



Coal



Biomass



Coke



Waste samples



Fuel oils



Limestone



Soil



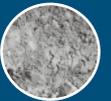
Dolomite



Feed



Cement



Carbon And Sulfur Analyzer

For Organic Materials by High Temperature Resistance Furnace

CSBox Tube | CSBox TubeHT

About Sylab

SYLAB Sarl, was formed in 1989 in France by Christian Pivovard, a graduate in Physics, who had a passion for designing and manufacturing a range of Scientific Analyzers, which could provide answers to many of the questions scientists have faced and are still facing to date.

SYLAB designs and manufactures a range of Thermal and Elemental Instruments for Organic & Inorganic Material Analysis, to a high level of both performance & reliability. Our Instruments include Proximate/ Thermogravimetric Analyzers, Carbon and Sulfur Analyzers, Ash Fusion Analyzers, and Fast Pyrolysis Analyzers.

Carbon and Sulfur Analyzer for Organic Materials :: CSBox Tube & CSBox TubeHT

CSBox Tube

- ✓ CSBox Tube Analyzer is used to determine Carbon and Sulfur in Organic Materials like Coal, Coke, Fuel oils, Soil, Biomass and many more.
- ✓ Furnace maximum temperature 1500 deg C
- ✓ High-efficiency furnace system design with intelligent temperature control can reach up to 1400 deg C

CSBox TubeHT

- ✓ CSBox TubeHT Analyzer is used to determine sulfur and carbon content in a wide variety of organic materials such as coal, coke and fuel oils, as well as some inorganic materials such as soils, cements and limestone by high temperature combustion with non-dispersive infrared detection (NDIR)
- ✓ Maximum Furnace temperature 1800 deg C
- ✓ High-efficiency furnace capable to operate up to 1600 deg C
- ✓ The high temperature of 1600 deg C ensures complete decomposition of some inorganic samples and thus reliable and accurate elemental analysis over a wide concentration range



CSBox Tube CS Analyser

CSBox Tube & CSBox TubeHT Features:

- ✓ Complete software enabled operation of the Analyzer
- ✓ Two individual solid-state IR detectors for Carbon and Sulfur
- ✓ High efficiency horizontal tube furnace design
- ✓ Improved furnace design to enhance safety and convenience
- ✓ Low maintenance
- ✓ Rapid, precise, accurate and reliable Carbon and Sulfur analysis in Organic Materials

Improved Furnace Design for Enhanced Safety And Convenience

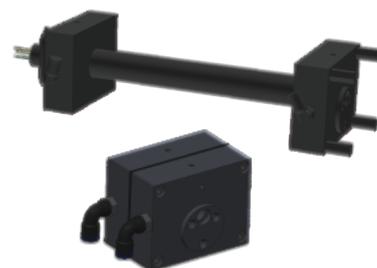


CSBox TubeHT CS Analyser

- ✓ High efficiency Horizontal Resistance Tube furnace design up to 1400 deg C (up to 1600 in HT Model)
- ✓ Programmable furnace temperatures and programmable temperature ramp rates
- ✓ Concentric ceramic furnace tube with ceramic lance directing the oxygen to the sample to ensure rapid analysis times and for complete combustion
- ✓ Better gas flow control to increase the furnace life and reliability of combustion

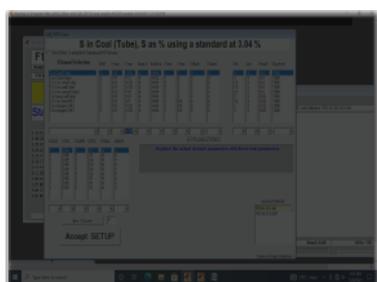
Two individual solid state IR detectors for Carbon and Sulfur

- ✓ Customized infrared cells provide wide, dynamic measuring range
- ✓ The “Stainless Steel” IR path provides increased cell life time for analysis of samples containing halogens and acids
- ✓ Analyzer uses static emitters and static detectors for better signal to noise ratio
- ✓ Sylab uses 100% static transmitter without chopper, no blade to modulate the IR beam. The detector is pyroelectric with 100% static and non-dispersive



IR Detector

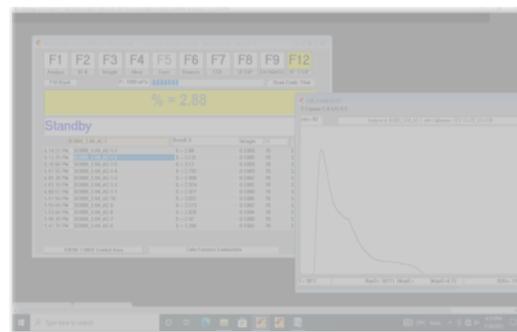
Sylab's CS software for Carbon and Sulfur Analyzers



