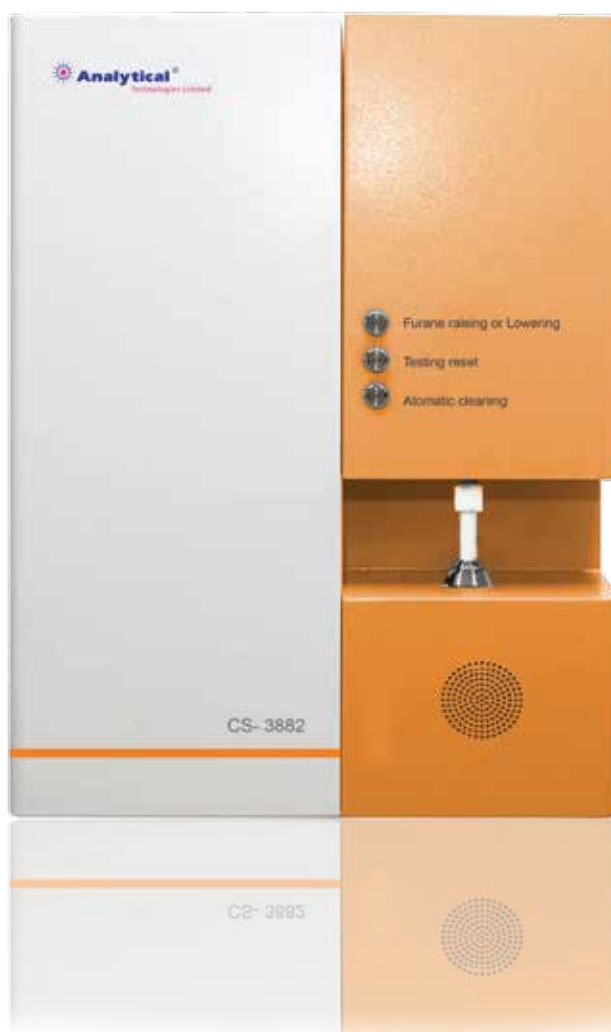


# CS- 3882

## Carbon & Sulfur Analyzer



EPCC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

**Analytical Technologies Limited**

An ISO 9001 Certified Company

[www.analyticalgroup.net](http://www.analyticalgroup.net)

## Features :

### Infrared detect system

The core component of infrared detection pool adopts precious metal miniature infrared light source which is high-efficient and long service life. The modulation system adopts high-precision stepper motor control by the micro controller. It is realized that long-term stability of the modulation frequency and infrared pyroelectric solid light cone sensor, Narrowband filters, these instruments make the host in high detect sensitivity, and it is effective way to detect carbon and sulfur content (ppm). It simplifies the hardware design, adding the whole host reliable and anti-interference ability.

1. **The circuit design:** The whole machine adopts modular design, highly integrated electronic circuits, it is very stable and reliable, meanwhile, it is adopted multi-level isolation so as to resolve high frequency interference thoroughly.

2. **Sampling :** it is adopted 32-bit sampling chip which belongs to America Analog Devices Company so it has fast speed and high precision.

The Communication: it is adopted USB new data exchange technology, so it greatly improves the communication speed.

The Power Supply : it is adopted high quality linear integrated military-grade power module, its output stable and there is no problem.

3. **Light Source:** special new type platinum infrared light source, it is efficient and its spectral stability.

4. **The Analysis of pool :** Gold-plated carbon and sulfur analysis pool and High-precision pyroelectric infrared detector.

5. **The Motor:** special aviation motor, its thermal stability well, it has a long service life.

### High Frequency Burning System

1. High Frequency Circuit: it is adopted Self-excited directional couple take power feedback, it ensures that output power is consistent, and it makes samples fully burned. It is stable.

2. High-frequency High Power Circuit Design: it is adopted 7.5kVA high-frequency pipe (actually it uses power more than 2.5kVA, cannot add sample with empty burn), it is reduced the load on high-frequency combustion systems, and it improves service life.

3. Military Products: Ceramic high-power tube and ceramic vacuum capacitor (100A).

4. High-frequency furnace output is power and power adjustable, it is suitable for all kinds of sample combustion analysis, a wide range of test materials, the whole machine adopts Import solenoid valve, high-frequency Ceramic power tube etc.

5. It adopts automatic cleaning of the burner and clean it up.

6. The control by electronic flow, the analysis of gas flow volume, the analysis of result is more stable and reliable.

7. The dust clean in the tube so as to improve measurement stable and precision.

8. The internal oxygen purification has advantages of analysis low content.
9. The main circuit over current and timeout protection. When the loop current exceeds desired point or burning time more than 60s, the system cut the main circuit by itself, and this system can avoid high-power devices overheating damage,eliminating security risks.When the status of over current disappears, the main circuit automatically resume normal.
10. The system of high-frequency combustion and infrared detection system adopt fiber connection, cutting off direct electrical connection between the two, avoiding the burning furnace or external circuit can produce interference by cable transfers to infrared monitoring system and improves the data stable.

### **Applications :**

CS-3882 High-Frequency Infrared Carbon & Sulfur Analyzer is used to measure mass fraction of carbon and sulfur in materials.Especially for the high carbon or high sulfur in Tyer,cement, ore, coke, catalyst, magnetic materials,ceramics,inorganic matter,graphite, refractory materials, battery materials, plants and other materials.

Key Applications: Mainly used in unknown samples, cement, ore, coke, catalyst, magnetic materials, ceramics, inorganic matter, graphite,refractory materials,battery materials,plants and other materials.

