Skytech

SKYTECH SYSTEMS (I) PVT. LTD.

Your trusted partner in delivering complete instrumentation solutions for...

ANALYTICAL LABS I PROCESS DEVELOPMENT & SAFETY I VALIDATION I SPECTROSCOPY

company profile

SKYTECH SYSTEMS INDIA PVT. LTD., is the leading Analytical Instrument distribution Company in India, established in 1993 with the main aim of making available the latest technological Analytical products from all over the globe to the scientific community in India. We mainly cater quality service and application support to QA/QC, R&D, Process, Testing Laboratories, Research Institutes, Universities etc. We have more than 1000 satisfied customers all over India.

We are channel partners with several International renowned manufacturers from all over the globe.

To provide efficient, appropriate & fast response we have divided our product line into five Business units depending upon the area of applications viz WATER, ELEMENTAL, PROCESS DEVELOPMENT AND SAFETY, CONTRACT SERVICES & SPECTROSCOPY.

Our product line includes Total Organic Carbon analyser, Thermal Validation Systems, Elemental analyzer [CHNS/O], Combustion analyzer, Reaction Calorimeter, Automated reactors, AAS, XRD, ICP, UV-Vis, CRM's, Accessories & many more for Pharmaceuticals, Petroleum, R & D, Agronomy, Marine, Cement, Soil, Universities, Institutes, paper & Pulp, Polymer, environmental, Pollution control etc applications.

Services provided by us:

Installation & On-site Services

Our engineers are highly trained, experienced on all products and will be there to make sure that your product delivers to specifications. Our field service and support professionals provide on-site service and on-call troubleshooting.

Application Support & Testing Laboratory

Our application / testing lab provide expert support, sample analysis, method validation, process development & regular training for your application.

Seminars & Trainings

We participate actively in quality seminars throughout the year and conduct technical seminars at various locations, including our Head office. We also conduct periodic conference & training where highly qualified speaker conducts training.

Access to information, application support and technical services are now a mere phone call or email away.

BUSINESS UNIT SPECTROSCOPY

UV-Vis Spectrometer

GBC's 4th generation of high performance UV-Vis Spectrometer demonstrates highly improved specifications. With true double beam optics coupled with a wavelength range extending upto 1200nm, you can surely expect nothing but the best for your spectrometry needs!

Key Features

- Spectral Bandpass: 0.1nm to 2nm in 0.1 nm Steps
- Measurement range: Upto 5Abs
- Scanning Speed: 5-10,000nm/min
- Stray Light@340nm: 0.000005% T
- Wavelength accuracy : 0.01nm
- Photometric reproducibility: 0.000015A
- Photometric Noise : <0.000023A
- Baseline flatness: 0.00055A
- Wide variety of accessories: Auto sipper, Peltier cooled thermocell, Reflectance Sphere, Linear movement module, Autosample delivery system, different cell holders.

AAS (Atomic Absorption Spectrometer)

GBC, a name synonymous with high quality instruments, has been on the forefront in developing time proven technology for the AAS world. With the latest family of AAS systems, GBC once again re-asserts its position as the global leader in the field of Atomic Absorption Spectrometry!

Key Features

- 1800 lines/mm dual blazed holographic grating
- Available in both Double and Single beam optics
- Options for 2, 6 & 8 turret lamp revolvers
- Variable slit widths between 0.1 to 2nm, automatic selection
- Hyperpulse Deuterium & Zeeman background corrections
- Automatic Workhead Adjustment.
- Motorized , Automatic burner rotation
- Coded lamp recognition & Super lamp Capability
- Electronic sample viewing
- Automatic Gas Box

Attachments available:

- Graphite Furnace
- Hydride Generator
- Mercury Concentrator
- Flame & Furnace Auto-Samplers

ICP-OES (Inductively Coupled Plasma Optical Emission Spectrometer)

The 4th generation Quantima represents a quantum leap in technology in the world of ICP Spectroscopy. With a pack of innovative features like the plasma cam tm and PIP, the Quantima is sure to take your research to another level. The Quantima consumes the least amount of Argon for any ICP-OES available. With an 11% increase in the monochromator speed, the Quantima is now faster than ever before.

