

SKYTECH SYSTEMS (I) PVT. LTD.

...Your Trusted Partner in Delivering
Complete Instrumentation Solution for
Analytical Labs/ Process Development &
Safety/ Spectroscopy/ Validation



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Thermal Validation System

- Asset centric data management
- 48 sensor input
- Console pre loaded with Kaye software
- Stand-alone operation with Console docking station
- Auto Calibration facility
- Best Reporting tools



AVS





Wireless Thermal Validation Solution

- True Online Wireless System.
- Stores 1,00,000 samples per sensor
- Different Sensor type option specific to applications
- Longer battery life with logger sleep option
- Accuracy meets requirements for [ISO-17665, EN554 and EN285](#)

Valprobe RT



Valprobe





Wireless Online Thermal Mapping solution

- Stores 10,000 samples per sensor
- Real time data
- 2 year battery performance
- Accuracy meets requirements for [ISO-17665, EN554 and EN285](#)
- Emergency Battery backup for base station (30 min)
- Automatic Calibration and verification using IRTD & Bath



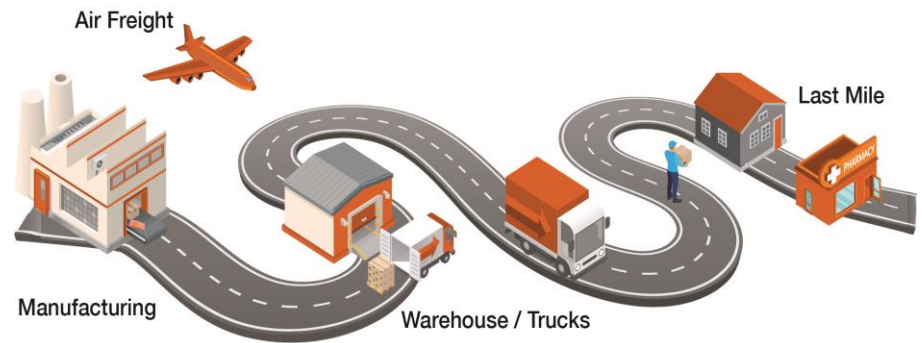
RF Valprobe





KAYE Log

- NFC Based Data Monitoring
- Available with single & multiple.
- Temperature range -100°C to $+100^{\circ}\text{C}$
- Stores 5000 samples
- Programmable login interval





Temperature Calibrators (BATHS)

- Automated calibration
- Accurate & repeatable calibration
- DRY and Liquid easy interchangeable wells
- Dry Block inserts design to accommodate thermocouples, IRTD, ValProbes, etc
- Customize inserts available
- Easy to use touch screen

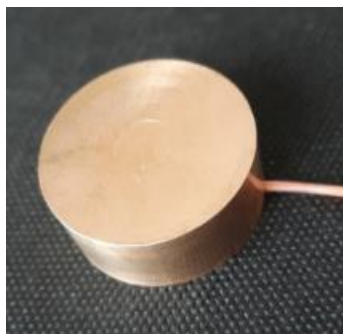


LTR 150
HTR 420
CTR 25



Thermal Validation Accessories

- Smart Gasket with various options of sensor input and different sizes
- Durable silicon with platinum cured
- Clamps with sensor slot
- Capping solution for vials
- Fitting for Lyo Self Uniformity Mapping



Smart Ground Detector (SGD)

- A Reliable tool for online control of Static current.
- Both capacitive and resistive technique of detection.
- Detects resistance in the earth loop and Monitors earth potential
- Flameproof Enclosure



