



AGRICULTURAL RESEARCH SOLUTIONS

From field sampling to laboratory insight -
equip every step of the agricultural
testing process.





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FIELD WORK



SOIL MONITORING

Soil Sensors

Comprehensive soil monitoring solutions designed for agricultural research, irrigation management, controlled environment agriculture, and ecosystem monitoring. These rugged, easy-to-deploy systems provide accurate measurements of soil moisture, soil temperature, soil water potential, pore water conductivity, and electrical conductivity (EC). Suitable for a wide range of soil types, growing media, and applications, they deliver reliable data and deeper insights into soil health and environmental conditions.



Soil CO₂ Flux Measurement System

Closed-chamber system used to quantify carbon dioxide emissions from soil surfaces which supports carbon cycle analysis and links field respiration data to laboratory-based carbon studies.

Typical Applications:

- Carbon sequestration research
- Soil health assessment
- Climate studies



Ahlstrom Glass Fibre Paper

High-performance filtration media made from 100 % pure glass. They are designed for rapid filtration of fine particles and are widely used in environmental and agricultural analysis.



Typical Applications:

- Removal of fine particles prior to soil nutrient analysis (nitrates, phosphates and potassium)
- pH and salinity testing
- Soil leachate and runoff analysis

It is also used to determine total suspended solids.

Trace Gas Analysers

Portable, high-precision gas analysers designed for measuring trace concentrations of greenhouse gases including CO₂, CH₄, N₂O, H₂O vapour, and isotopes in soil and atmospheric studies. Suitable for integration with soil flux systems, long-term monitoring stations, and field-based environmental research applications.

Typical Applications:

- Greenhouse gas monitoring
- Methane and nitrous oxide studies
- Atmospheric research
- Environmental monitoring
- Soil gas flux analysis
- Ecosystem and climate research



PLANT PHYSIOLOGY & CROP PERFORMANCE



Portable Photosynthesis System

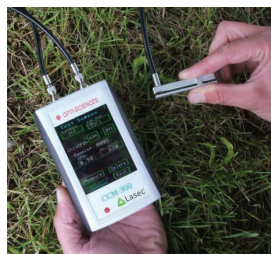
Field-based gas exchange analyser measuring photosynthesis, transpiration, and stomatal conductance under controlled conditions which generates real-time plant performance data prior to destructive sampling or lab analysis.

Typical Applications:

- Crop stress physiology
- Fertiliser trials
- Plant breeding research

Chlorophyll Fluorometer

Instrument used to assess photosynthetic efficiency and plant stress via fluorescence measurements by detecting early plant stress before visible symptoms appear, guiding sampling decisions.



Typical Applications:

- Stress physiology
- Disease detection
- Crop health monitoring

Handheld Porometer

Compact instrument used to measure stomatal conductance and transpiration rates which provides rapid screening of plant water status in the field.

Typical Applications:

- Drought stress studies
- Irrigation scheduling
- Crop performance monitoring



Ceptometer - Canopy Analysis System

Portable system used to measure light interception within plant canopies using a linear PAR sensor array, enabling calculation of canopy structure parameters such as Leaf Area Index (LAI) and fractional light interception. It provides non-destructive, in-field assessment of canopy development and crop growth, linking environmental conditions to plant performance before laboratory analysis.

Typical Applications:

- Crop growth monitoring
- Fertiliser trials
- Plant breeding
- Yield optimisation studies



ENVIRONMENTAL & CLIMATE MONITORING

Complete Weather Station

Fully integrated, ready-to-deploy system measuring key environmental parameters including solar radiation, temperature, humidity, wind speed / direction, and rainfall. Provides a comprehensive environmental baseline at the field site, ensuring all sampling and experimental data can be correlated with real-time climatic conditions.