Key Features

- The new IIS Intelligent Ignition Startup
- Free running 40.68MHz RF generator
- Inbuilt Chiller
- Nitrogen purged optics-no need of vacuum pumps
- 2400 lines/mm grating with a resolution of 0.004nm
- Widest linear dynamic range with dual detector technology, upto 8 orders of magnitude.

ICP-oTOFMS (Inductively Coupled Plasma Orthogonal Time Of Flight Mass Spectrometer)

With the release of the 2nd generation optimass 9600, GBC remains at the forefront in the field of ICP-Mass Spectrometry. The optimass 9600 Performs 30,000 acquisitions each second, Acquiring all masses simultaneously. Each acquisition simultaneously measures every mass and isotope from 1 to mass 260 amu. This unique feature represents a major advancement in technology and place the Optimass 9600 far ahead in the race in the field of ICP Mass Spectrometry.

Key Features

- 40% reduction in Argon consumption
- Simultaneous detection of all masses (1-260 amu)
- 5 Times faster than any Quadrapole
- Unique Retrospective Semi-Quantitative Analysis
- Multielement Spectral Fingerprinting Capability

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BUSINESS UNIT SPECTROSCOPY

XRD (X-Ray Diffractometer)

Powered by a 3kW X-Ray generator, EMMA is available in Theta-2Theta Geometry or in Theta-Theta geometry for high temperature and environmental stages, supporting a wide variety of sample sizes. The multi-disciplinary capebilities of Emma make it the perfect choice for every laboratory.

Key Features

- Twin co-Axial Harmonic gearbox with zero backlash
- Radius: 180-250mm
- Temp range upto 1600^{0}c
- Wide range of detectors including a Multi strip Solid State detector
- Thin film attachment
- Eulerian Cradle
- Powerful Software

Key application fields:

- Material research
- Pigments & Dyes
- Mining & Geology
- Process Control
- Metallurgy
- Semiconductors
- Thin film analysis
- Forensics
- Archaeology
- Soil Science
- Nano-Materials
- Environment

Rheometer

The exciting new MFR 2100 Micro Fourier Rheometer has redefined the state of the-art in rheological analysis. This groundbreaking product will revolutionize the traditional rheometer market due to the significant benefits offered by its ability to analyse very small volumes and perform analyses across a wide frequency range in seconds.

While traditional rheometer's use a twisting motion at a single frequency, the MFR 2100 applies a novel patented pseudo-random squeezing motion to a sample. The complex visco-elastic properties are extracted across a wide frequency range in seconds at high resolution using Fourier analysis.

This makes the MFR 2100 excellent for measuring the visco-elastic properties of materials that are changing rapidly with time.

Key Features

- Small sample volume:40 µL or lower
- Upto 400 frequency step analyzed in seconds
- Wide measurement range
- High Phase resolution (<0.2°)

Key application areas:

- Inks
- Polymers
- Biological fluids
- Paints
- Petroleum products
- Food
- Adhesives
- Cosmetics

HPLC (High-Performance Liquid Chromatography)

GBC offers a comprehensive range of quality, high performance HPLC systems & detectors from turn-key system to stand alone modules including auto-samplers, pumps and detectors. GBC also offers accessories such as columns, fittings and tool kits.

Simplify your choices by selecting one of our customized and complete HPLC systems or choose from our comprehensive range of pumps, detectors, and auto-samplers to compliment your existing system.

