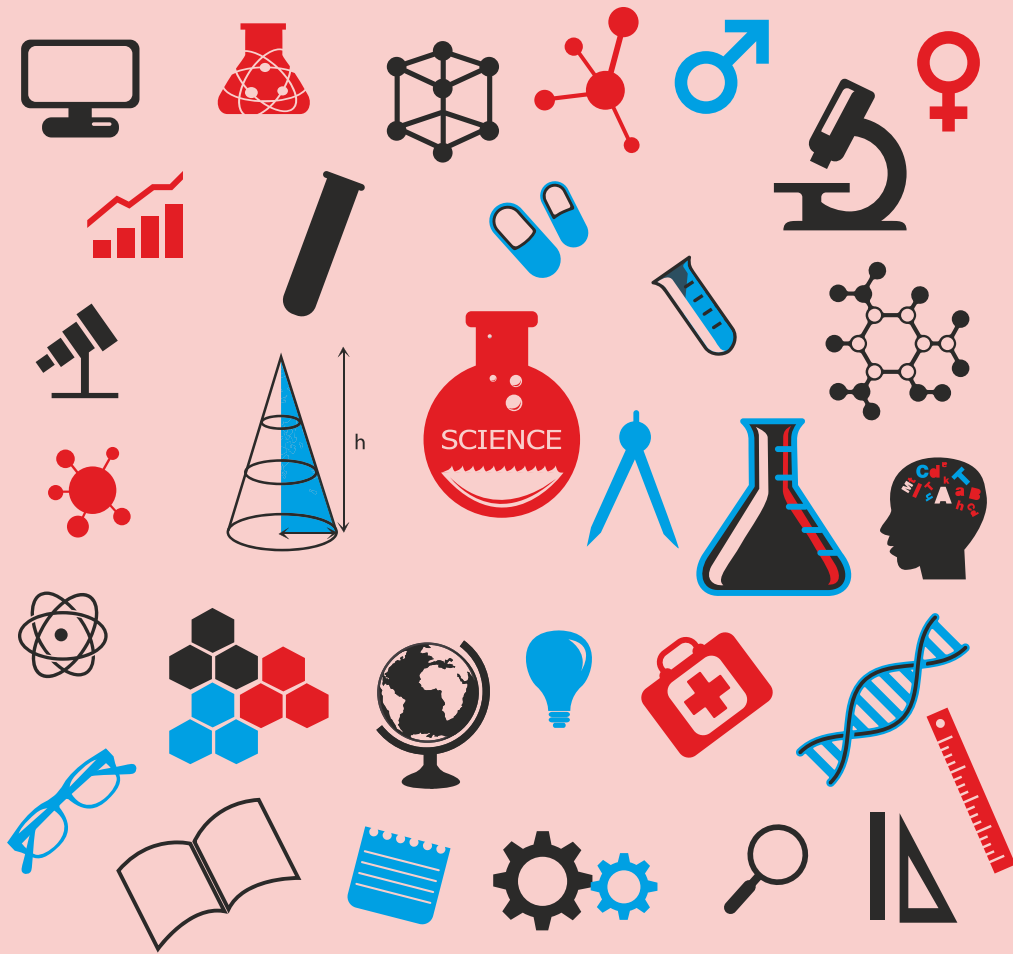




# SWAN SCIENTIFIC LLP

ANALYTICAL & LABORATORY SOLUTIONS

(A SWAN GROUP COMPANY)



## OUR GLOBAL PARTNERS



## Total Organic Carbon (TOC) Analyzer

TOC is index of organic pollution in water. Extremely wide range from 4 µg/L to 25,000 mg/L for applications from ultrapure water to highly contaminated water.

The Analysis of TOC is a more rapid method for determination of organic load and thus has the potential for better early warning and pollution control management.



TOC Analysis is a practical alternative to COD for plant control process management and monitoring of inflow and effluent in waste water treatment plants.

### TN Unit with TOC:

Analyze gas and solid samples as well as liquids with measurements over a wide range from 4 µg/L to 4000 mg/L, Simultaneous measurement of Total Organic Carbon & Total Nitrogen.