Typical Applications:

- Agricultural field trials
- Research stations
- Irrigation scheduling
- Long-term climate monitoring



Custom Weather Station Build

Key Sensors for custom weather station configuration:

PARAMETER	SENSOR / PRODUCT	DESCRIPTION	TYPICAL APPLICATION
Air Temperature	Air Temperature Sensor (e.g., thermistor / PRT probes)	High-accuracy sensors for ambient temperature measurement, often housed in radiation shields	Climate monitoring, crop modelling
Relative Humidity	Humidity Probe	Measures atmospheric moisture content, often combined with temperature sensors	Disease prediction, evapotranspiration studies
Barometric Pressure	Barometric Pressure Sensor	Measures atmospheric pressure changes	Weather forecasting, altitude correction
Wind Speed	Cup Anemometer	Measures wind speed using rotating cups	Spray drift studies, climate monitoring
Wind Direction	Wind Vane	Determines wind direction relative to north	Weather stations, environmental assessments
Rainfall	Tipping Bucket Rain Gauge	Measures precipitation via calibrated tipping mechanism	Irrigation planning, rainfall tracking
Solar Radiation (Global)	Pyranometer	Measures total incoming solar radiation	Crop growth modelling, solar energy studies
Photosynthetically Active Radiation (PAR)	PAR Sensor (e.g., Quantum Sensor)	Measures light in the PAR spectrum (400 – 700 nm)	Plant physiology, canopy studies
Net Radiation	Net Radiometer	Measures net radiation balance (incoming vs outgoing energy)	Energy balance and evapotranspiration studies
Soil Moisture	Soil Moisture Sensor (e.g., ThetaProbe)	Measures volumetric water content in soil	Irrigation management, soil studies
Soil Temperature	Soil Temperature Probe	Measures temperature at various soil depths	Root zone monitoring, crop modelling
Soil Electrical Conductivity (EC)	Soil EC Sensor	Measures salinity and nutrient levels in soil	Precision agriculture, salinity monitoring
Leaf Wetness	Leaf Wetness Sensor	Detects moisture presence on leaf surfaces	Disease forecasting (fungal risk)
Evapotranspiration (ET)	Derived (via Multiple Sensors)	Calculated using meteorological inputs (radiation, temp, humidity, wind)	Irrigation scheduling
CO ₂ (Optional)	CO ₂ Sensor	Measures atmospheric carbon dioxide levels	Greenhouse and climate studies
Water Level	Water Level Sensor (Pressure / Ultrasonic)	Measures water depth in tanks, rivers, or reservoirs	Hydrology, irrigation systems

ECOSYSTEM & CARBON FLUX MONITORING

Eddy Covariance System

Integrated system measuring gas exchange between the land surface and atmosphere. It provides large-scale context for carbon and water flux prior to lab-based validation.

Typical Applications:

- Ecosystem research
- Carbon budgeting
- Climate impact studies



Water Level & Water Quality Monitoring Loggers

Rugged, research-grade monitoring solutions designed for continuous measurement of water quality and water level parameters across freshwater, marine, and environmental applications. Wireless and easy-to-deploy systems provide reliable, high-accuracy data for parameters including water level, temperature, dissolved oxygen, conductivity, salinity, pH, light, and photosynthetically active radiation (PAR). Multiparameter loggers and aquatic carbon monitoring solutions support long-term environmental studies, ecosystem monitoring, and climate research in demanding field conditions.

Typical Applications:

- Surface and groundwater monitoring
- Watershed management
- Aquatic ecosystem research
- Coastal and marine studies
- Aquaculture
- Environmental compliance
- Climate and carbon cycle research
- Long-term water quality assessment



INTEGRATED DATA LOGGING & MONITORING

Environmental Data Logger

Multi-channel device for collecting and storing data from connected field sensors which is a central hub for synchronising all field measurements into a unified dataset.

Typical Applications:

- Long-term monitoring projects
- Research trials
- Remote sensing integration



Remote Monitoring & Telemetry System

System enabling real-time transmission of field data to cloud-based platforms. It allows continuous monitoring without the need for frequent site visits.

Typical Applications:

- Precision agriculture
- Remote research sites
- Environmental monitoring networks



FIELD SAMPLE COLLECTION

Copan provides advanced sample collection solutions, supporting reliable testing across multiple environments – from livestock, across farms to food production facilities. The innovative FLOQSwab® technology ensures superior sample uptake and release for accurate detection of microorganisms. Liquid Based Media (LBM) solutions such as eSwab® and SRK® allow for efficient sampling and preservation.