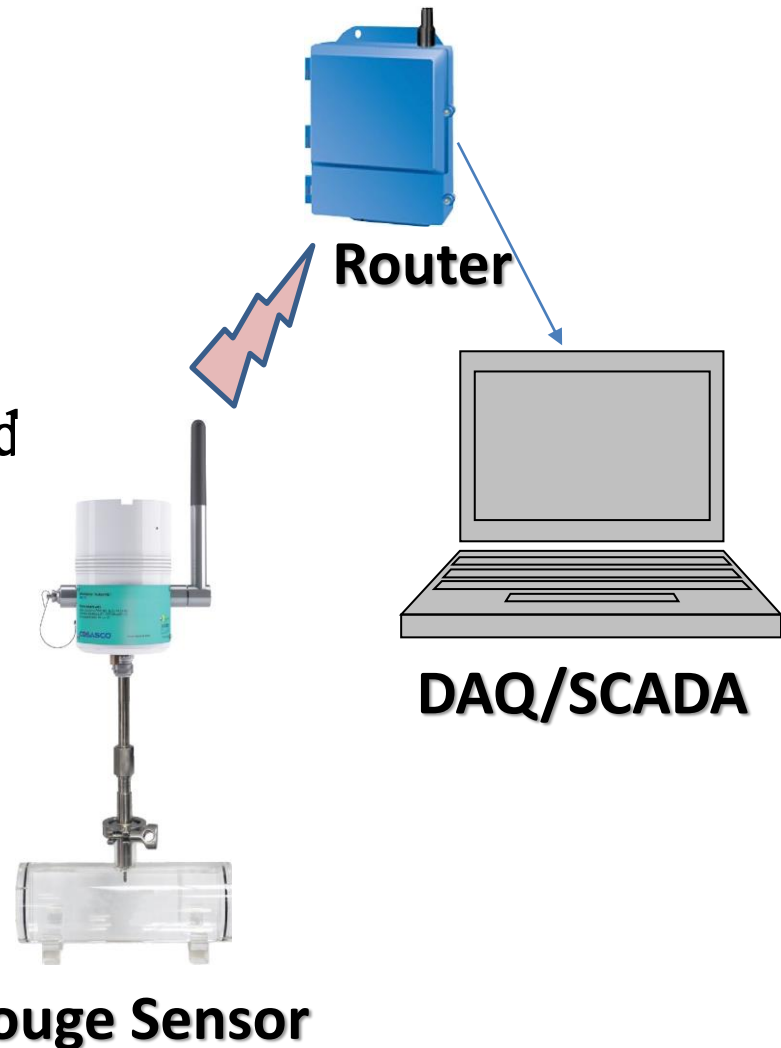
Head Space Oxygen Analyser

- Non Destructive Methodology
- Uses TDLAS Technology for detection of the Gas Concentration.
- Available for Vial, Ampoule and Bags
- Handy Tool for CCIT .
- Quick Measurement time of 2 Sec.
- At-line Measurement possible.
- No Consumables or frequent Calibration.
- USP 1207 Recommended method



Rouge Monitoring

- Online measurement of Rouging in UPW system.
- Multiple rouge sensor can be connected to wireless Router and DAQ.
- Monitor Rouge Rate and accumulated Rouge
- Determine the need of derouging and passivation frequency scientifically.



Tablet Dissolution Solutions

Easy Dissilio



- Method change in seconds
- Option for Shafts, Vessels, Paddles, Baskets, etc
- Available in 6 & 8 positions

Dissolution Media Preparator



- Gravimetric principle
- No foaming
- Stable temperature throughout the tank
- **USP, EP, FDA, GLP/GMP** conformity

SI Analytics

a xylem brand

Potentiometric Titrator



- Ready to use upto 50 methods standalone & n number with software
- Inbuilt user management
- Can detect & calculate 2 equivalence points

KF Titrator



- Quick & high sensitivity (RSD <1%)
- With intelligent interchangeable module
- 21 CFR compliant

Water Purification System

- Type 1, 2 & 3 water
- No stagnancy
- Password protection
- Customizable as per need
- Flexible dispensing available
- Feed water monitoring