Detectors available:

- Variable wavelength UV-Vis Detector
- Fluorescence detector
- RI Detector
- Electrochemical Detector
- Programmable UV-Vis Detector
- Dual Wavelength UV-Vis Detector
- Photo Diode Array Detector
- Conductivity Detector

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BUSINESS UNIT ELEMENTAL

COMBUSTION / TRACE ELEMENTAL ANALYZER

MITSUBISHI CHEMICAL ANALYTECH CO. LTD. JAPAN

Combustion Analyzers for accuracy, simplicity and cost - effectiveness with Horizontal / Vertical NSX-2100 Models

- Total Nitrogen by chemiluminesscence method [ASTM D4629 / D7184]
- Total Sulfur by UV Fluorescence / Microcoulometric Method [ASTM D5453 / D7183 / D3120 / D6667]
- Total Chloride by Microcoulometric Method [ASTM D4929 / D7457]
- Total Halide by combustion IC (CIC) as per ASTM D7359 / D5987.
- Gas / LPG Module for introducing Gas & LPG samples in NSX-2100 analyser.
- Combination of any or all the above 4 elements [Sulphur / Chloride / Nitrogen / Halide] is available for Gas / LPG, Liquid & Solid Analysis.
- Low Sulphur < 10ppb analysis by TRU210 as option compliant to UOP 987, UOP 988.
- AOX / TX / TOX Analyser for Adsorbable Organic Halide (AOX) Extractable (EOX) / Purgeable (POX) analysis.

Rigaku
Leading With Innovation

ED-XRF ELEMENTAL ANALYZER

RIGAKU, USA

Rigaku offers XRF for rapid qualitative and quantitative analysis of

- Sulphur - as per ASTM D7220, ASTM D4294, ISO 13032
- Lead - as per ASTM D5059
- Phosphorous, Sulfur, Calcium and Zinc as per ASTM D6481
- Chlorine
- Vanadium
- Ferrous
- Nickel

MERCURY ANALYZER

BROOKS RAND INSTRUMENTS, USA

Designed for trace level analysis of total mercury and mercury species in a wide variety of matrices seawater, industrial wastewater, atmospheric deposition, soil, sediment, sludge, plant and animal tissues, coral and coal byproducts etc.

- **Total Mercury analyzer:** For mercury analysis by EPA Method 1631.
- **Methyl Mercury analyzer:** For methyl mercury analysis by EPA Method 1630.

BROOKS RAND INSTRUMENTS

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BUSINESS UNIT WATER

THERMAL VALIDATION SYSTEMS

AMPHENOL ADVANCE SENSORS – USA

Amphenol Kaye is recognized leader in high accuracy thermal process measurement. Amphenol Kaye technology is relied upon by the world's leading drug manufacturers to verify critical sterilization processes as required by governing regulatory bodies. Turnkey Solutions for Thermal Validation in Pharmaceutical, Manufacturing, Research & Development, Biotechnology for compliance to En554, ISO 17665, HTM2010, cGMP requirement.

- **AVS:** Simplifies the entire validation process by Asset concentric Data Management System reducing setup time and minimizing sensor handling, automating sensor calibration, neatly organizing study data and generating regulatory required reports.
- **Kaye Valprobe:** Wireless probe design eliminates the need for hard-wired sensors simplifying access to hostile, remote or hard to reach environments. It has a broad operating range and ability to measure temperature, humidity and pressure.
- **Kaye RF Valprobe:** Integrates breakthrough RF mesh technology with the well established thermal validation insitu loggers. Loggers provide high accuracy measurement of temperature, humidity and any 4-20 or 1-10 v output.
- **Kaye Lab Watch:** Centralized PC based Wireless Monitoring, Alarming and Reporting System specifically designed to meet GMP / GLP requirements for continuous monitoring of Temperature, Humidity, Differential pressure and many more parameters

We also offer **Kaye Calibration** References & Standards.

KAYE

GE SMART GROUND DETECTOR

GE ADVANCE SYSTEK

- **Smart Ground Detector (SGD)** is a grounding device that effectively controls and dissipates static charge. It can be Single/ Dual channel, Ensures low resistance in the earth loop. Varieties of Earthing clamps are available to suit the application.
- **Smart Lock SE** is a grounding device that effectively detects the loss of connectivity of earth i.e. it checks the continuity of tank or any vessel to ground. It is Single channel, Varieties of Earth clamps are available to suit the application.