Copan Liquid Amies Elution Swab (eSwab®)

Streamline specimen collection and transport with the versatile eSwab® system, designed to preserve sample viability for bacterial cultures, nucleic acids, and viral or bacterial antigens.

- Cost-efficient: replaces multiple collection devices
- Available in various fill volumes, tube sizes, and swab combinations
- Compatible with automation for enhanced efficiency
- Capture cap ensures easy and secure tube handling
- Suitable for diverse collection and transport applications



Copan Swab Rinse Kit (SRK®)

A dependable solution for detecting environmental microbial contamination, ideal for routine surface monitoring across diverse settings.

- Provides effective sample collection from various surfaces
- Ensures sample preservation with isotonic solutions or enrichment broths like Letheen
- Screw cap design minimises contamination and spillage during transport
- Simplifies testing by offering pre-submerged samples in a ready-to-use diluent

PARTICLE SIZE SEPARATION

CISA offers a comprehensive range of certified analytical laboratory sieves and advanced sieve shakers, engineered to deliver durable and consistent performance in agricultural, field and laboratory environments. Manufactured from high-grade stainless steel, these products are designed to meet stringent quality standards while accommodating a variety of diameters and mesh sizes to suit diverse analytical requirements.

Certified Analytical Sieves

CISA's certified analytical sieves are manufactured from durable stainless steel to ensure resistance to corrosion, wear, and distortion over time. Available in a wide range of diameters and mesh sizes, each sieve is produced to ensure accuracy and reproducibility in particle size analysis. Pore size certification and calibrated reference sands are available to support quality control processes.

Typical Applications:

- Ideal for precise particle size separation and classification of soil samples
- Grading and filtering of seeds, cereals, fertilisers, and animal feed



Electromagnetic Sieve Shakers

CISA's electromagnetic sieve shakers are designed for high-efficiency particle separation in both wet and dry applications. These units utilise consistent, controlled vibrations to ensure accurate and reproducible results. These systems can accommodate multiple stacked sieves, enabling high-throughput processing of samples and separation along a particle-size gradient.

Typical Applications:

- Suitable for high-throughput separation and classification of soil samples, seeds, cereals, fertilisers, and animal feed



SAMPLING SOLUTIONS

Robust sampling solutions designed for raw materials, in-process products, and finished goods. Ensures representative sampling for GMP compliance and reliable quality control.

CATEGORY	PRODUCT NAME	DESCRIPTION	TYPICAL APPLICATION
Soil Sampling	Soil Auger Sampler	Spiral auger design for efficient sampling at various depths	Soil nutrient analysis, pH testing, fertilisation planning
	Soil Cup Sampler	Stainless steel sampler for softer soils and loose materials	Soil diagnostics and monitoring
	Soil Sampler	General-purpose stainless steel sampler for soil and silt	Soil testing and environmental monitoring
	Soil Sampler Pro	Designed for cross-sectional sampling in light to medium soils	Lawn, meadow, and agricultural soil analysis
	Soil Screw Sampler	Heavy-duty sampler for hard materials like chalk and lime	Soil characterisation in difficult terrains
Grain & Powder Sampling	Spiral Grain Spear	Aluminium sampler with spiral pockets for representative cross-sectional grain sampling	Grain quality testing
	SteriWare Sack & Bag Sampler	Enables sampling through sacks into bags or bottles	Bulk material quality control (grains, nuts, beans)
	SteriWare Slot Sampler	Disposable / reusable tool for multi-level powder and granule sampling	Powder and granule quality testing
Liquid Sampling	Liquid Master	Reusable sampler for low to medium viscosity liquids	Beverage and liquid product testing
	SteriWare® LiquiThief	Disposable sampler for quick low-viscosity liquid sampling	Fast, contamination-free sampling
	Fluid Point Sampler	Designed for rapid point sampling from drums and containers	Food and liquid sampling
	Bottle Sampler	Spring-loaded system for direct sampling into bottles	Controlled liquid sampling
	Cup Sampler	Stainless steel sampler for discrete sampling at specific depths	Stratified liquid sampling
	PeriPump Set	Battery-operated peristaltic pump for deep liquid sampling	Sampling from drums, tanks, and vessels
	Pump Sampler	Uses disposable tubing to reduce cross-contamination	Hygienic liquid sampling
	SteriWare™ Jumbo Pipettes	Long disposable pipettes for deep container sampling	Drum and bulk liquid sampling
	SteriWare™ Ladle	Disposable ladle for surface sampling	Surface liquid sampling
Specialised Sampling	Bottle Sampler	Enables controlled, contamination-free liquid sampling directly into containers	Beverage and liquid QA
Sampling Consumables	Sampling Accessories	Includes scoops, spatulas, spoons, funnels, beakers, jugs, and containers (plastic & stainless steel)	General sampling and handling

