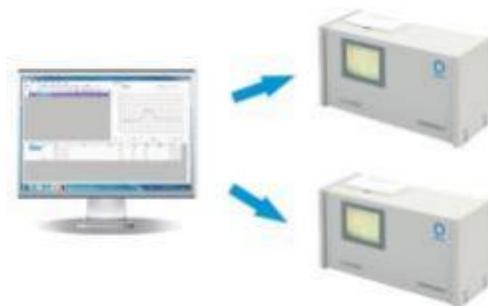


AST-CD-600S Online Total Organic Carbon Analyzer

1. Product Introduction

The AST-CD-600S Total Organic Carbon Analyzer is an analytical instrument independently developed and manufactured by JINAN ANSENTA MEDICAL EQUIPMENT CO., LTD for determining the total organic carbon concentration in water samples. It can detect water samples with TOC concentrations ranging from 0.1 μ g/L to 1500.0 μ g/L, and features high sensitivity, accuracy, and excellent stability.



(This analyzer widely meets customer requirements, features user-friendly software operation, and enables rapid sample analysis and instrument calibration.)

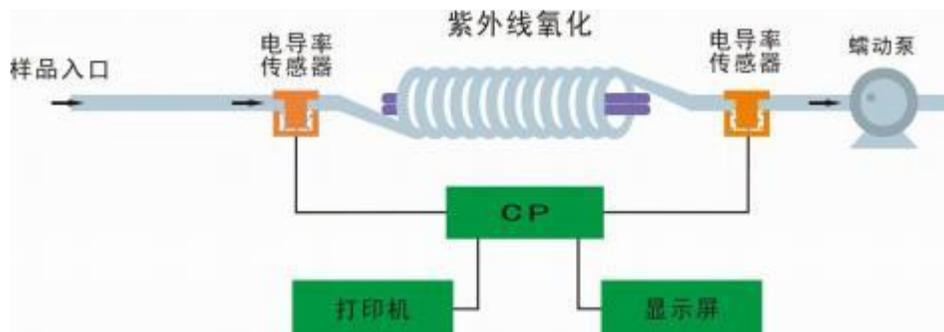
2. Working Principle

The AST-CD-600S Total Organic Carbon Analyzer uses a UV lamp to oxidize a slowly flowing water sample. The TOC value of the water sample is obtained by measuring the change in conductivity before and

after oxidation.

The water sample enters a Teflon tube under the action of a peristaltic pump, passing sequentially through the first electrode, a quartz spiral tube, and the second electrode, and is finally discharged through the waste pipe.

During detection, the conductivity values of two sensors are collected simultaneously, resulting in G1 and G2. Organic matter in the water sample produces CO₂ under the action of dual UV lamps, increasing conductivity. The difference (G2-G1) is used to determine the corresponding total organic carbon.



3. Application Scope

- Online TOC monitoring of water systems in the pharmaceutical industry;
- Online monitoring of ultrapure water preparation systems and wafer manufacturing processes in the semiconductor industry;
- Online monitoring of deionized water preparation processes in power plants.

4. Technical parameters

Operate	TOC Detection Range: 0.1 $\mu\text{g/L}$ ~1500.0 $\mu\text{g/L}$ TOC Detection Accuracy: 0.1 $\mu\text{g/L}$ (Conductivity < 1.0 $\mu\text{S/cm}$) Conductivity Detection Range: 0.055-6.000 $\mu\text{S/cm}$ TOC Accuracy Error: $\leq \pm 5\%$ Repeatability Error: $\leq 3\%$ Analysis Time: Minimum 1 min analysis interval (can be arbitrarily set)
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	Response Time: Within 15 min Sample Temperature: 0-100°C Zero Drift: $\pm 2\%/D$ Span Drift: $\pm 2\%/D$
Environmental requirements	Ambient temperature: 0-60°C (temperature variation within $\pm 5^\circ\text{C}/\text{day}$) Relative humidity: $\leq 90\%$
Power requirements	Power supply: $220 \pm 22\text{V AC } 50 \pm 1\text{Hz}$ Power: 60W
Dimensions	Basic dimensions: $30 \times 20 \times 18\text{cm}$ Weight: 10kg

5. Technical Features

- High detection accuracy and low detection limit.