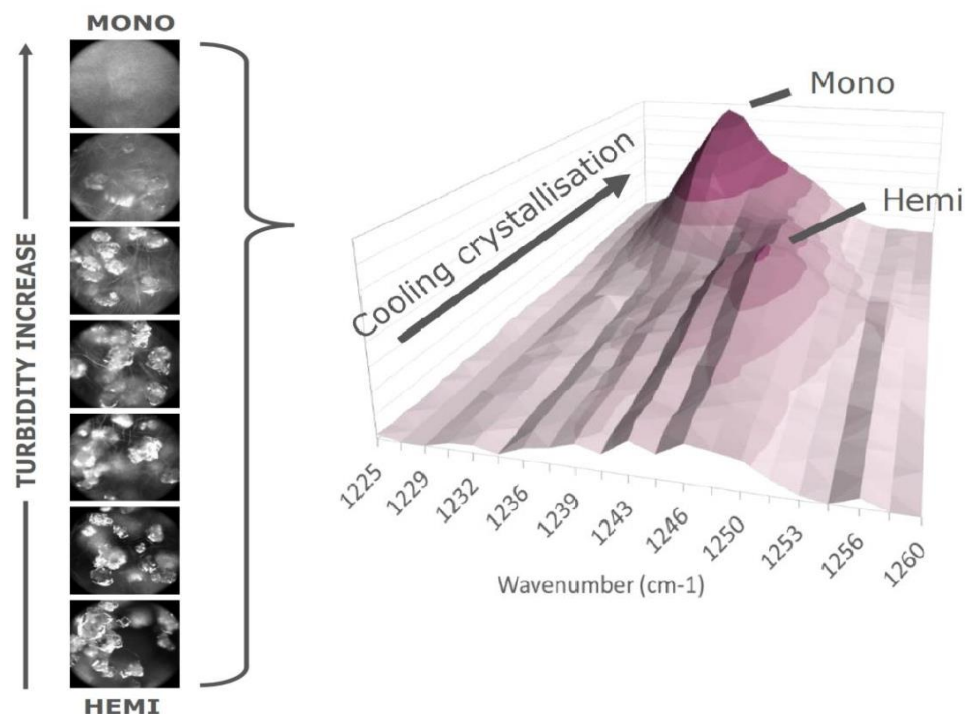
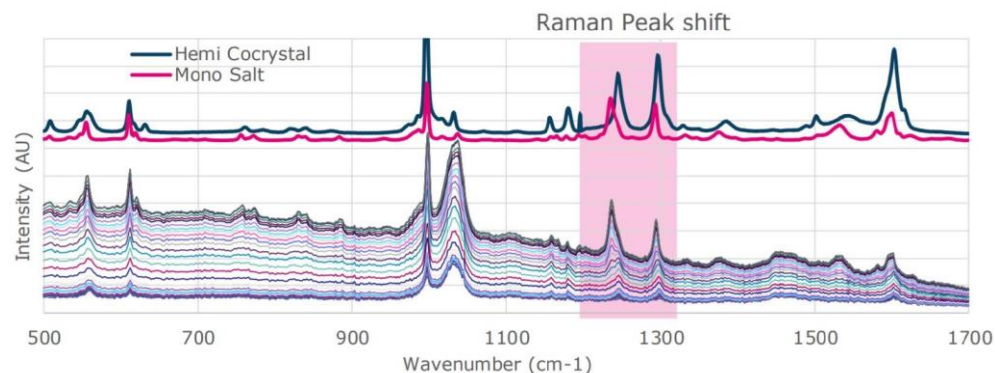
Particle Shape / Size PAT Probe

- BlazeMetrics USA for Next generation ONE Probe PAT Solution & Application, InSitu probe for simultaneous measurement of Particle Shape & Size , Microscopy , HDR Turbidity & Particle focused Raman.
- Single probe from 25ml to 2L + Multi-PAT
- Reduce time to implement process to process, leading to reduced cost of PAT utilization
- The particle size data D10, D50, D90 values are well in agreement with offline Laboratory Malvern particle size analysers