Ahlstrom LeafSaver

A specialised biospecimen collection and preservation card designed for collecting, transporting, and storing biological samples from plants, fungi, insects, and parasites. It is made from pure cotton-based paper treated with stabilising chemicals, allowing the long-term preservation of nucleic acids (DNA / RNA) at room temperature without refrigeration.

The LeafSaver card can be used in the sampling, monitoring and diagnostic stage of the agricultural workflow.

- Crop monitoring (post-planting stage)
- In-field sample collection for downstream PCR testing, genetic analysis and disease identification
- Ensures representative samples
- Reduces contamination risk
- Improves data accuracy

Key Features:

- Multiple sample zones for replicate testing
- A protective cover to prevent contamination
- A field-ready design for direct sample application
- Enables remote agricultural sampling and eliminates need for cold storage and complex sample preparation



SAMPLE TRANSPORT & PRESERVATION



Ensures sample integrity is maintained between field and laboratory through controlled handling and temperature management.

COLD CHAIN TRANSPORT SYSTEMS (COOLERS, INSULATED CARRIERS)

Insulated Pathology Specimen & Sample Carrier Bag

Versapak insulated carrier bags are reusable, durable bags designed to keep samples at stable temperatures during transport, ensuring quality and integrity from field to laboratory. Available in small, medium and large.



DRY ICE AND LIQUID NITROGEN-COMPATIBLE CONTAINERS



Liquid Nitrogen Dewars

Freeze your sample in time and prevent DNA degradation. It prevents gene expression changes post-harvest.

Typical Applications:

- Field snap freezer (plant tissue)



PORTABLE REFRIGERATION UNITS

Portable Transport Coolers

Prevent deterioration of samples between the field and lab by maintaining cooler temperatures. This plugs directly into car AC / DC power for controlled temperatures between -20 °C to 10 °C.

SAMPLE PREPARATION & PROCESSING



Samples are stabilised, homogenised, and prepared for accurate analytical workflows under controlled laboratory conditions.

Laminar Flow Cabinet

Enclosed workstation providing a continuous flow of HEPA-filtered air to create a sterile working environment, protecting samples from particulate contamination during preparation. Ensures contamination-free sample handling during preparation and processing, particularly for sensitive biological, microbiological, and molecular samples.

Typical Applications:

- Sample aliquoting
- Media preparation
- Sterile transfers
- Plant tissue preparation
- Microbiological sample handling



Vortex Mixer

Compact, high-speed mixer for rapid homogenisation of small liquid samples. Initial sample mixing prior to analysis.

Typical Applications:

- Mixing soil extracts
- Agrochemical solutions
- Nutrient samples



Magnetic Hotplate Stirrers

Stirring with optional heating for solution preparation. Routine lab preparation and reactions.

Typical Applications:

- Buffer prep
- Chemical dissolution
- Nutrient analysis



The product images shown are for illustration purposes only and may not be an exact representation of the product.

E&OE



Orbital Shakers

Uniform shaking for sample mixing.
Used for batch sample processing.

Typical Applications:

- Soil extraction
- Plant tissue assays



Mini Centrifuges

Compact and user-friendly centrifuges designed for quick spin-down of samples in molecular biology and routine analytical workflows. Ideal for PCR preparation, DNA / RNA workflows, and general lab use. Mini centrifuges support efficient sample handling with minimal bench space requirements.