2B Technologies

Industrial Ozone Monitors

Features

- Measurement based on UV absorption.
- Low power consumption; can be battery operated.
- Internal data logger with real time clock.
- On-board microprocessor with interactive menus includes data averaging options of 10 s, 1 m, 5 m and 1 hr.
- USB and RS-232 output of time/date, O3 concentration, internal temperature and pressure.
- Analog output (0-2.5 V and 4-20 mA) of ozone concentration in user selected units.
- Two level relay for control purposes (e.g., control of ozone source or turn warning light on and off)
- Available in Standard Enclosure, NEMA Enclosure & OEM Version.

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BUSINESS UNIT WATER

ANATEL TOTAL ORGANIC CARBON ANALYZER

HACH ULTRA, USA

Offers TOC analyzers designed for ultrapure water applications which allows customized solutions for online and lab measurement of all TOC concentrations within high-purity water distribution systems. The analyzer work with complete UV oxidation by dynamic end point detection ensures a validated TOC result.

ONLINE TOC ANALYZER

- **TOC 600** - Provides online TOC analysis for a wide range of applications
- **TOC PAT700** - A science and risk-based on-line TOC analyzer that simplifies the application of process analytical technology.
- **PAT 700 DUAL STREAM** - Allow customer to measure supply & return stream with help of single analyzer, Even PW & WFI can be analyzed.

LABORATORY TOC ANALYZER

- **Model Hach QbD1200** - Critical Measurements Made Simple & Simplify your validation and analysis with the Quality by Design approach. Dynamic Endpoint Detection provides clear assurance of complete oxidation of organics & complete removal of inorganic carbon.

STREAM - SEQUENCER

SKY-STREAM-SEQUENCER helps perform analysis of Samples from Multiple streams using single analyzer. It organizes the sample available for online analysis as programmed.

TITRATORS

SI ANALYTICS (A XYLEM BRAND)- GERMANY

Automatic Potentiometric,Coulometric & Volumetric Karl Fisher Titrators, Auto Burettes from SI combine ease of use with maximum accuracy & the robustness required for daily operation in the laboratory. Applications includes the food & beverages, petrochemicals, pharmaceuticals, environmental analysis etc.

- **TL 7000** with auto sampler
- **TL 7500 KF**
- **TL 7750**
- **TL 7500 KF TRACE**

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BUSINESS UNIT
PROCESS DEVELOPMENT & SAFETY

HEL - UK

Automated tools for Process R&D, Process Safety & Hazards Assessment from small volume Screening to Optimization and Scale up for Pharmaceutical, Fine Chemicals & Petrochemical Industries.

PARALLEL PROCESS DEVELOPMENT

PolyBLOCK 4 &8 (For Screening, Process Optimisation, Synthesis and Discovery)

- With either 4 or 8 independently controlled and monitored zones with independent stirring.
- For performing upto 112 simultaneous reactions with temperature range of -80 °C to +250 °C

Automate II (4 &8) - Highly Functional and Versatile Platform

- Options of 2, 4, 6 or 8 zones available with Vials, flasks and custom reactors up to 500ml, interchangeable.
- Movable jacket, independent temperature & stirring control and monitoring of each reactor.
- Facility to mix and match up to 8 different reactors and vials, low and high pressure.

CRYSTALLIZATION AND PARTICLE CHARACTERIZATION TOOLS

- **CrystalEYES & CrystalSCAN** (For accurate detection of crystallization and dissolution onset points)
- Crystal EYE, a portable turbidity probe for Solubility, Super Solubility & MSZW Determination studies
- CrystalSCAN is a parallel synthesis platform, Coupled with Turbidity probes and controlled-dilution pumps for solubility and MSZW determination in multiple samples for accurate detection of crystallization and dissolution onset points.
- Raw temperature and turbidity data is displayed graphically which is then automatically extracted to produce a complete MSZW plot, live.