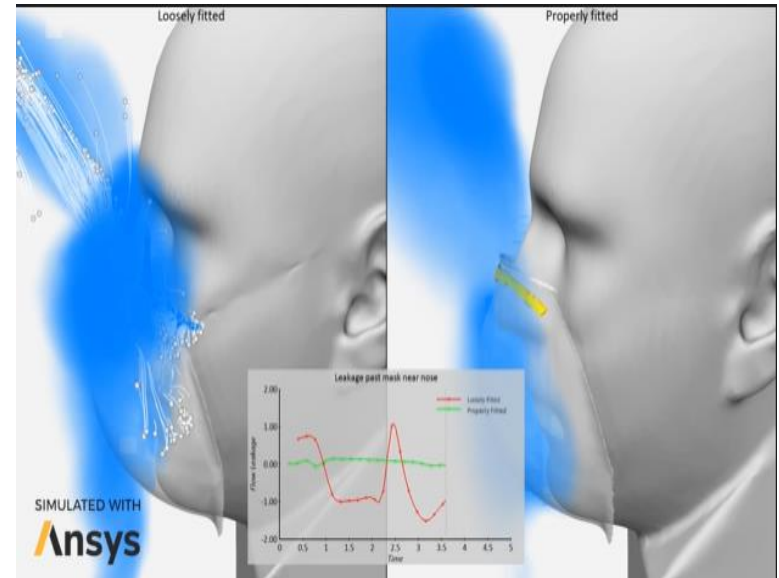
Blaze 900 Probe Raman Spectroscopy for Monitoring Solid Form

- Particle Focused Raman for monitoring form transition
- Blaze900 turbidity measurement correlated with Raman intensity
- Turbidity normalised spectra demonstrate clear peak shift
- In process images confirm transition to high aspect ratio morphology



Engineering Simulation Software

- ANSYS being global leader provide simulation solutions for almost all the major application areas for last 45 years
- Having expertise in physics as Structural, Fluids , Geometry , Materials , Additives etc. with individual *physics* as well combining *multi-physics* platform for bringing your product under single platform for Design process Development , Optimization and Validation.





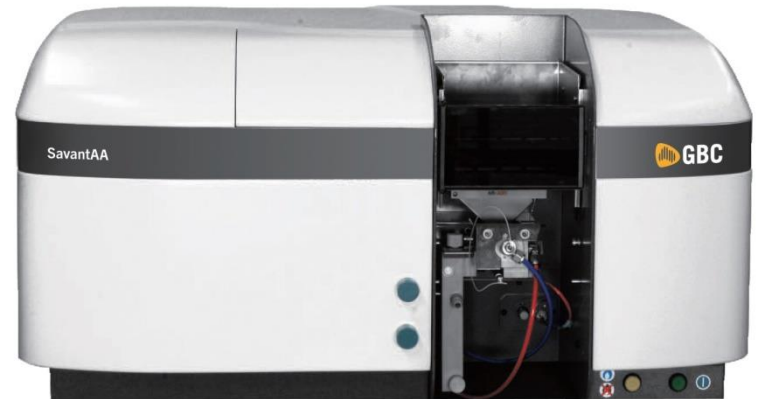
Mixing Software and DOE software

- User friendly VisiMix mixing simulation software enables process engineers to visualize all the mixing processes
- Blending, homogenization, liquid dispersion, dissolution and more to increase productivity and reduce costs.



Atomic Absorption Spectrophotometer SavantAA

- Double beam optics
- Electronic sample viewing
- Hyper pulse background correction
- Automated gas module
- Coded lamps available
- Graphite furnace for ppb level analysis
- Atom trap available for higher sensitivity



UV VIS Spectrophotometer Cintra Series

- True double beam
- Outstanding stability & reproducibility
- Multiple applications can be performed with software
- True double monochromator
- Variable slit length
- Powerful Software



Nittoseiko Analytech Co.,Ltd.