- Rapid spin-down of PCR tubes and microtubes
- Suitable for DNA / RNA extraction and PCR preparation workflows
- Compact, space-saving design for benchtop use
- Easy operation with quick-start functionality
- Interchangeable rotors for tubes and PCR strips

Dispersers / Homogenisers

High-shear devices for particle size reduction and uniform sample dispersion. Critical for representative sample preparation.

Typical Applications:

- Plant tissue
- Seeds
- Emulsions
- Pesticide formulations



Overhead Stirrers

High-torque stirring system for medium to high viscosity samples. Used for bulk sample preparation and reagent mixing.

Typical Applications:

- Fertiliser slurries
- Soil suspensions
- Feed mixtures



Air Sampler

Environmental testing for clean environments.

Agricultural Uses:

- Pesticide drift
- Ammonia
- Mold in farming environments

Sample Homogenisation

Omni Bead Ruptor Homogenisation enable rapid and reliable processing of agricultural samples, including plant tissues, seeds, roots, and soil.

Designed for consistent sample disruption and high-quality extraction of DNA, RNA, and proteins, Omni instruments help researchers streamline workflows and generate reproducible results for agricultural genomics, breeding, and crop health studies.



MATRIX	ANALYTE	BEAD MEDIA	OMNI UNIT
Seeds & Beans			
Cherry tomato seeds (<i>Solanum lycopersicum</i> var. <i>cerasiform</i>)	RNA	2.8 mm ceramic	Bead Ruptor Elite
Chili pepper seeds (<i>Capsicum chinens</i>)	RNA	2.8 mm ceramic	Bead Ruptor Elite
Corn kernels (<i>Zea mays</i>)	DNA	25 mm stainless steel	Bead Ruptor 96 +
Dried kidney beans (<i>Phaseolus vulgaris</i>)	DNA	25 mm stainless steel	Bead Ruptor 96 +
Lettuce seed (<i>Lactuca sativa</i>)	Amino acids	2.8 mm ceramic	Bead Ruptor Elite
Okra pods (<i>Abelmoschus esculentus</i>)	Protein	2.8 mm ceramic	Bead Ruptor Elite
Peanut seeds (<i>Arachis hypogaea</i>)	Nutritional analysis	10 mm stainless steel	Bead Ruptor 96 +
Peas (<i>Pisum sativum</i>)	Protein	2.8 mm ceramic	Bead Ruptor Elite
Peas (<i>Pisum sativum</i>)	Protein	2.8 mm ceramic	Bead Ruptor Elite
Rice seeds (<i>Oryza sativa</i>)	Nutritional analysis	6.5 mm ceramic	Bead Ruptor Elite
Rice seeds (<i>Oryza sativa</i>)	DNA	25 mm stainless steel	Bead Ruptor 96 +
Dried soybeans (<i>Glycine max</i>)	DNA	6.5 mm ceramic	Bead Ruptor Elite
Tomato seed (<i>Solanum lycopersicum</i>)	RNA	2.4 mm stainless steel	Bead Ruptor Elite
Wheat berries / kernels (<i>Triticum</i> sp.)	Nutritional analysis	6.5 mm ceramic	Bead Ruptor Elite
Wheat berries / kernels (<i>Triticum aestivum</i>)	Protein	6.5 mm ceramic	Bead Ruptor Elite
Flower And Fruit			
Hemp flower (<i>Cannabis sativa</i>)	DNA	2.8 mm ceramic beads	Bead Ruptor 12
Hops flower (<i>Humulus lupulus</i>)	Pesticides	6.5 mm ceramic	Bead Ruptor Elite
Tangerine (<i>Citrus tangerine</i>)	Nutritional analysis	10 mm stainless steel	Bead Ruptor 96 +
Leaves and Shoots			
Bamboo leaves (<i>Bambusoideae</i>)	DNA	2.8 mm ceramic beads	Bead Ruptor Elite
Bamboo leaves (<i>Bambusoideae</i>)	DNA	2.8 mm ceramic beads	Bead Ruptor 96 +
Frozen basil leaves (<i>Ocimum basilicum</i>)	DNA	2.8 mm ceramic beads	Bead Ruptor 96 +
Clover leaves (<i>Trifolium repens</i>)	DNA	2.8 mm ceramic	Bead Ruptor Elite
Dried Palm leaves (<i>Arecaceae</i>)	DNA	1.4 mm and 2.8 mm ceramic	Bead Ruptor Elite
Parsley leaves (<i>Petroselinum crispum</i>)	Nutritional analysis	10 mm stainless steel	Bead Ruptor 96 +
Privet leaves (<i>Ligustrum</i> sp.)	DNA	2.8 mm ceramic	Bead Ruptor Elite
Sorghum leaves (<i>Sorghum amylum</i>)	DNA, RNA	2.8 mm ceramic	Bead Ruptor Elite
Spinach leaves (<i>Spinacia oleracea</i>)	Protein	2.8 mm ceramic	Bead Ruptor Elite
Spinach leaves (<i>Spinacia oleracea</i>)	Protein	2.8 mm ceramic	Bead Ruptor Elite
Sugarcane shoots (<i>Saccharum officinarum</i>)	DNA, RNA	2.8 mm ceramic	Bead Ruptor Elite
Tabacco leaves (<i>Nicotiana tabacum</i>)	Heavy metals	10 mm stainless steel	Bead Ruptor 96 +
Yarrow leaves (<i>Achillea millefolium</i>)	Heavy metals	10 mm stainless steel	Bead Ruptor 96 +
Roots, Bark / Chips, and Cane			
Beech bark (<i>Fagus grandifolia</i>)	Heavy metals	25 mm stainless steel	Bead Ruptor 96 +
Pine chips (<i>Pinus resinosa</i>)	Aromatics	6.5 mm ceramic	Bead Ruptor Elite
White potato (<i>Solanum tuberosum</i>)	Nutritional analysis	10 mm stainless steel	Bead Ruptor 96 +