### SSM with TOC:

Combining the Solid Sample combustion unit with a TOC analyzer permits analysis of many solid samples in addition aqueous samples, including soil, sludge, and sediments.



### Applications:

- Wastewater management in accordance with ISO 14001
- TOC Measurement in Tap Water
- Water quality control in water purification plants and feed water
- Measurement of TOC in boiler water
- TOC measurement in soil, sludge and sediments
- Land fill leachate monitoring in ground water

## BOD System

The most innovative ecological (mercury-free) system with microprocessor utilizing manometric technology. Features a stirring system offering non-stop operation without risks of interruption or overheating. Easy to handle design allows 6 or 10 bottles to be operated at the same time.



## COD / TN / TP System

Measure COD using your choice of mercury (USEPA approved method) or non-mercury reagent systems.

COD Colorimeter is direct reading for on-site water analyses. Features pre-programmed tests.



## Rapid Bio Mass Detection System

It is the first and only solution able to accurately measure true living biomass concentration and health at any step in biological wastewater collection and treatment.

Measures and differentiates between living biomass, dead biomass, and inert solids.

Complete results within 5 minutes, allowing real-time assessment of bio-reactor efficiency and stability.

Optimize treatment parameters & thus reduce operating costs.



## Portable Water Analysis Laboratory

Portable lab model for visible range more than 80 preprogramed and 25 user programs for testing of water parameters for all types of water like sewage water, drinking water and effluent water etc;

Economical use: titration test kits, digital pH & conductivity meters along with reagents for the measurement of Ammonia, Chlorine, Bromine, Iodine, Chromium, Copper, Fluoride, Iron, Nitrate, Nitrite, Phosphate, Silica, Sulphate, Sulphide, Turbidity, Alkalinity, Carbon dioxide, Chlorine/ Salinity, and Dissolved Oxygen.



## Professional Water Analysis Lab

WaterLink Spin for pool and spa water testing. Just fill one unique Spin reagent disk with water and vital tests are done automatically. In just 60 seconds all test results are transferred into software, analysed to recommend precise treatment instructions.



## Triometer/Turbidity Laboratory Meter

Compact water analysis instrument designed for turbidity, Chlorine and color.

Meets USEPA & ISO design criteria as specified by USEPA method 180.1 & ISO.



It uses a tungsten lamp and meets the specifications of EPA 180.1 Data logging up to 4000 points with a date and time stamp — stored tests can be viewed on the meter or downloaded to a PC.

## Multiparameter BenchTop Meter

Microprocessor Based Multi-Parameter for Measurement of PH-Conductivity-ORP-TDS-Temp.



## Handheld pH / Conductivity / DO Meters

Portable waterproof meter for DO (Dissolved Oxygen) and temperature measurements, designed to provide laboratory results & accuracy even under harsh industrial conditions.



## pH /Conductivity /TDS Pocket Testers

Ideal for any water analysis, microprocessor based tester enables full reading display without any multiplications with temperature measurements.



## Rapid Total Coliform and E.coli Systems

### Rapid Qualification:

Colitag™ is a USEPA approved Presence /Absence and MPN enzyme substrate test that provides 16-48 hour total coliform & E. coli determinations and detects 1 MPN of total coliform or E. coli bacteria per 100mL water sample. Detects both MUG-negative and MUG-positive E. Coli in one test. Includes built-in-ability to detect E. coli using the reliable indole test.



### Rapid Quantification:

Tests using the iMPNplate-1600 offer a high degree of sensitivity, with a detection limit ranging from one to 1,600 MPN per 100 mL sample. The device is stand-alone and no other equipment is ever needed to perform the test. The entire procedure involves only a few steps and can be done in less than one minute per sample.



## Benzene Monitor

- One of the most advanced compound-specific monitor.
- Accurate measurement of benzene from 10 ppb to 200 ppm and other VOCs up to 10,000 ppm.
- 60-second response for benzene measurement snapshot.
- Unique 15-minute benzene STEL measurement.
- Excellent versatility for entry pre-screening, marine spill response, and refinery down-stream monitoring.