- Touchscreen design, user-friendly interface, simple and convenient operation.
- Conductivity temperature compensation technology improves detection accuracy.
- No carrier gas or reagents required, simple maintenance, low cost.
- Separate system suitability test interface for more user-friendly operation.
- Real-time visibility of detection curves for greater intuitiveness.
- Large data storage capacity, convenient querying, and daily query capability.
- • Built-in dot matrix printer, reducing space occupation.
- • UV lamp life countdown timer for easy UV lamp replacement and maintenance.
- • Over-limit alarm output function.
- • External 4-20mA connection available.
- • Optional automatic calibration kit for one-click automatic calibration and system suitability testing.

6. Patents

ZL 2014 2 0386326.8 A conductivity electrode with adjustable electrode constant

ZL 2014 2 0386169.0 An apparatus for detecting total organic carbon in ultrapure water

7. Software

The software meets GMP computer system verification requirements

Electronic Signature

- 1) Login via username and password, ensuring uniqueness.
- 2) Password length requirements enhance security.
- 3) Includes manual screen lock function to guarantee unique and secure operation.

Access Control

- 1) Multi-level permission settings.
- 2) Administrators can grant different permissions to other operators, ensuring that personnel only have permissions commensurate with their job responsibilities.

Data integrity

- 1) Includes audit trail functionality, which cannot be disabled.
- 2) All test results are saved and cannot be modified or deleted.
- 3) All operations are logged (everyone who accesses the system leaves a trace).
- 4) If the testing method is modified, the modified parameters will be recorded.
- 5) Data can be exported and backed up to protect the stored data for future retrieval.

用户登陆

用户: 张三 用户类型: 管理员

密码: 使用单位:

用户权限

新建用户 删除用户 修改密码 新建方法 修改方法 删除方法

绑定至方法 查看审计 数据备份还原 采集控制 检测器参数

新建用户

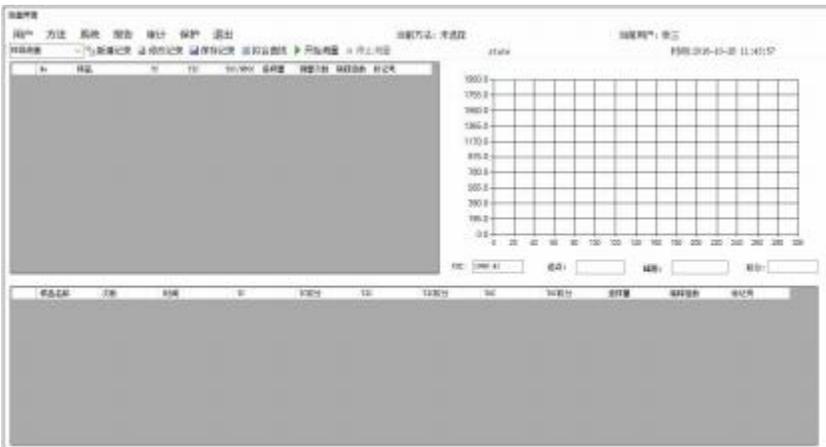
新用户: 用户类型: 实验员

密码: 使用单位:

确认密码:

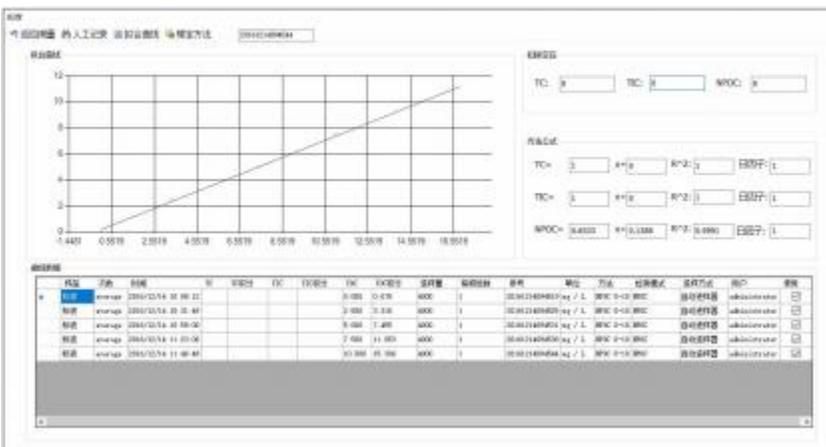
Create a new user interface:

Administrators can grant different permissions to other operators to ensure that personnel only have permissions commensurate with their job functions.