Seward Stomachers

Paddle-based system for sterile homogenisation in sealed bags. Used for safe biological sample preparation.

Typical Applications:

- Microbiological testing of food, crops, and environmental samples



Grinders / Mills (Wet & Dry)

Grinding mills offer efficient sample preparation, material reduction and homogenisation of mixtures for consistent, accurate testing. Primary sample preparation step by grinding raw materials for isolation and improved extraction efficiency of products.

Typical Applications:

- Grind grain, feed, soil, leaf tissue, fertiliser, and other plant samples for further analysis (pesticide residue analysis, nutrient content analysis)

Centrifuges (Benchtop and High-speed)

Benchtop and high-speed centrifuges are used to separate soil particles and prepare samples for analysis. Benchtop units are used for routine testing, while high-speed centrifuges allow more efficient separation of fine particles. They are used during sample preparation to separate solid and liquid phases, ensuring accurate and reliable laboratory results.

Typical Applications:

- Soil particle separation
- Preparation of soil and water extracts
- Analysis of micro-nutrients and trace elements



Microscopes

Digital microscopes for agriculture combine infinity optics with flexible imaging system used to clarify and identify pathogens, analyse soil microbiomes, and study plant structures. By turning biological data into actionable insights, they help labs accelerate disease diagnosis, optimise soil health, and develop resilient crop varieties.

Typical Applications:

- Plant pathology & disease diagnosis
- Soil biology & microbiome ecology
- Plant physiology & agronomy





Filtration Systems (Vacuum and Membrane-Based)

Filtration systems are separation technologies used to remove suspended solids, microorganisms, and unwanted particles from liquids. Used in the process of water quality testing, microbial analysis (with the use of membrane filters) and testing nutrient solutions in hydroponics.

Typical Applications:

- Separation of solid residues from liquid extracts
- Clarification of fruit juices and wine / beverages during productions
- Soil and water testing

Vacuum Pumps

Provides vacuum for filtration, evaporation, and drying. Supports multiple analytical processes.

Typical Applications:

- Filtration
- Degassing samples
- Rotary evaporation



Peristaltic Pumps

Accurate, contamination-free fluid transfer. Used for sample dosing and transfer and supports automation and fluid handling.