## Continuous VOC Monitor

- Fixed, field-configurable detector for VOCs
- Continuous measurement
- Pre-programmed correction factors for more than 200 compounds
- Graphic display and LED status indicator for fault and alarm conditions
- Configurable low, high, and fault relays can trigger alarms or process controls
- Explosion-proof enclosure
- Humidity compensation



## Micro Ambient Air Quality Monitoring System

- Measures SO<sub>2</sub>, NO<sub>2</sub>, CO, CO<sub>2</sub>, O<sub>3</sub>, PM<sub>2.5</sub>, PM<sub>10</sub>, Temp., RH, Noise, Light, UV, Pressure.
- Real time hot spot analytics.
- For urban/smart cities
- Mountable on poles
- Innovative IoT Solution with cloud server.
- Solar powered battery.
- Advance Analytics & Trends.
- Mobile and Email Alerts.



## Portable FTIR Ambient Air Analyser

- Based on FTIR principle
- Can detect up to 25 gases simultaneously providing validated results in 25 seconds.
- Access to a reference library of over 250 gases & 50 gas measurement capability including H<sub>2</sub>O, CO<sub>2</sub>, CO, NO, NO<sub>2</sub>, N<sub>2</sub>O, SO<sub>2</sub>, NH<sub>3</sub>, CH<sub>4</sub>, HCl, HF, VOC's etc.. Especially useful in situations where unknown gases are encountered.
- Lightweight, Simple to use, Low operating costs
- Both battery and 230 VAC operations are possible.



## Light Meter

Easy View Digital light meters are for building audit usage with footcandle and Lux measurement modes.

- Monitor the student and workforce performance by monitoring quality of light in schools and work place.
- Ensures the level of brightness in direct sunlight or any high intensity light source.



## Handheld Odor Meter

Most popular simplified tool for odor analysis. Indicates the relative strength and odor classification numerically by comparing odor gas and purified air. The reading shown on display is calculated based on our original principle.

- Finding odor source at factories, incinerator plant, or ETP facilities
- Evaluation of deodorizing at hospitals, nursing homes etc.



## Personal & Portable VOC Monitors

Provides accurate and reliable measurements of VOC by using patented auto-cleaning sensor technology and Reflex PID Technology™.

- Wide measuring range of 0-15,000 ppm.
- Available with 1 ppb sensitivity also.
- Correction factors for more than 200 compounds.
- 3 second response.
- IP 65/67 water-proof and dust-tight.
- Humidity compensation.
- Built-in man down alarm.
- Large display reports gas type, correction factor, concentration



## Portable Environmental Particulate Air Monitor

- The EPAM - 5000 is a portable micro processor - based particulate monitor suitable for ambient, environmental, and indoor air quality investigations.
- Uses light scattering to measure particle concentration and provide immediate real time determinations and data recordings of airborne particle concentration in milligrams per cubic meter (mg/m<sup>3</sup>)
- Interchangeable size —Selective sampling heads allow PM<sub>10</sub>, PM<sub>2.5</sub>, or PM<sub>1.0</sub> monitoring.



## Handheld Real Time Aerosol Monitor / Counter

Small, handheld, battery operated, and completely portable unit. This unit provides both particle counts or mass PM measurements as stored data logged values, real-time networked data, or printed results. Five Mass Ranges and Two Particle Sizes.



All five important mass size ranges (PM<sub>1</sub>, PM<sub>2.5</sub>, PM<sub>7</sub>, PM<sub>10</sub>, and TSP) are displayed in mass mode as well as two popular cumulative particle sizes (> 0.5 and > 5.0 microns) in particle mode.

## Portable Gas Detectors

Single and Multi Gas Detectors are available for most of the Toxic Gases Viz., SO<sub>2</sub>, NO, NO<sub>2</sub>, HCN, HCl, Cl<sub>2</sub>, ClO<sub>2</sub>, ETO, H<sub>2</sub>S, HF, H<sub>2</sub>, O<sub>3</sub>, NH<sub>3</sub>, PH<sub>3</sub>, SiH<sub>4</sub>, COCl<sub>2</sub>, CO, CO<sub>2</sub>, VOC including Oxygen and Combustible (LEL) gases.