Combustion/ Trace Analyser

- ASTM D 5453, ASTM D 7183 & UOP 987 & 988 complaint
- Detects Sulfur upto 5ppb with TRU
- Nitrogen as per UOP 981, ASTM D 7184, ASTM D4629
- Chloride as per UOP 910, ASTM D7457, ASTM D4929
- Liquid cooling sample for volatile samples



Nittoseiko Analytech Co.,Ltd.

Automatic Titrator

- Multiple titration configurations
- Compliant to **ASTM D6304**
- Touch Screen control display
- Smart End point Detection
- Simple & portable
- Vaporizer for solid , Viscous samples
- Moisture analysis



Nittoseiko Analytech Co.,Ltd.

Combustion IC (CIC)

- Safe and reliable combustion
- Improved analysis sensitivity for Cl, Br, I, F, S
- Fully automated operation
- Compliant to **ASTM D7359, ASTM D5987**



TOC Analyser

- USP <643> / EU 2.2.44, ASTM D 5310 B, 4779, 7573 and 4839 compliant
- Wide sample range from 10 ppb to 30,000 ppm
- Optional Total Nitrogen estimation
- Low cost of ownership
- Catalyst guard for extended catalyst life



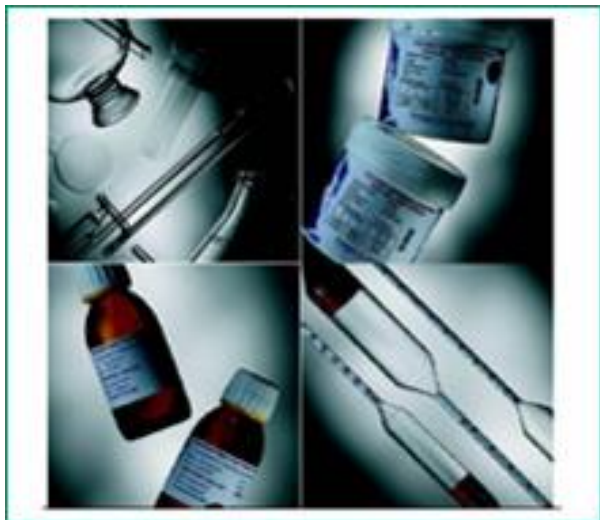
CHNS/O Elemental Analyser

- 15 year warranty on furnace & TCD detector
- MVC module
- Auto change over from CHNS to O or vice versa with a click of the mouse
- User-friendly operation
- Carrier gases options: Helium or Argon
- Compliant to **ASTM D5291**



Certified Reference Standards

AQUAMICRON
KARL FISCHER REAGENTS



- Certified analytical standards
- Sulfur (ppb-ppm), Sulfur & Nitrogen Mix, Chlorine, standards



Karl fisher Reagents

- Coulometric Reagents
- Volumetric Reagents
- Water Standards

Certified Reference Standards

Altus
science



SANTIS
analytical



- Certified reference materials (CRM)/Consumables for TOC
- **ISO 170235 & ISO Guide 34** complaint

- Produce and distribute first-class consumables for: CHNS / O, AAS, ICP, ICP-MS, DSC, TOC, etc

Analytical Testing Facilities

Total Sulphur/ Chloride analysis
(ASTM D5453, D3120, D4929)

Refractive Index + Brix
(ASTM D542)

Absorbable Organic Halide
(AOX) (IS 9056)

UV Visible Spectroscopy
(ATM D2008, E2193)

Total Organic Carbon (TOC) of
water
(USP 643)

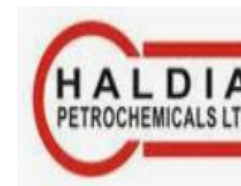
AAS with graphite & hydride
(ASTM D5863)

CHNS-O (Elemental) Analysis
(ASTM D5291, D5373, etc)

All type of Potentiometric & KF
Titration
(ASTM D664, IS 1448, D2896 &
more)