Typical Applications:

- Nutrient dosing
- Sample handling
- Irrigation research

Analytical Balances

An analytical balance is a critical, high-precision instrument in the agricultural industry, primarily fitting into the laboratory analysis, quality control (QC), and research and development (R&D) stages of the workflow. It is used for tasks requiring extreme accuracy (typically 0.1 mg), such as weighing samples, reagents, extracted soil contaminants, and nutrients.

Typical Applications:

- Soil and plant analysis
- Seed research
- Agrochemical formulation
- Quality and safety testing



GENERAL LABORATORY GLASSWARE



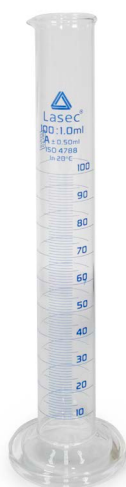
Burettes

Dr. Schilling

- Class A borosilicate 3:3 glass
- Calibrated "Ex" (to deliver)
- Automatic zero adjustment
- Complete with plastic bottle and stable plastic base

Straight Bore

- Class A borosilicate 3:3 glass
- Calibrated "Ex" (to deliver)
- Graduated
- Batch or Individual Certification available
- Glass, Teflon (PTFE) or rotaflo stopcock option



Cylinders

Measuring

- Class A borosilicate 3:3 glass
- Spouted or stoppered
- Graduated
- Hexagonal or round base
- Batch or Individual Certification available

Nessler

- Class A borosilicate 3:3 glass
- Graduated
- Batch or Individual Certification available



Crucibles

- Silica, soda-lime or borosilicate
- Low or tall form
- Glazed options available
- Lids available

Dishes

Crystallising

- With or without spout

Petri

- Soda lime glass or plastic





Flasks

Erlenmeyer

- Class A borosilicate 3:3 glass
- Wide or narrow neck
- Plain, ground neck or screw cap

Filter

- Class A borosilicate 3:3 glass
- Plain or ground neck
- With side arm

Volumetric

- Class A borosilicate 3:3 glass
- Amber or clear
- With plastic or glass stopper
- Batch or Individual Certification available



Funnels

Buchner

- Class A borosilicate 3:3 glass
- Porcelain options available
- Glass - with sintered disc

Filter

- Class A borosilicate 3:3 glass
- With long or short stem

Separating

- Class A borosilicate 3:3 glass
- Glass, teflon (PTFE) or rotaflo stopcock options
- Pear or conical shapes available
- With polypropylene stopper

Mortars And Pestles

- Porcelain or Class-A borosilicate 3:3 glass
- Porcelain – completely glazed, or glazed on outside only



Ointment Jars

- Various sizes
- With or without Polypropylene cap





Pipettes

Pasteur

- Soda-lime glass
- With or without cotton plug
- Various sizes available: 150 mm or 230 mm

Serological

- Graduated
- Batch or Individual Certification
- Calibrated "Ex" (to deliver)

Volumetric

- Batch or Individual Certification
- Calibrated "Ex" (to deliver)



Tubes

Capillary

- Heparinised options available
- Sigillum wax available

Melting Point

- Determination of melting point
- May be used for sample storage

Test

- Soda-lime or Class-A borosilicate 3:3 glass
- Round bottom
- With or without rim
- Graduated or ungraduated



Vials

Chromatography

- Head space
- Crimp top
- Screw neck
- Snap ring

Diagnostic

- With caps or rubber stoppers

Pill

- With stoppers

Scintillation

- With or without caps

TOC (Total Organic Carbon)

- With bonded cap and PTFE lined silicone septa

Vaccine

- Clear or amber
- Rubber stoppers and aluminium seals available
- Crimpers available



Weighing Scoops

- Made of borosilicate glass with open tubular arm
- Ideal for weighing small quantities of powders and dyes
- Available in 3 ml, 6 ml, and 10 ml capacities

Beakers

- Low or tall form
- Spouted
- Graduated

Bottles

Dropping

- Amber or clear
- With rubber teat or glass stopper

McCartney

- Soda lime glass
- Narrow or wide neck
- Autoclavable
- Aluminium screw cap

Media

- Graduated
- Amber or clear
- Autoclavable
- Blue polypropylene GL 45 screw cap and pouring ring

Reagent

- Amber or clear
- Narrow or wide neck
- With glass or plastic stopper



SAFETY COATED GLASSWARE

Reducing the risk of breakage and contamination in laboratory and industrial settings, safety coated glassware provides protection from scratches and minimises collision impacts.

