



Determination of Carbon and Sulfur using LECO® CS-230

Florin Analytical
Services

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Florin Analytical Services (FAS) provides carbon and sulfur analyses utilizing a LECO® CS-240 Series Determinator.

Applications

Analysis of a wide variety of inorganic sample types such as ferrous and non-ferrous metals, ores, limestone, glass, catalysts, or cement. Specific analyses on:

- Aluminum and Aluminum Alloys
- Carbides
- Catalysts
- Cast Iron
- Cements/Fly Ash/Limestone
- Ceramics/Sands/Glasses
- Copper Alloys/Brass
- Ferro-Alloys
- High temperature Alloys
- Mold Powders
- Refractory Metals
- Refractory Ores
- Rare Earths
- Steels
- Superconductors
- Waste and Process Solution Characterization

Theory of Operation

The LECO® CS-230 Carbon/Sulfur Determinator is a PC controlled instrument for the measurement of carbon and sulfur in inorganic products. The unit utilizes a 2.2 kW induction furnace coupled with an infrared absorption cell. A precisely weighed sample is combusted in a small crucible with oxygen and a small amount of tungsten. Carbon in the sample is oxidized to carbon dioxide or carbon monoxide. The sulfur is oxidized to sulfur dioxide. These combustion gases are carried by oxygen into an infrared (IR) cell where sulfur is detected as sulfur dioxide. Following sulfur analysis, all of the carbon is converted to carbon dioxide. The sulfur is converted to sulfur trioxide and removed by filtration.

The carbon dioxide is then measured in a separate IR cell. The determination of carbon and sulfur is done by nondispersive (fixed) infrared energy at precise wavelengths as the gases pass through their respective IR absorption cells. The changes in energy are then observed at the detectors and the concentration determined.



FAS Laboratory

Florin Analytical Services has the goal of delivering accurate results on EVERY sample. We do not take a “production commodity” for assays. Before and after processing a sample, the procedures for sample preparation and analysis are reviewed by our experienced staff. Florin does not compete on price but we promise affordable results that reflect our extra level of care.

All analytical procedures are monitored using the latest in Quality Assurance (QA) and Quality Control (QC) methodologies. For specific requirements please contact us.

Contact Information

Please contact either Terry Albert or Mario Desilets at FAS for pricing and turn-around information.