SDCHN435 Elemental Analyzer

10 patents (7 invention patents included), the only type of elemental analyzers with auto combustion crucible replacing the device.

High Precision

① Self developed ultra-low drift infrared cell (Patent No. ZL200920318535.8) adopts the high-performance infrared light, electronic components,
optical glass as well as infrared light receiving the device. The drift of infrared cell is greatly reduced (calibrate every 3
hours or even longer time).

② Self-developed ultra low-temperature drift TCD and thermostatic diffusion type TCD ensure the stability of TC reference line
(SDCHN435 elemental analyzer only).

High automation and test efficiency

① Autoloader with 34 positions, automatic sample introduction, and test.
② Analysis time of elemental analyzer for a single sample is less than 5 minutes, new samples can be added or replaced during the analysis process
.
③ Combustion crucible can be replaced automatically (Patent No.: ZL200710303473.9), no disassembling, no cooling, no damage to
the furnace and combustion tubes. Operator is away from high temperature and danger.

Humanization design and convenient operation

① Easy and convenient for gas leakage check, operators only need to click on the software.
② Convenient to replace the Furnace Reagent. With separate design of combustion furnace and reagent furnace, reagent can be easily
and safely replaced with the minimal amount of effort.
③ Floor standing design with superior wheels and wheel locking device for all elemental analyzers, it’s convenient to shift the instrument

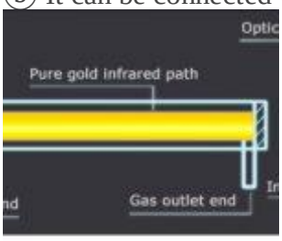
from place to place.
④ Enlarged combustion crucible for elemental analyzer can greatly reduce the frequency of crucible changing.

Low Operation Cost

① Helium consumption is only 0.7L/min for each test, which reduces the gas consumption greatly. Nitrogen analysis part can be stopped
optionally if necessary.（SDCHN435 elemental analyzer only）
② Oxygen with purity of 99.5% can meet the test requirement of all elemental analyzers.

Intelligent Control

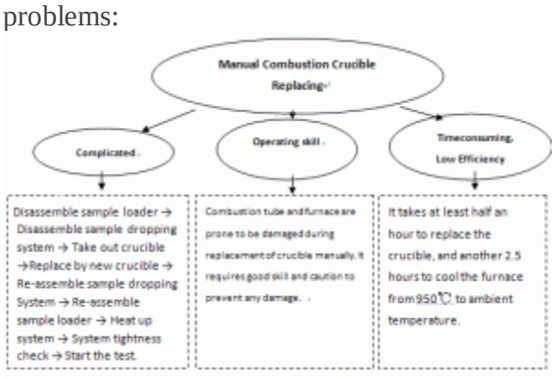
①Easy-to-use Windows-based software for all elemental analyzers, easy data handling, real time data can be transmitted by internal network.
② With CAN bus interface, several elemental analyzers can be controlled by a single PC without mutual influence
③ It can be connected with balance and network by standard interface RS232.



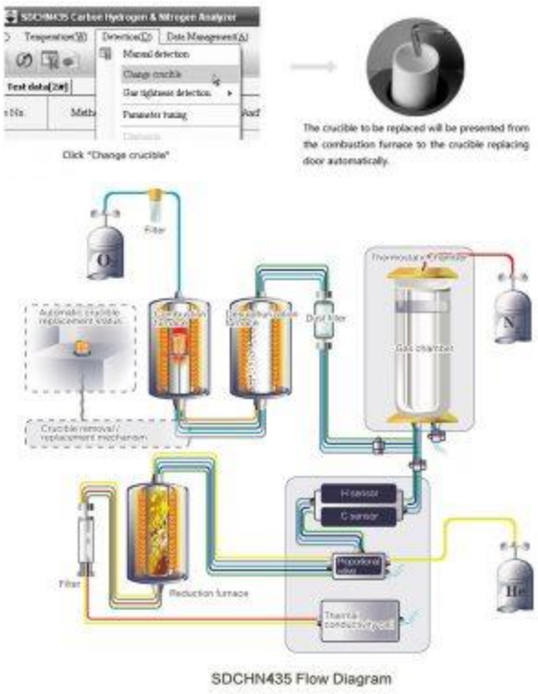
Unique Infrared Cell

Critical Innovation: Unique automated design makes the operation easy.

Samples for elemental analyzers are packed by tin-foil cups/capsules, the combustion residues will be remained in the combustion crucible and need to be replaced approximate every 350 tests. Currently manual combustion crucible replacing is required by competitor's elemental analyzers which will lead to the following inevitable problems:



SDCHN435：Automatic Combustion Crucible Replacing（Patent No.: ZL200710303473.9）
No Disassembling, No Cooling, No waiting
Finish the crucible replacing by one click.



SDCHN435 Flow Diagram

Application:

Our Carbon Hydrogen & Nitrogen Analyzer can be used to determine the carbon, hydrogen and nitrogen content in coal, coke, food, soil, fertilizer, etcin the fields of power plant, coal mine, metallurgy, steel factory and so on.

Conformance to Standards:

ISO29541 Solid mineral fuels – Determination of total carbon, hydrogen and nitrogen content– Instrumental method
ASTM D5373-08 Standard Test Method for Instrumental Determination of Carbon, Hydrogen, and Nitrogen in Laboratory Samples of Coal and Coke
GB/T476-2008 Standard Test method for Determination of Carbon and Hydrogen of Coal

Spec:

Method:	Carbon & Hydrogen: Infrared Absorption
Nitrogen:	Thermal Conductivity Detection
Measuring range:	Carbon（0.02%~100%） Hydrogen（0.02%~50%）Nitrogen（0.01%~50%）
Auto loader：	34 Samples
Analysis time：	≤5min/per sample
Sample weight:	75~105mg（100mg recommended）
Repeat ability：	Cad≤0.5% Had≤0.15% Nad ≤ 0.08%
Combustion-supporting gas:	Oxygen Purity: ≥99.5% Gas Pressure: ≥1MPa
Driving gas:	Nitrogen/ Dried Compressed Air Gas Pressure: ≥1MPa
Carrier gas (SDCHN435 only)：	Helium Purity：≥99.99%, Gas Pressure: ≥1MPa
Power requirement：	220 V（-15%-10%）， 50/60Hz
Max. Power:	SDCHN435：4.5kW SDCH425 /SDH425/SDCH415 /SDH415：3.5Kw
Combustion Crucible replacing:	Automatic (SDCHN435, SDCH425, SDH425) Manual (SDCH415, SDH415)