Software Window

- ✓ Sylab software gives a complete solution for Carbon and Sulfur analysis. User will have complete access to analysis control like method setup, reports, diagnostics, data analysis and transfer graphs and other functions in a highly organised manner
- ✓ CS software is designed for speed and ease of use
- ✓ It is an easy method setup with automatic sample weight transfer from Analytical Balance
- ✓ Storing all data and providing user-defined filters
- ✓ CSBox Tube Software will dynamically display the average, standard deviation, and relative standard deviation for sample replicate sets
- ✓ Software offers choices for tabular and graphical reporting with flexible, user defined, and customizable instrument displays

- ✓ Capable to capture weights from all reputed analytical balances
- ✓ Software allows to set up different methods and user profiles
- ✓ Password protection facility
- ✓ Grouping of sample data into sets depending on the customers choice
- ✓ Instrument can be provided with external balance, printer and laboratory information management system (LIMS) with customizable transport feature supporting file
- ✓ Advanced diagnostic features
- ✓ Instrument leak check feature providing available diagnostic tool and increasing reliability



Analysis Screen

Ordering Information

Model	Description	Order No.
CSBox Tube CS	Carbon and Sulfur Analyzer with LC Tube Furnace	20-10000
CSBox Tube CS	Carbon and Sulfur Analyzer with SC Tube Furnace	20-20000
CSBox Tube C	Carbon Analyzer with LC Tube Furnace	20-11000
CSBox Tube C	Carbon Analyzer with SC Tube Furnace	20-21000
CSBox Tube S	Sulfur Analyzer with LC Tube Furnace	20-13000
CSBox Tube S	Sulfur Analyzer with SC Tube Furnace	20-23000
CSBox Tube HT CS	Carbon and Sulfur Analyzer with LC High Temperature Tube Furnace	23-10000
CSBox Tube HT CS	Carbon and Sulfur Analyzer with SC High Temperature Tube Furnace	23-20000
CSBox Tube HT C	Carbon Analyzer with LC High Temperature Tube Furnace	23-11000
CSBox Tube HT C	Carbon Analyzer with SC High Temperature Tube Furnace	23-21000
CSBox Tube HT S	Sulfur Analyzer with LC High Temperature Tube Furnace	23-13000
CSBox Tube HT S	Sulfur Analyzer with SC High Temperature Tube Furnace	23-23000

Thermogravimetric Analyzer

TGA 3000 is a proximate analyzer for analyzing Moisture, Ash, Volatile Matter, Fixed Carbon and Loss on Ignition (LOI) in a wide range of Organic, Inorganic and Synthetic materials.

TGA 3000 provides multi-constituent analysis for up to 19 samples at a time. Typical analysis method consists of determination of moisture, volatile matter and ash content. The software allows for customization of the analysis steps such as temperature ramping, start temperature & end temperature, programmable gas flows, placement/removal of crucible lids and mass constancy criteria for a fully flexible instrument, optimized for every user's unique needs.



Maximum Efficiency & Enhanced Precision

- ✓ Dual Carousel with automatic placement & removal of crucible lids
- ✓ High performance Thermogravimetric Analyzer
- ✓ Automated Analysis of up to 19 samples
- ✓ Capable to accept maximum sample weight up to 5 grams, higher range can be offered on request
- ✓ Programmable heating ramp rates as per test methods
- ✓ Windows based control software for operation of the analyzer
- ✓ Integrated balance with 0.1 mg readability for robust and accurate mass determination

Ash Fusion Analyzer

Uses Latest Technology to determine Fusion Temperatures

IF 2000G-HDC for Coal and Coke ash samples

IF 2000G-HDBM for Biomass, Refuse-Derived Fuel (RFD), Solid Mineral Fuel and Solid Bio Fuel Ash samples

Sylab Ash Fusion Analyzer automatically determines four critical temperatures:

Initial Deformation Temperature, Softening Temperature, Hemispherical Temperature and Fluid Temperature.

It is a fully automatic instrument for determining the ash fusion points by means of image analysis.

Sylab's Ash Fusion Analyzer uses modern technology for monitoring, computing, storing results and curves obtained during the test. Up to 6 samples can be analyzed in each batch.

- ✓ Fully automatic instrument for determining the ash fusion points by means of image analysis
- ✓ Up to 6 samples can be analysed in each batch
- ✓ Real time monitoring of the samples and test process
- ✓ Integrated high resolution camera which is isolated from the high temperature area to improve camera life
- ✓ Capable to record the complete analysis video and digital capture of the images
- ✓ Adjustable grid scale for each test specimen
- ✓ Maximum furnace temperature of 1600 Deg C for IF2000G-HDC and 1800 Deg C for IF2000G-HDBM