### **The Random Software**

1. It is adopted WINDOWS 10 color surface in, its interface clear and its operation very convenient.
2. The independent infrared analysis software, complete functions. It has the functions of channel selection, data statistics, break point correction, results corrected, the system of detecting, system diagnostics and more than forty functions.
3. The analysis process of dynamic data integration, sampling every 32 seconds time, A/D change the frequency 150Hz-200Hz and it improves the analysis of sensitivity and accuracy.
4. The signal is tracked and its adjusted by itself.
5. Linear table of linear data high, medium and low can be corrected.
6. The process of analysis displays all kinds of real-time data and carbon and sulfur release curve.
7. There are 20 analysis channels to choose (each carbon and sulfur channels), and they can be arbitrary collocation, the choose range is very wide.

8. There are 100 carbon and sulfur release curves (each 50), it is can be stored at any time, and can be complete with carbon release curve and sulfur release curve.
9. Linearization calibration technology in full range, there are single and multi-point calibration, it can be set up one, two, three and more Linear calibration equation, and it improves Linear calibration equation and the correction of analysis data.
10. It can be communicated with data center or reported in front of the furnace.
11. Any brand of computers can communicate with this system.
12. A variety of print output mode.
13. It can communicate with any brand of electronic balance.

### Technical parameters:

#### Measurement Range:

**Carbon:** 0.0001%-95.0000% (can be expanded to 99.9999%)

**Sulfur:** 0.0001%-95.0000% (can be expanded to 99.9999%)

**Low carbon:** 1ppm~0.2%, high carbon: 0.2%~99.99999% (low carbon and high carbon automatic adjustment)

**Low sulfur:** 1ppm~0.2%, high sulfur: 0.2%~99.99999% (low sulfur and high sulfur automatic adjustment)

**Accuracy:** Low carbon: 1ppm or  $RSD \leq 1\%$ , high carbon:  $RSD \leq 0.5\%$

**Low sulfur:** 1.5ppm or  $RSD \leq 1.5\%$ , high sulfur:  $RSD \leq 1.5\%$

**Sensitivity:** 0.1ppm

**Analysis Time:** Adjustable within 25-60 s (Normally around 35s)

**Analysis Error:** Carbon meets ISO9556 standard, Sulfur meets ISO4935 standard

**Oscillating frequency:** 20MHz

**Combustion power:** 2.5KVA—7.5KVA(auto-adjust).

**Working environment:** Room temperature  $10^{\circ}\text{C} \sim 30^{\circ}\text{C}$  Relative humidity 75%

**Voltage:** AC220V $\pm 5\%$ , frequency 50HZ $\pm 2\%$

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### Main configuration :

No.	Name	Type	Quantity	Unit	Remarks
1	Infrared host	CS-3882	1	PC	Include in quotation
2	Computer		1	PC	
3	Printer		1	PC	
4	Electronic balance	Sartorius	1	PC	
5	Standard Configuration	See the table below	1	Set	



### Main configuration :

No.	Name	Specification	Unit	Quantity
1	Relieve Valve	YQY-6	Pcs	1
2	Ceramic Crucible	1000pcs/carton	Box	1
3	Tungsten Accelerator	Low blank of C & S	Bottle	1
4	Pure Iron Accelerator	Low blank of C & S	Bottle	1
5	Quartz Crucible Holder		Pcs	2
6	Dust Cleaning Tube		Meter	1.2
7	Silicone Ring	Ø40*27*7	Pcs	1
8	O-Ring	37mm*3.1mm	Pcs	2
9	O-Ring	16mm*2.5mm	Pcs	2
10	PVC pipe	4mm*6mm	Meter	10
11	Button	Self-locking	Pcs	1
12	Boat-shaped switch		Pcs	1
13	Fuse	2A、 20A	Pcs	Each 2
14	Quartz Combustion Tube		Pcs	2
15	Dust Cleaning Tube		Pcs	1
16	Spoon for samples	Large, Medium, Small	Set	1
17	Tweezer		Pcs	1
18	Combustion Tube Brush		Pcs	1
19	Ash Brush		Pcs	1
20	Steel Wire Brush		Pcs	3
21	Vacuum Silicone Grease		Bottle	1



## HPLC Servicing, Validation, Trainings and Preventive Maintenance :

**HPLC Servicing** :HPLC Servicing : We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.

**Trainings** :We also take up preventive Maintenance to reduce downtime of HPLC's Trainings.

**AMC's/CMC** :AMC's/CMC :We offer user training both in-House and at customer sites on HPLC principles, operations, trouble-shooting.

**Validations** :Validations :We have protocols for carrying out periodic Validations as per GLP/GMP/USFDA norms.

**Instruments** :Instruments :We offer instruments/Renting Services Modules like pumps,detector etc. on Rent.



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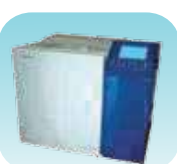
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Size Analyzer



Ion Chromatograph



Water purification  
system

## Regulatory compliances



## Corporate Social Responsibility

Analytical Foundation is a nonprofit organization (NGO) found for the purpose of:



1. Research & Innovation Scientist's awards/QC Professional Award : Quality life is possible by innovation only and the innovation is possible by research only, hence ANALYTICAL FOUNDATION is committed to identify such personalities for their contributions across various field of Science and Technology and awarding them yearly. To participate for award, send us your details of research / testing / publication at [Info@analyticalfoundation.org](mailto:Info@analyticalfoundation.org)

2. Improving quality of life by offering YOGA Training courses, Work shops/Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXYFY human minds, souls and body by means of yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

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