## Online Gas Monitors

Designed to use in Hazardous Zone 1 / 2 / 0. Available with electrochemical, catalytic combustion, photo ionization and infrared technologies. Measurable gases : CO, H<sub>2</sub>S, O<sub>2</sub>, LEL, Cl<sub>2</sub>, NH<sub>3</sub>, H<sub>2</sub>, NO<sub>2</sub>, HCN, HF, C<sub>2</sub>CHCl, HCl, HCHO, COCl<sub>2</sub>, AsH<sub>3</sub>, C<sub>2</sub>H<sub>4</sub>O, CO<sub>2</sub>, and CH<sub>4</sub>O etc. Controllers compute data, provide alarm.



## Combustible Gas Leak Detector

Combustible gas leak detector has a long, slim gooseneck probe to detect the presence of combustible gases in tight areas. It's adjustable alarm, easy one-hand operation and impact resistance storage case add up to value and convenience. Probe length : 410mm



## Sound Level Meters

Sound level meters are designed for measurement of workplace noise levels to determine the degree of hearing protection that may be required. It offers an integrating feature that computes the average sound pressure level.

- Sound Detector is a basic Integrating Sound Level Meter
- Sound Examiner is with Data Logging and PC interface by using powerful DMS Software
- Sound Professional is widely used for advanced research applications with 1/1 & 1/3 Octave Filter analysis.



## Noise Dosimeters

Helping Industrial Hygiene and Safety professionals to monitor noise exposure levels.

Edge series personal noise dosimeter come with advanced cable-free technology and more ergonomic way to monitor noise levels. This innovative dosimeter designed for direct shoulder mount with dual dosimeters in one unit.



## Heat Stress Monitors

Wet Bulb Globe Temperature Heat Stress Monitors calculate and display a WBGT Index value that considers the effects of ambient air temperature, humidity, air flow (which provides an evaporative cooling effect to the body) and radiant heat from sources such as the sun, furnaces, ovens, and boilers.

- QT32, QT34, and QT36 heat stress monitors are with conventional wet bulb sensor.
- QT 44, 46 and 48N heat stress monitors are engineered with waterless wet bulb sensor.



## Vibration Analyser

- Six-channel Human Vibration Meter and Analyser.
- Meets requirements of ISO 8041:2005, ISO 2631-1,2&5, ISO 5349.
- Enables simultaneous measurements with two triaxial accelerometers (e.g. both-hands vibration or triaxial SEAT transmission measurements).



## IAQ Monitor With Particulates

- Measures upto 7 different parameters simultaneously including Particulates, VOCs, Toxic Gas, CO<sub>2</sub>, RH, Temp & Air Velocity.
- Time history data logging and displays instantaneous levels, Min, Max, AVG, STEL.
- Particulates in 4 different sizes by rotary Impactor.
- Gravimetric analysis is possible by built in filter cassette.



## Anemometers

- Kanomax anemometers can simultaneously measure Air Velocity, Air Flow, Static Pressure, Temperature and Humidity of the indoor environment.
- It is ideal for HVAC ventilation testing and balancing, laboratory control, fume hood performance testing, IAQ investigations, and industrial testing.



## Personal Air Samplers

- Designed to collect air samples into different sampling media based on various hazards and guidelines.
- Sampling pumps are available with variety of Flow ranges and sampling features to suit various applications.



## Sioutas Cascade Impactor

Sioutas Impactor and SKC Leland Legacy® Sample Pump operated at 9 L/min ensure precise particle separation on the filters at each stage. Patented Sioutas\* Cascade Impactor collects particles in five size ranges: > 2.5 µm, 1.0 to 2.5 µm, 0.50 to 1.0 µm, 0.25 to 0.50 µm, and < 0.25 µm.



## Direct Reading Instruments

**HAZ-DUST I** Real-Time particulate monitor provides accurate and instantaneous data on airborne particle concentration. Designed for industrial hygiene, indoor air quality, and hazardous materials investigations



**HAZ-DUST IV**, with new infrared detector, displays quick breathing zone measurements of aerosol and dust for industrial hygiene and environmental air investigations. Possible specific particle fractions by inhalable, thoracic, or respirable sampling heads. An in-line 37-mm cassette is used to do filter sample for gravimetric or chemical analysis.



