Microcomputer Multi Sample Sulfur Analyzer For Coal Coke And Petroleum

Item Number: KT-CD2

Introduction

Designed for coal coke and petroleum laboratories this microcomputer multi sample sulfur analyzer delivers automated coulometric titration with twenty sample capacity dual stage combustion advanced silicon carbide tube heating and self correcting precision to maximize throughput and operational testing efficiency

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Application	Description	Key Benefit
Power Plant Coal Quality Screening	Rapid determination of total sulfur in raw and pulverized coal feeds to monitor boiler emissions and ensure compliance with environmental desulfurization thresholds.	Enables rapid combustion optimization and avoids compliance penalties through 5-to-7-minute turnaround per sample.
Metallurgical Coke and Carbon Analysis	Quantitative testing of sulfur content in metallurgical coke, foundry coke, and petroleum needle coke used in blast furnace operations and steelmaking.	Prevents sulfur transfer to molten iron, safeguarding structural steel properties and improving furnace efficiency.
Petrochemical and Heavy Oil Monitoring	Evaluation of sulfur concentrations in crude oil residues, fuel oils, lubricants, and solid petroleum pitch distillates.	Facilitates strict compliance with fuel sulfur specifications while safeguarding downstream cracking catalysts.
Commercial Mineral Testing and Assaying	High-throughput batch testing of commercial coal shipments, mineral ores, and solid combustibles in third-party inspection laboratories.	Continuous carousel replenishment allows round-the-clock testing with complete traceability and automated reporting.
Biomass and Refuse-Derived Fuel Testing	Characterization of total sulfur in biomass pellets, agricultural residues, refuse-derived fuel (RDF), and synthetic solid recovered fuels.	Accurately predicts sulfur-induced corrosion risks in industrial biomass boilers and waste-to-energy power plants.
Academic and Environmental Fuel Research	Academic research into combustion kinetics, synthetic fuel development, desulfurization catalyst efficiency, and sulfur transformation pathways.	Delivers consistent baseline precision across 0% to 10% sulfur ranges with automated algorithmic compensation.

Technical Parameter	Specification Value (KT-CD2)
Product Item Number	KT-CD2
Primary Applications	Coal, Coke, Petroleum, and Combustible Materials
Sulfur Measurement Range	0% to 10%
Sample Batch Capacity	1 to 20 samples per sequence (Supports continuous addition)
Analysis Time per Sample	Approximately 5 to 7 minutes total
Combustion Dwell Profile	45 seconds at 500°C; 4 minutes 45 seconds at 1050°C
Furnace Operating Temperature	1050°C ± 5°C (User adjustable)
Temperature Control Accuracy	±5°C
Temperature Measurement Grade	Grade 0.5
Temperature Measurement Resolution	0.0001°C
Heating Element Type	Silicon carbide (SiC) heating tube

Technical Parameter	Specification Value (KT-CD2)
High-Temperature Zone Length	≥ 90 mm
Heating Ramp Rate	20°C to 25°C/min (Reaches 1050°C in ~30 minutes)
Electrolytic Cell Volume	450 mL
Platinum Electrode Surface Area	150 mm^2
Repeatability (St < 1.00%)	St,ad ≤ 0.05%
Reproducibility (St < 1.00%)	St,d ≤ 0.10%
Repeatability (St 1.00% - 4.00%)	St,ad ≤ 0.10%
Reproducibility (St 1.00% - 4.00%)	St,d ≤ 0.20%
Repeatability (St > 4.00%)	St,ad ≤ 0.20%
Reproducibility (St > 4.00%)	St,d ≤ 0.30%
Testing Standard Conformity	Precision exceeds requirements of GB/T 213-2008
Error Correction Mechanism	Automated experimental calibration correction
Temperature Compensation	Automatic compensation (measurement error: 5%)
Hardware Safety Protections	Silicon carbide tube startup protection and overcurrent interlock
Power Supply Requirements	AC 220 V ± 22 V (220 V ± 10% / ±15%), 50 Hz
Maximum Rated Power Consumption	≤ 4.3 kW
Operating Environmental Temperature	5°C to 40°C (Ambient shift ≤ 1°C per measurement run)
Operating Relative Humidity	≤ 80% RH
System External Dimensions	770 mm (L) × 460 mm (W) × 410 mm (H)
Data Archiving and Interfacing	Automatic historical storage, query capability, and report printout