C230 CARBON DETERMINATION

The LECO C230 Carbon Determinator is a microprocessor based, software driven instrument for measurement of carbon and sulphur content in metals, ores, ceramics and other inorganic materials. The C230 uses an induction furnace and measures carbon by infrared absorption.
The infrared (IR) source consists of nichrome wire that is resistance-heated to 850^{0}C. The IR source radiates visible energy as well as all wavelengths in the infrared spectrum. The description may use carbon dioxide; the same principle applies to sulfur detection.
Carbon dioxide absorbs IR energy at a precise wavelength within the IR spectrum. Energy from IR source is absorbed as the gas passes through the cell, preventing it from reaching the IR detector.
One IR cell is used both as a reference and for measurement. The total carbon, as carbon dioxide, is detected on a continuous and simultaneous basis.
The starting reference level, or baseline, for the detector is established by running oxygen through the cell to drive off residual atmospheric gases.

LECO C230 CARBON ANALYZER

Specifications

Range (at 1 gram)
C230C
Carbon : 4 ppm to 3.5%
C230CLC
Carbon : 2 ppm to 0.5%
C230CHC
Carbon : 60 ppm to 6.0%
Note: *Reducing sample weight may extend range.*

Precision
C230C
Carbon : 2 ppm or 0.5% RSD*
C230CLC
Carbon : 1 ppm or 0.5% RSD*
C230CHC
Carbon : 30 ppm or 0.5% RSD*

Result Readability
With PC : 15 digits of precision
Without PC : 0.1 ppm

Calibration
With PC : Multi-Point Linear
Without PC : Single-Point Linear

Analysis Time : 45 seconds (Nominal)
Sample size : 1 gram (Nominal)

Detection method : Sulphur State, Infrared Absorption, Sulphur as Sulphur Dioxide

Chemical Reagents : Anhydrone Magnesium Perchlorate, Sodium Hydroxide on an inert base, Lecosorb, Platinized Silica, Cellulose

GEOCHEMISTRY ANALYSIS: Geochemistry Equipment

Geochemistry Equipment Catalogue Carbon Analysis Equipment .

Specifications

Gas Required
Carrier Gas : Oxygen 99.5% pure, 40 psi
Pneumatic Gas : Compressed Air, Nitrogen, or Argon, 40 psi (2.76 bars), Source must be oil & water free

Gas Flow (based on nominal analysis time)
Measure : 3 litres per analysis
Pneumatic : 1 litre per analysis

Regulators

Oxygen : 501-291 O_2 Pressure Regulator
Compressed Air : 766-036 Compressed Air Regula
Inert Gas : 764-216 Inert Gas Regulator

Furnace : Induction, 18 MHz, 2.2 kW

Data Transmit : Included

Data Storage
With PC : Limited only by hard drive space
Without PC : 10 Samples Weight, 50 Answers, 5 Methods

Key Pad
With PC : External
Without PC : Internal Membrane / External Optional

Display
With PC : 15.00 inch SVGA Monitor
Without PC : Liquid Crystal (16x26 character)

Dimensions

Determinator
Height : 30.50 inches (77.5 cm)
Width : 27.50 inches (70.0 cm)
Depth : 23.50 inches (59.7 cm)
Weight : 300 pounds

Computer (PC based system)
Height : 17.00 inches (43.2 cm)
Width : 8.00 inches (20.3 cm)
Depth : 17.00 inches (43.2 cm)
Weight : 29 pounds

Monitor (PC based system)
Height : 15.00 inches (38.1 cm)
Width : 14.00 inches (35.6 cm)
Depth : 16.00 inches (40.6 cm)
Weight : 35 pounds

Electrical Power Requirements

Determinator : 230 V, ± 10%, 50/60 Hz, Single phase, 15 amps max
Operating Current : 12 Amps
Stand-by Current : 4 Amps
Computer (PC based): 115/230 V, ± 10%, 50/60 Hz, 5/3 amps max
Monitor (PC based): 90 264 V, 50/60 Hz, 1.6 amps max
Balance: 120V, ± 10%, 50/60 Hz, 0.5 amps max

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