**Realtime Wearable Particle Sensor** Measures respirable dust < 4 micron. Gives Particle counts and mass concentration. Has automated pump control and calibration. Web enabled control interface, no difficult buttons or sequences, Post sample analysis capability. Monitor Silica content directly using correlation factor



## AEROSOL MONITOR

Can simultaneously measure both mass and size fraction. Real-time dust monitoring. Multi-channel, battery-operated, data-logging, light-scattering laser photometer. STEL alarm setpoint. Touchscreen interface. Aerosol concentration range 0.001 to 150 mg/m<sup>3</sup>



## Air Care Monitor

Measures 0.3 to 25 µm particles with mass concentration and stores indoor air quality measurements of temperature, relative humidity, CO<sub>2</sub>, and TVOC. Meets ISO 21501-4 and JIS B9921. Touch screen display. Connect using Ethernet, USB or Wireless 802.11 b/g, RS485 or RS232.



## Handheld IAQ Monitor

Inexpensive multimeter that simultaneously measures and records CO<sub>2</sub>, humidity and temperature. It also calculates the dew point and wet bulb temperature. Data can be downloaded, saved and analyzed. Adjustable audible CO<sub>2</sub> alarm. Display with backlight. Mini USB interface.



## Refractometers

Available Refractometer options – Digital, Abbe, Process, Digital Handheld and Manual Handheld.

### Digital Lab Refractometers

Can be comfortably operated by touchscreen. It has an integrated Peltier thermostat for efficient temperature control, which allows very short measuring times at maximum accuracy.



### Digital Abbe Refractometers

Includes a robust unit incorporating electronic data evaluation and an optional temperature-compensation feature.



### Digital Handheld Refractometers

The sturdy entry level model has the same easy handling & fast measuring results as the two other digital handheld refractometers.



### Manual Handheld Refractometers

Have been designed for quick daily application, and are delivered complete with conversion tables and case.



## Polarimeter

Includes built-in Peltier precise temperature control system. Has automatic photoelectric inspection technology & WINDOWS HMI system. Boasts accurate and reliable measurement, convenient operation.



By detecting the optical rotation, the density, content and purity of substances etc. can be analyzed and determined.

It is widely used in medicine, petroleum, food, chemicals, flavors, spices, sugar marking, other industries and universities and research institutes.

## Auto Titrator

Automatic Titrator is a lab titration device with high analysis accuracy under the principle of potentiometric titration. It enjoys modular design, consist of three parts: volume titration device, control device and measuring device. The titration methods include macro titration, micro titration, volume setting titration, EP, etc.



## Compact IR Thermometers

Compact Hand held infrared thermometers with max-min feature and choice of temperature ranges.

Range: From -50 to 500°C & F,

LCD Dimensions: 17 x 20 mm



## Vortex Mixer

- Any other accessories are unnecessary.
- Universal rack can be used for several kinds of tubes.
- Smooth touch
- Powerful and stable motion
- Without noise even at 3,000rpm.
- Special Rubber feet with shock-absorber system prevent it from moving around on a desk.



## Melting Point Apparatus

Automatic Melting Point Apparatus perfectly integrate video technology into melting point measuring. It not only provides users with reliable melting point test result, but also intuitively displays temperature curve and real-time video image, and achieves the function of save, replay the video etc. It provides better help for users to observe melting process of sample.



## Fluorescence Spectrophotometer

Measures the luminescent characteristics of molecules. It's not only used in quantification and qualification, but also available for analyzing the structure of macromolecule, bonding between molecules, reaction in solution, and distance between molecules, etc. Can measure excitation spectrum and emission spectrum, and using synchronous scan function, it can also measure the samples that contains multi-components.



## Laboratory Centrifuges

- Built to last, these Centrifuges have strong construction yet offering a sleek modern design that will fit into any modern laboratory.
- No compromises on quality. Only the best components are used.
- Reliability has been retained and improved to give a 3 year warranty as standard.