Measurement Interface:

- 1) Real-time visibility of the detection curve, more intuitive
- 2) Automatic calculation of average value



Curve Fitting Interface:

- 1) Automatically fits curves, calculates formulas, and binds them to the corresponding methods.
- Manually added records can also be used to fit curves.

操作ID	时间	用户	操作内容	操作详情
1001	2020-12-01 08:00:00	张三	登录系统	
1002	2020-12-01 08:05:00	张三	添加药品	药品名称-123456
1003	2020-12-01 08:10:00	张三	添加药品	张三
1004	2020-12-01 08:15:00	张三	添加药品	张三
1005	2020-12-01 08:20:00	张三	添加药品	张三
1006	2020-12-01 08:25:00	张三	添加药品	张三
1007	2020-12-01 08:30:00	张三	添加药品	张三
1008	2020-12-01 08:35:00	张三	添加药品	张三
1009	2020-12-01 08:40:00	张三	添加药品	张三
1010	2020-12-01 08:45:00	张三	添加药品	张三
1011	2020-12-01 08:50:00	张三	添加药品	张三
1012	2020-12-01 08:55:00	张三	添加药品	张三
1013	2020-12-01 09:00:00	张三	添加药品	张三
1014	2020-12-01 09:05:00	张三	添加药品	张三
1015	2020-12-01 09:10:00	张三	添加药品	张三
1016	2020-12-01 09:15:00	张三	添加药品	张三
1017	2020-12-01 09:20:00	张三	添加药品	张三
1018	2020-12-01 09:25:00	张三	添加药品	张三
1019	2020-12-01 09:30:00	张三	添加药品	张三
1020	2020-12-01 09:35:00	张三	添加药品	张三
1021	2020-12-01 09:40:00	张三	添加药品	张三
1022	2020-12-01 09:45:00	张三	添加药品	张三
1023	2020-12-01 09:50:00	张三	添加药品	张三
1024	2020-12-01 09:55:00	张三	添加药品	张三
1025	2020-12-01 10:00:00	张三	添加药品	张三
1026	2020-12-01 10:05:00	张三	添加药品	张三
1027	2020-12-01 10:10:00	张三	添加药品	张三
1028	2020-12-01 10:15:00	张三	添加药品	张三
1029	2020-12-01 10:20:00	张三	添加药品	张三
1030	2020-12-01 10:25:00	张三	添加药品	张三
1031	2020-12-01 10:30:00	张三	添加药品	张三
1032	2020-12-01 10:35:00	张三	添加药品	张三
1033	2020-12-01 10:40:00	张三	添加药品	张三
1034	2020-12-01 10:45:00	张三	添加药品	张三
1035	2020-12-01 10:50:00	张三	添加药品	张三
1036	2020-12-01 10:55:00	张三	添加药品	张三
1037	2020-12-01 11:00:00	张三	添加药品	张三
1038	2020-12-01 11:05:00	张三	添加药品	张三
1039	2020-12-01 11:10:00	张三	添加药品	张三
1040	2020-12-01 11:15:00	张三	添加药品	张三
1041	2020-12-01 11:20:00	张三	添加药品	张三
1042	2020-12-01 11:25:00	张三	添加药品	张三
1043	2020-12-01 11:30:00	张三	添加药品	张三
1044	2020-12-01 11:35:00	张三	添加药品	张三
1045	2020-12-01 11:40:00	张三	添加药品	张三
1046	2020-12-01 11:45:00	张三	添加药品	张三
1047	2020-12-01 11:50:00	张三	添加药品	张三
1048	2020-12-01 11:55:00	张三	添加药品	张三
1049	2020-12-01 12:00:00	张三	添加药品	张三
1050	2020-12-01 12:05:00	张三	添加药品	张三

Audit trail:

1) Cannot be closed.

All operations are logged (everyone who enters the system leaves a trace).

8. Configuration List

Item Name	Specifications and Models	Quantity	Unit
Total Organic Carbon Analyzer Main Unit	AST-CD-600S	1	set
Power Cord	220V	1	piece
Printer Paper	57mm	10	roll
Tools	hexagonal socket	1	set

9. Consumables List

Item Name	Specifications and Models	Cycle
UV lamp	UV600	5000h
Peristaltic pump tubing	/	1 year
Calibration reagent	Zero-point calibration water, sucrose stock solution, and 1,4-p-benzoquinone stock solution (1 bottle each)	During calibration