Reaction Calorimetry testing for
Reaction kinetics cooling duty for
scale up

Some of Our Esteemed Customers



Brief Description / Specs of Applicable Standards

Norms	Descriptions
ISO17665	This is an international harmonized Standards:” It shall be verified that each item of the equipment used during validation complies with its specification,« Pre & Post Calibration >> (Pressure Measurement in Validation Equipment for Steam Quality)
EN 554	Europeon Guideline : The accuracy of test equipment shall be not less than the accuracy of the instruments fitted to the sterilizer, and shall exceed by at least a factor of three the accuracy of measurements required to judge the performance of the sterilizer.
EN285	Europeon Guideline : The limit of error between 0°C and 150°C (excluding temperature sensors) shall not exceed $\pm 0.25\%$ ($\pm 0.375^{\circ}\text{C}$ of full scale).
USP 643	USP Chapter 643 : Talk about how to analyse TOC from Water for pharmaceutical use ie TOC=TC-IC & TOC= NPOC+POC. qualify the instrument to be used for measurement of the TOC ie SST test where in the RE should be between 85%-115%.
USP 645	This is for conductivity measurement
US EPA 415.3	Measurement of total organic carbon, dissolved organic carbon and specific uv absorbance at 254 nm in source water and drinking water
JP	Japanese Pharmacopeia
EP	European Pharmacopeia Chapter no 2.2.44 talk about the TOC analyser
USP	USP 771 : it describes different type of dissolution test apparatus can be used and their specifications
EP	European Pharmacopeia
FDA	Food and Drug Administration, it’s a regulatory body
GLP/GMP	GLP: Good Laboratory Practice GMP : Good Manufacturing Practice

Brief Description / Specs of Applicable Standards

Norms	Descriptions
UOP 987 Part B	Trace Sulfur in Liquid Hydrocarbons by Oxidative Combustion with Ultraviolet Fluorescence Detection with TRU
UOP 988	Trace Sulfur in LPG & Gaseous Hydrocarbons by Oxidative Combustion with UV Fluorescence with TRU
ASTM D5453	Standard Test Method for Determination of Total Sulfur in Light Hydrocarbons, Spark Ignition Engine Fuel, Diesel Engine Fuel, and Engine Oil by Ultraviolet Fluorescence
ASTM D7183	Standard Test Method for Determination of Total Sulfur in Aromatic Hydrocarbons and Related Chemicals by Ultraviolet Fluorescence
ASTM D7551	Standard Test Method for Determination of Total Volatile Sulfur in Gaseous Hydrocarbons and Liquefied Petroleum Gases and Natural Gas by Ultraviolet Fluorescence
ASTM D6667	Standard Test Method for Determination of Total Volatile Sulfur in Gaseous Hydrocarbons and Liquefied Petroleum Gases by Ultraviolet Fluorescence
ISO 20846	Determination of sulfur content of automotive fuels — Ultraviolet fluorescence method
EN 15486	Ethanol as a blending component for petrol - Determination of S content - UV fluorescence method
UOP 981	Trace N in Liquid Hydrocarbons by Oxidative Combustion with Chemiluminescence Detection
UOP 971	Determination of Nitrogen in Light Aromatic Hydrocarbons by Oxidative Combustion with Chemiluminescence Detection
UOP 936	Determination of Nitrogen in LPG by Oxidative Combustion with Chemiluminescence Detection
ASTM D4629	Trace Nitrogen in Liquid Hydrocarbons by Syringe/Inlet Oxidative Combustion and Chemiluminescence
ASTM D5176	Standard Test Method for Total Chemically Bound Nitrogen in Water by Pyrolysis and Chemiluminescence Detection
ASTM D6069	Trace Nitrogen in Aromatic Hydrocarbons by Oxidative Combustion and Reduced Pressure Chemiluminescence Detection
ASTM D7184	Ultra Low N in Aromatic Hydrocarbons by Oxidative Combustion & Reduced Pressure Chem. Detection
ISO 11905	Determination of bound Nitrogen after oxidation and combustion to Nitrogen Dioxide using chemiluminescent detection
EN12260	Total N in Water by High Temperature Catalytic Combustion and Chemiluminescence Detection
ASTM D3120	Test Method for Trace S in Light Liquid Petroleum Hydrocarbons by Oxidative Microcoulometry
ASTM D3246	Standard Test Method for Sulfur in Petroleum Gas by Oxidative Microcoulometry
ISO 16591	Determination of Sulfur content — Oxidative microcoulometry method
ASTM D4929	Standard Test Method for Determination of Organic Chloride Content in Crude Oil
ASTM D5808	Test Method for Determining Cl in Aromatic Hydrocarbons by Microcoulometry
ASTM D6721	Test Method for Determination of Chlorine in Coal by Oxidative Hydrolysis Microcoulometry
ASTM D7457	Test Method for Determining Chloride in Aromatic Hydrocarbons by Microcoulometry
UOP 779	Chloride in Petroleum Distillates by Microcoulometry