## Muffle Furnace

- Fire Proof Molded Heating Element
- Can be set to Rapid Temp. Increasing and Uniform Temp. Distribution
- Auto Tuning, Temperature Calibration, Self-diagnosis Function Available
- Automatic Fault Sensing System
- Double Overheat Safety Device
- Digital Over Temperature Safety Device



## Ovens

- Can be set to Temperature's Increasing, Maintaining and Decreasing Time
- Can be set to Prevent Temperature Overshoot and Precision Temperature Control
- Uniform Temperature Distribution by Forced Convection of Heat Flow
- Inside observation by Triple Tempered Glass
- Auto Tuning and Temperature Calibration Function Installed



## Plant Growth Chamber

- Controlling Temperature, Humidity and Illuminance at the Same Time
- 10 Step Programing Control and Repeat Operation Function
- Timely Temperature Check with Optional Recorder Installation
- Alarm for Temperature Variation
- Auto Tuning, Temperature Calibration
- Double Overheat Safety Device - 1st Controller Overheat Alarm, 2nd Overheat Shut Off Circuit



### Automatic Colony Counter

High throughput analysis of bacterial colonies or bacteriophage plaques in less than a second.

Differentiation by colour, size and shape to be combined at choice by the user. Additional features allow for separating overlapping colonies.

Results are presented as an image on your monitor or in a table exportable to MS Excel.



### Horizontal Electrophoresis

- Features with DNA electrophoresis screening.
- Several rows of samples for a total of 96 can be done simultaneously.
- Abundant buffer not only guarantee cooling effects, but also keep the pH Value stable during the whole experimental process.
- Unfolded electrodes make repair and parts replacement easy and quick.
- The transparent top lid effectively prevents the liquid in the cell from volatilizing and avoids electricity leakage.
- Auto-switch-off when the lid is removed.



### Vertical Electrophoresis

- Abundant buffer not only guarantees cooling effects, but also keeps the pH Value stable during the whole experimental process.
- With special gel caster, and realize the integrated casting gel.
- Cam fastening methods, this is the way to make the process of installing glass plate becomes very simple.
- Gel area optimization, sample design is reasonable, the electrophoresis tank is widely used in the SSR amplification products of polyacrylamide gel electrophoresis detection.



### 2D Gel Electrophoresis

DGGE technology is used to analyze the composition of a microbial community.

This technology is widely used in various microbial ecosystems, including soil, activated sludge, human and animal intestines, hot springs, plant roots, oceans, freshwater lakes, reservoirs and so on.

Equipped with the electric gradient gel caster and original gel caster.



### Gel Document Imaging System

Intended for band observation after electrophoresis run. DNA or other biomolecular can be visualized, with the help of UV light and high resolution CCD with a fluorescent stain such as ethidium bromide. Easy to get dim stripes, real-time browsing.



### PCR Thermal Cycler

An advanced thermal cycler with peltier based technology making it more accurate and reliable. Has high heating and cooling rate, uniform temperature across the block surface, 96 wells block, large data storage capacity and 8 inch colour touch-screen.



### Speed Vacuum Concentrator

- Speedy cooling vacuum concentrator system
- Easy to manage modulated design
- 4L cold trap
- Refrigeration systems reach -75 °C
- Various pumps available
- Oil status confirming in vacuum pump
- Vacuum pressure measuring by Pirani gauge



### Freeze Dryer

- Speedy freeze dryer in slim design
- Self pre-freezing
- 8L cold trap
- Refrigeration systems reach -75 °C
- Oil (in vacuum pump) status check & confirm
- Vacuum pressure measuring by Pirani gauge



### Lab Fermentor

- High density fermentation
- Data tracking & analysis by RS232
- Accurate PID temperature sensor
- Wide range vessels from 0.5 to 14 liter
- Individually controlled 4 peristaltic pump for pH, DO, anti-foam & feeding.
- Easy control of external devices (O<sub>2</sub>/CO<sub>2</sub> analyzer, glucose analyzer, gas mixer, etc.)



### Microscopes

The instrument is a professional inverse microscope, for identification and analysis of biological substances and cultures, includes mirror reflex and video camera connection via photo and C-mount video adapter.



