L	0.03 mg/L
11	Total Chromium	0-5 mg/L	0.04 mg/L
12	Copper	0-50 mg/L	0.2 mg/L
13	Nickel	0-4 mg/L	0.1 mg/L
14	Zinc (PAN)	0-10 mg/L	0.04 mg/L
15	Iron	0-50 mg/L	0.1 mg/L
16	Silver	0-10 mg/L	0.08 mg/L
17	Antimony	0-10 mg/L	0.8 mg/L
18	Manganese	0-5 mg/L	0.4 mg/L
19	Manganese (PAN)	0-0.5 mg/L	0.02 mg/L
20	Phosphate	0-20 mg/L	0.05 mg/L
21	Sulfate	0-200 mg/L	11 mg/L
22	Sulfide	0-4 mg/L	0.02 mg/L
23	Cyanide	0-1 mg/L	0.02 mg/L
24	Fluoride	0-7.5 mg/L	0.08 mg/L
25	Formaldehyde	0-50 mg/L	0.09 mg/L
26	Nitrate Nitrogen	0-20 mg/L	0.4 mg/L
27	Nitrite	0-1 mg/L	0.007 mg/L
28	CODmn-1	0-10 mg/L	0.1 mg/L
29	CODmn-2	0-8 mg/L	0.07 mg/L
30	Free Chlorine	0-10 mg/L	0.1 mg/L
31	Total Chlorine	0-10 mg/L	0.1 mg/L
32	Chlorine Dioxide	0-10 mg/L	0.1 mg/L
33	Silica	0-5 mg/L	0.2 mg/L
34	Volatile Phenol	0-10 mg/L	0.1 mg/L
35	Arsenic	0-0.5 mg/L	0.004 mg/L
36	Aniline	0-20 mg/L	0.08 mg/L
37	Cadmium	0-0.5 mg/L	0.04 mg/L
38	Anionic Surfactants	0-2 mg/L	0.01 mg/L
39	Ozone	0-30 mg/L	0.04 mg/L
40	Ozone (Indigo)	0-1 mg/L	0.05 mg/L
41	Aluminum-1	0-20 mg/L	0.07 mg/L
42	Aluminum-2	0-1 mg/L	0.02 mg/L
43	pH	5.0-8.5	5
44	Dissolved Oxygen	0-15 mg/L	0.4 mg/L
45	Total Hardness	0-500 mg/L	0.2 mg/L
46	Chloride	0-50 mg/L	0.2 mg/L

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47	Alkalinity	0–500 mg/L	4 mg/L
48	Available Chlorine	0–100 mg/L	0.6 mg/L
49	Lead	0–5 mg/L	0.2 mg/L
50	Cyanuric Acid	0–800 mg/L	2 mg/L
51	Cobalt	0–5 mg/L	0.03 mg/L
52	Calcium	0–10 mg/L	0.1 mg/L
53	Bromide	0–20 mg/L	0.1 mg/L
54	Bromate	0–0.5 mg/L	0.05 mg/L
55	Urea (GB)	0–100 mg/L	0.3 mg/L
56	Urea (PDAB)	0–100 mg/L	1 mg/L
57	Hydrazine	0–10 mg/L	0.01 mg/L
58	Selenium	0–20 mg/L	1.8 mg/L
59	Hydrogen Peroxide	0–50 mg/L	4 mg/L
60	Palladium	0–2 mg/L	0.3 mg/L
61	Methanol	0–5 mg/L	0.7 mg/L
62	Beryllium	0–0.2 mg/L	0.07 mg/L
63	Vanadium	0–1 mg/L	0.04 mg/L
64	Boron	0–4 mg/L	0.09 mg/L
65	Titanium	0–0.4 mg/L	0.01 mg/L
66	Mercury	0–1 mg/L	0.05 mg/L
67	Molybdenum	0–4 mg/L	0.2 mg/L
68	Biuret	0–400 mg/L	85 mg/L
69	Barium	0–1 mg/L	0.2 mg/L
70	Tin	0–1 mg/L	0.1 mg/L
71	Bismuth	0–8 mg/L	0.9 mg/L
72	Volatile Fatty Acids	0–4,000 mg/L	29 mg/L
73	Thiocyanate	0–40 mg/L	0.7 mg/L
74	Combined Chlorine	0–2.5 mg/L	0.01 mg/L
75	Chlorite	0–1 mg/L	0.01 mg/L
76	Zirconium	0–1 mg/L	0.05 mg/L
77	Chloral	0–2 mg/L	0.3 mg/L
78	Ammonium Ion	0–50 mg/L	0.1 mg/L
79	Phenolphthalein Alkalinity	0–100 mg/L	1 mg/L
80	Silicic Acid (Metasilicic)	0–5 mg/L	0.2 mg/L

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