

Rapid Intelligent Sulfur Analyzer Automatic Coulometric Sulfur Determinator For Coal And Coke Analysis

Item Number: KT-TE9



Introduction

Optimize laboratory throughput with this rapid intelligent sulfur analyzer featuring automatic coulometric titration high precision silicon carbide heating modular self diagnostics and compliant coal testing to GB T 214 standards across demanding analytical operations worldwide.

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Application	Description	Key Benefit
Coal Mining & Washing Quality Control	Quantifying total sulfur content across run-of-mine raw coal, washed fractions, tailings, and processing rejects.	Ensures immediate compliance with contract calorific and sulfur specifications while guiding coal blending ratios to optimize commercial yield.
Thermal Power Plant Combustion Monitoring	Screening pulverised coal feeds to predict sulfur dioxide emissions and optimize flue-gas desulfurization (FGD) systems.	Mitigates environmental penalty risks, minimizes excessive reagent dosing in wet scrubbers, and protects boiler tubes from acidic corrosion.
Metallurgical Coke & By-Product Verification	Routine quality assurance of metallurgical coke, foundry coke, and semi-coke used in blast furnaces and cupolas.	Prevents hot metal sulfur contamination, reduces iron desulfurization costs, and ensures structural integrity in downstream steelmaking.
Coal Gangue & Solid Waste Utilization	Measuring residual sulfur content in coal gangue, fly ash, and carbonaceous shale repurposed for building materials or backfilling.	Complies with environmental disposal criteria and prevents acid mine drainage (AMD) or harmful sulfate leaching in geotechnical works.
Cement Clinker & Kiln Fuel Evaluation	Testing low-grade alternate fuels, petcoke, and secondary solid fuels introduced into rotary cement kilns.	Balances sulfur-to-alkali ratios inside precalciners, preventing ring formation, preheater blockages, and inconsistent clinker setting times.
Independent Inspection & Commercial Certification	Third-party commercial arbitration, export cargo certification, and laboratory benchmarking compliant with GB/T 214-2007.	Delivers indisputable, highly repeatable analytical data supported by automatic baseline correction and hardcopy documentation.

Parameter	Specification (KT-TE9)
Product Item Number	KT-TE9
Applicable Standard	GB/T 214-2007 (Determination of Total Sulfur in Coal)
Sulfur Measurement Range	0% – 99.99%
Measurement Resolution	0.00001 (0.001% / 10 ⁻⁵)
Combustion & Analysis Duration	3 – 9 minutes per sample (automatic endpoint return)
Operating Furnace Temperature	1150°C ± 5°C (user-adjustable based on protocol)
Temperature Measurement Accuracy	Grade 0.5
Temperature Control Precision	± 5°C at 1150°C
Heating Element Type	Silicon Carbide (SiC) Tube
Furnace Heating Rate	25°C – 30°C/min (ambient to 1200°C in ~35 min)
Electrolytic Cell Capacity	450 mL
Sensing Electrodes	Metallic Platinum (Pt)

Parameter	Specification (KT-TE9)
Electrolyte System Features	Anti-backflow design, quick-change sintered glass filter plate
Baseline Stabilization Time	≤ 1 minute from cold power-on
Carrier Gas Flow Rate	1000 mL/min
Analytical Data Processing	Automatic baseline drift correction, dynamic curve correction, SCM automated processing
Data Output	Integrated micro-printer and digital display
Operating Power Supply	220V ± 20%, 50 Hz
Total Power Consumption	≤ 2.2 kW