### SAS IAQ — Microbial Air Sampler

A simple well known air sampler to be used by Industrial Hygienists for "SBS" (Sick Building Syndrome) and "HVAC" (Heating Ventilation Air Conditioning)

Rapid sample collection device for collection of microbial & fungal count by using Petri Dishes. Air flow rate : 100 liters per minute



### Universal Power Supply

- Type of Output: Constant-Voltage, Current or Power.
- Output Ranges: 20-1600V, 1-100mA, 1-160W.
- Increment: 1 V, 1mA, 1W.
- Timer Range: 1min-99hr, 59min.
- Intelligent micro-processor control
- Automatic detection of no-load, over-load, short circuit, rapid resistance change, ground leak and system overheating.



### Water Activity (ERH Meter)

- High precision and resolution for measurement of water activity / Equilibrium relative humidity (ERH)
- With Digital Sensor Technology
- Easy to operate Non-destructive measurement
- International certified calibration standards available
- Absolutely no maintenance and no recurring cost
- Suitable for the laboratory and Production site/on-site monitoring applications
- Sorption Isotherm can be generated for the measurement of moisture content



### Head Space Oxygen Analyzer

- Useful for Headspace oxygen analysis in vials / bottles / sealed containers & also for testing quality of Nitrogen air cylinders/ Generators.
- Can be easily transported to remote locations such as the packaging line.
- Suitable for continuous operation in routine QC/QA testing.
- Used for measurement of many types of modified atmosphere (MAP), or "gas-flushed" packaged foods such as meats, snack foods, fresh vegetables, nuts, fruits, dairy products and ready-to-eat packaged foods including salads.



### Cooking Oil Tester

Designed for cooking oil testing with safety and efficiency. It is able to test total polar material (TPM) values in minutes and suitable for all kinds of cooking oil within high operation temperature.

Suitable for quality supervision, refectory, fast-food restaurants, food manufacturers, bakeries and so on. It is also used for cooking oil quality's preliminary inspection in lab.



### ATP+ADP+AMP Rapid Hygiene Monitoring

- ATP bioluminescence provides a simple rapid test method for monitoring degree of cleanliness, hygiene and risk and acts as first step to HACCP
- One of the quickest and most useful methods of finding and tracking the source of bacteria that can contaminate food
- Useful for rapidly determining if the food preparation and processing environment is clean or not.



### Weather Monitoring Station

It is a Complete, Self-contained, Digital Meteorological Monitoring System that provides instant access to weather information like:

- Wind sensor for Speed & Direction,
- Temperature & Relative Humidity,
- Solar Radiation / Sunshine Duration,
- Barometric Pressure,
- Precipitation for rainfall evaporation.

Data logger with 200 day storage capacity & provision for password protection & software with wind rose charts.



### Soil Test Kits

- Rugged, lightweight carrying cases with components securely mounted in removable foam-lined trays.
- Technically advanced reagent systems and unique extraction procedures provide fast, simple and extremely accurate soil testing.
- Common measurable parameters: pH, Nitrate Nitrogen, Phosphorus, Potassium, Humus, Calcium, Magnesium, Ammonia nitrogen, Manganese, Aluminium, Nitrite Nitrogen, Sulfur, Chloride, Ferric Iron, Copper



### Wireless Weather Station

Wireless Weather Station including wireless temperature, humidity sensor and rainfall gauge transmitter with a range of up to 30m. Includes max min memory of temperature and humidity.

History of daily, weekly, monthly and seasonal rainfall is recorded by this wireless weather station which comes complete with batteries included.

Features include weather forecast for the following six hours with weather icons by Barometric sensor, temp. alert, calendar and clock.



### Soil Moisture/EC/Temperature Sensor

Whether it's container pots in a greenhouse or turf on a putting green, the salinity of the root zone is a critical element for healthy plant growth. Irrigation, fertilizers, & crop demand all impact salt concentrations. High levels can damage the plant: low levels can lead to nutrient deficiencies. Identify situations where soil salinity is an issue or where certain moisture and temperature conditions facilitate soil-borne diseases.



### Soil Moisture Meter

Portable unit, accurately measures soil moisture across the full range of soil moisture conditions. Select from the 1.5, 3, 4.8 or 8-inch (3.8, 7.5, 12 or 20-cm) probe rods to suit your desired depth measurement. Install PVC access tubes and take readings deeper in the soil profile for permanent crops like apple, grapes, and nut crops.