HYDROGENATION & CATALYSIS TOOLS

High Pressure ChemSCAN HPCS (for Rapid Screening in Parallel Batch High Pressure Reactors)

- On-line gas consumption calculation and gas uptake display for each reactor.
- An 8 reactor platform rated to 200 °C & 100Bar (200Bar option)

CAT systems (for semi quantitative Catalyst Screening)

- CAT 7 with 7 standard 10ml vials.
- CAT 18 with 18 standard 2ml HPLC vials.
- CAT 24 allows the use of 24 open top vials with test volume is around 1ml.

FlowCAT (for Continuous flow catalytic reactions)

- Fixed Bed, Continuous Flow Reactor for continuous flow screening and optimisation of hydrogenation and other high pressure reactions.
- Provision for Gas and Liquid Dosing, Pressure regulation, Vent Gas measurement and link to GC and PAT probes is possible.

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BUSINESS UNIT
PROCESS DEVELOPMENT & SAFETY

SAFE SCALE-UP TOOLS

Simular (for Reaction Calorimetry by Heat Flow, Power Compensation and Reflux Calorimetric Techniques and INSTANT On Line calorimetry)

- To determine the rate of heat release during a process.
- From this, the cooling duty required for scale up can be calculated.
- Dual Reaction calorimeter with High Pressure and Glass reactors, different high capacity Heater/ Chillers integration , automatic sampling during the reaction for off line analysis.

Thermal Screening Unit (for preliminary safety studies and hazard assessment)

- Determines the rate of rise of temperature, pressure to handle chemicals safely.
- Uses 1-5g of sample and provides thermal stability information - including pressure (i.e. Onset Temperature and pressure Data)

Phitec I & II (Adiabatic Calorimeters for detailed safety evaluation and relief system sizing)

- Determine with HWS mode even the minute Exotherm.
- Automatic Calibration.
- Global reaction kinetic studies.
- Time to maximum rate (TMR) , TNR, & SADT, order of reaction, Activation energy etc.

Unchained Labs, USA

Unchained Labs have analytical tools for protein characterization and stability. Pioneer & leader in High Throughput robotic Screening systems for Pharmaceuticals & Life Sciences.

Uncle is all in one system measures all methods like DLS/SLS/Fluorescence for better characterization of protein. It offers data on Tm & Tagg, Isothermal stability, Thermal, recovery, Sizing & Polydispersity, Sizing with thermal ramp, B22 & kD, Viscosity.

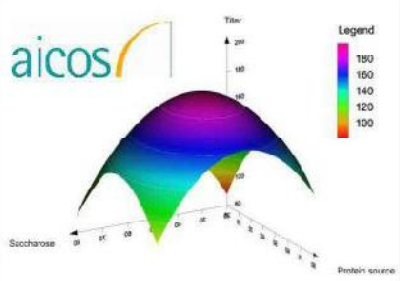
Freeslate Junior is for protein formulation and development e.g Visual inspection, pH & Viscosity for large molecules and salt Screening & Polymorphs for Small molecule studies.

VISIMIX - ISRAEL

Visimix is engaged in Simulation for Mixing related problems and is the only such software offering precise data for any scale up and scale down activities with respect to hydrodynamics when the mixing is not ideal and homogenous.

The latest VisiMix products are:

- VisiMix 2K8 Turbulent
- VisiMix 2K8 Laminar
- VisiMix 2K8 Different Impellers
- VisiXcel- Data Base
- Visimix Pipe Line
- VisiMix RSD - Rotor Stator Disperser



AICOS Technologies Ltd, Switzerland

Stavex a DOE software (For API & Formulations) : It is a user-friendly PC-based software system enabling experimenters in research and development to apply statistical design and analysis of experiments in their routine work independently of a statistician.

- Special knowledge in statistics is not necessary.
- Intelligent and flexible user guidance enabling to analyse easily even complex situations with many potential influence factors.
- Multitude of graphics for visualising the results.