Brief Description / Specs of Applicable Standards

UOP 910	Total Chloride in LPG and Gaseous Hydrocarbons by Microcoulometry
ASTM D7359	Test Method for Total Fluorine, Chlorine and Sulfur in Aromatic Hydrocarbons and Their Mixtures by Oxidative Pyrohydrolytic Combustion & by Ion Chromatography Detection(CIC)
ASTM D5987	Standard Test Method for Total Fluorine in Coal and Coke by Pyrohydrolytic Extraction and Ion Selective Electrode or Ion Chromatograph Methods
ASTM D7994	Test Method for Total Fluorine, Chlorine, and Sulfur in Liquid Petroleum Gas (LPG) by Oxidative Pyrohydrolytic Combustion Followed by Ion Chromatography Detection (CIC)
UOP 991	Trace Chloride, Fluoride, and Bromide in Liquid Organics by Combustion Ion Chromatography (CIC)
ASTM D5291	Test Methods for Instrumental Determination of C, H, and N in Petroleum Products and Lubricants
ASTM D5373	Standard Test Methods for Determination of Carbon, Hydrogen and Nitrogen in Analysis Samples of Coal and Carbon in Analysis Samples of Coal and Coke
ASTM D5622	Test Methods for of Total Oxygen in Gasoline and Methanol Fuels by Reductive Pyrolysis
ASTM D7633	Standard Test Method for Carbon Black—Carbon Content
ASTM D4239	Test Method for Sulfur in the Sample of Coal and Coke Using High-Temp. Tube Furnace Combustion
ISO12902	Determination of total Carbon, Hydrogen and Nitrogen
ISO 16634	Determination of the total nitrogen content by combustion according to the Dumas principle and calculation of the crude Protein content
5310B,5310C	Total organic carbon (TOC)
ASTM D 4839	Standard Test Method for Total Carbon and Organic Carbon in Water by Ultraviolet, or Persulfate Oxidation, or Both, and Infrared Detection
ISO 8245	Guidelines for the determination of total organic carbon (TOC) and dissolved organic carbon
EN 1484	Guidelines for the determination of total organic carbon (TOC) and dissolved organic carbon
ASTM D7573	Standard Test Method for Total Carbon and Organic Carbon in Water by High Temperature Catalytic Combustion and Infrared Detection
ISO9562	Water quality — Determination of Adsorbable Organically bound Halogens (AOX)
EN 1485	Water - Determination of Adsorbable Organic Halides (AOX)
DIN 38409	German standard methods for the examination of water, waste water and sludge
DIN 38414-S18	German standard methods for the examination of water, waste water and sludge - Sludge and sediments (group S) - Part 18: Determination of Adsorbed Organically bound Halogens (AOX)
EPA 1650B	Adsorbable Organic Halides by Adsorption and Coulometric Titration
EPA 9020	Determination of Total Organic Halides (TOX) as chloride in drinking water and ground waters