Designed for quick and easy measuring. Monitor and record soil moisture accurately with the TDR technology and GPS-compatible data logging equipment!



### Soil Compaction Meter

Compacted soil has less pore space to store what the plant needs. Measure soil compaction to monitor moisture penetration, fertilizer and chemical uptake, avoid anaerobic microbes build up conditions. In some cases, yield losses as high as 30% can be prevented.

- To determine the density of soil and other material.
- Take reading upto 60cm depth
- Save losses upto 30%
- Records 772 data points



### Chlorophyll Meter

Instantly measures chlorophyll content or "greenness" of your plants to reduce the risk of yield-limiting deficiencies or costly overfertilizing. Quantifies subtle changes or trends in plant health long before they're visible to the human eye.

Non-invasive measurement; simply clamp the meter over leafy tissue, and receive an indexed chlorophyll content reading (-9.9 to 199.9) in less than 2 seconds.

Assess nitrogen needs by comparing in-field SPAD readings to the university guidelines or to adequately fertilized reference strips. Research shows a strong correlation between SPAD measurements and leaf N content.



### Portable Digital Microscope

The IPM Scope combines a digital camera, precision optics and LED lighting into a powerful handheld microscope and imaging software package. Zoom in on fine details of plant disease symptoms, or insects. Instead of straining to look into a tiny eyepiece, place the IPM Scope over the leaf and view the magnified image right on your computer screen.



### Heavy Metal Analyser

One instrument tests for multiple heavy metal contaminants. Tests drinking water, environmental water & industrial waste water. No special knowledge of chemical testing required. Test results in under one minute. Highly sensitive and selective. No harmful reagents, environmentally friendly. Meets US EPA standards. Portable, rugged, water resistant with data capture and reporting features.



### Fruit Texture Analyser

Texture analyser to measure the mechanical properties of food product etc, as they relate to its sensory properties detected by humans. Applying controlled forces to the product and recording its response in the form of force, deformation & time help us to know the profile of the products.



### Nutrient Meters

Over application of nutrients can be just as detrimental as a deficiency. It not only impairs plant growth, but may contaminate groundwater or pollute surface waters. For proper plant nutrition measure nutrient solutions, soils, greenhouse soilless media, water samples and tissue sap for Ca, NO<sub>3</sub>, K, Na, pH & EC (Conductivity).



### Professional 5-in-1 Environment Meter

5-in-1 professional environment meter designed to measure sound, light, wind speed, humidity and temperature, suitable for professional and home use.

Features: Large backlit LCD, Over range indicator, Low battery indicator, Total accuracy for CIE standard illuminate A (2856K), Supplied in heavy duty carry case.



### 4 in 1 Soil Survey Instrument

4 in 1 Soil Survey Instrument can test moisture of soil, PH value, temperature and environment sunlight intensity using a 200mm probe. The unit has backlight function.

Test Range: Sunlight (9 levels) , Moisture (5 levels), PH Value (12 levels), Temperature (3 levels).



### Rheometers

Rheometers to carry out your flow curves directly on your Rheometer, without needing to be connected to a computer, for a precise quality control that is both simple and effective. Many optional geometries available.

Activity domains: Car Industry, Teaching, Chocolate, Food Industry, Cosmetics, Pharmacy, Paint/ Ink/ Coatings, Chemical/ petroleum products, Building materials



### Viscosity Meters

Springless instrument for use without adjusting levels. Unlimited number of speeds between 0.3 and 250 rpm. Touch screen, with display setting. Let's you set measuring times for thixotropic products.

Kinematic viscosity when your products density is inputted. Also, models wherein you can program your measurement methods directly using touch screen and Temperature control systems



### Texture analyzers

Texture analyzers with touch screen, PT100 sensor for temperature. Different operating modes available for Compression, Traction, Relaxation, TPA Cycle and choice of sensors for 20N, 50N, 200N, 500N



### Density Meters

Oscillating U-tube technology for reliable measurement. Has a compact measurement cell with high resolution, measuring density specific gravity and concentration of liquids of any kind. Cost-effective operation.



A SWAN GROUP COMPANY

# SWAN SCIENTIFIC LLP

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