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BUSINESS UNIT CONTRACT SERVICES

HD ELEKTRONIK
Fusion machines

FLUXANA GmbH & CO. KG, GERMANY

A complete solution for XRF application & reference materials for XRF, ICP, AAS etc.

- Fusion Technology
- Pressing Technology
- Certified reference materials
- Metal reference materials
- Aluminum reference materials
- Petro standards liquid
- Inorganics ventures
- Petrochemical reference materials
- Liquid analysis technique

SÄNTIS ANALYTICAL AG – SWITERLAND

Offers customers complete solutions for analytical consumables. We produce and distribute first–class consumables for the following analytical instruments:

- CHNS/O
- AAS
- ICP
- ICP-MS
- DSC
- TOC
- Aluminum boats & Weighing pans

ULTRA SCIENTIFIC
Analytical Solutions

ULTRA SCIENTIFIC – USA

Leading manufacturers of Certified analytical standards such as:

- Sulfur standards – for ppb to ppm level
- Nitrogen standards - for ppb to ppm level
- Sulfur & Nitrogen Mix standards
- Chlorine Standards
- Carbon Standards
- Solid standards for Sulfur, Nitrogen & chlorine determination
- Miscellaneous chemicals

Altus Science Limited-UK

TOC – Certified Reference Materials & consumables

Altus science

Certified reference materials (CRM)/Consumables, focus on Total Organic Carbon (TOC) & Conductivity CRMs. We provide Calibration, Validation and Consumables for all brands of TOC analyzers.

Our CRM's were successfully assessed by UKAS, and audited to both ISO 170235 & ISO Guide 34.

Our TOC-CRMs are supplied in ready to use vials with liquid volumes ranging from 30ml to 500ml.

We manufacture TOC-CRMs/ Consumables compatible with **Analytic Jena, OI Analytical, Shimadzu, Sievers, Swan, Teledyne Tekmar and Thornton TOC analyser**

GBC

GBC Scientific Pty Ltd, Australia

AAS Lamps

- Atomic Absorption Spectroscopy (AAS)Lamps.
- We offer AAS Lamps Single & Multielement which are compatible with Thermo, Varian, Analytica Jena, Shimadzu, Hitachi, Unicam & others.

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BUSINESS UNIT CONTRACT SERVICES

MITSUBISHI CHEMICAL CORPORATION

Aquamicron Karl Fischer Reagents

We offer Karl Fischer Reagent from Aquamicron which can be used in both volumetric and coulometric titration systems. Karl Fischer Reagent consists of

- Anolyte
- Catholyte
- Single solution
- Titrants
- Dehydrated solvents
- Standard water-methanol
- Aquamicron check solution & water standards

RENTAL SERVICE

- Online/Offline TOC Analyzer
- Thermal Validation System & accessories
- RF Valprobe with Base Station

APPLICATION SERVICE

- Application training for customer's.
- Operation & Maintenance training for existing customer's
- Training to future prospects before purchase of instrument to achieve optimum performance after installation.

TESTING SERVICE

1 Petroleum & Petrochemical

- Total Sulphur analysis by ASTM D 5453 and ASTM D 3120 in Light / Heavy Hydrocarbons, Engine Fuel, Diesel Engine Fuel, petroleum etc.
- Total Halide analysis (TX) ASTM D 4929 in Paraffin, aromats, methanol, toluene, benzene, polycarbonate, and acetic acid etc.

2 Environmental

- Total Organic Carbon analysis
- Total Organic Halide (TOX)
- Purgable Organic Halide (POX)
- Absorbable Organic Halide (AOX)

3 Water Testing

- Total Organic Carbon analysis of pharmaceutical water i.e. PW & WFI

4 Elemental Analysis

- CHNS – O Analysis of Organic/Inorganic Chemistry, Pharmaceuticals, Petrochemical & Energy, Environmental, Material Characterization, Agronomy & Marine Science etc. samples.

5 Thermal Screening Testing

- Onset of decomposition
- Rate of pressure rise
- Rate of Temperature rise

6 Crystallization

- On set of Clear point and Cloud point for determine MSZW

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