The transparent slip-resistant surface enhances grip, grasp, and stability. Safety coated glassware is available in a range of media bottles, measuring cylinders and volumetric flasks.



Helps contain broken glass & spillage



Temperature stability



UV protection up to approx. 380 nm



Helps maintain the electrostatic charge



Autoclavable at 121 °C

ANALYTICAL TESTING & CHARACTERISATION



Perform detailed agricultural testing using professional instruments. Prepared samples undergo testing to generate meaningful research data.

MICROBIOLOGY & CULTURE

Perform detailed agricultural testing using professional instruments. Prepared samples undergo testing to generate meaningful research data.



Autoclave Sterilisation Systems

Autoclaves are designed for the sterilisation of laboratory media, glassware, instruments, and biological waste. Our range offers robust construction, user-friendly operation, and efficient steam sterilisation for routine laboratory applications.

Supports microbiology and culture workflows by enabling the preparation of sterile media and equipment prior to testing, as well as the safe decontamination of material after analysis.

Typical Applications:

- Sterilisation of culture media
- Preparation of sterile glassware and instruments
- Decontamination of microbiological waste
- Routine use in agricultural, environmental, and food testing laboratories

Media Preparators

Optimise your media production with automatic media preparators, designed to deliver precise, sterile, and consistent results for every batch. These versatile instruments support capacities from 1 to 50 litres, ensuring reliable productivity and traceability across all formulations.

- Ensures sterile media preparation for dependable performance
- Precise temperature control with $\pm 0.5^\circ\text{C}$ accuracy inside the medium
- Continuous stirring for preparation and dispensing
- Multifunctional: steriliser, homogeniser, water bath, and traceability in one unit



The product images shown are for illustration purposes only and may not be an exact representation of the product.

E&OE



Pipetman M

Electronic pipettes for high-throughput and repetitive pipetting tasks.

- One-button aspiration and dispensing
- Four pipetting modes: Pipette, Reverse, Repetitive, Mix
- Fill a 96-well plate in a single cycle using repetitive mode
- Single- and multi-channel options
- Volume range from 0.1 μ l to 1,200 μ l



Pipetman L or G

Manual air-displacement pipettes for routine laboratory use.

- Fully autoclavable
- Lockable volume setting
- Adjustable tip ejector button
- Ergonomic design to reduce user strain
- Single- and multi-channel options
- Volume range from 0.1 μ l to 10 m ℓ



Positive Displacement Pipettes

Accurate pipetting for challenging samples.

- Suitable for viscous, corrosive, or volatile liquids
- Minimises cross-contamination
- No recalibration required
- Volume range from 1 μ l to 12.5 m ℓ



Pipette Fillers

Motorised pipette controllers for fast, controlled aspiration.

- Suitable for plastic and glass pipettes (1 – 100 m ℓ)
- Continuously adjustable speed
- Dispenses 25 m ℓ in approximately 4 seconds
- NiMH battery provides up to 8 hours of operation
- Smooth, precise dosing control

Pipette Tips

- Filter, non-filter or specialised
- Aerosol barrier tips
- Bulk or racked
- Sterile¹ or non-sterile
- Fully traceable - quality certificates and certificates of sterilisation available





PCR Tubes & Strip Tubes

We specialise in high-quality PCR solutions, offering both individual PCR tubes and PCR strip tubes tailored to meet your laboratory needs. Our products are designed for optimal performance and reliability, ensuring the integrity of your samples throughout the amplification process.

- Certified free of RNase, DNase, DNA, PCR inhibitors, and tested pyrogen-free
- Ultra-thin, uniform wells ensure optimal heat transfer and reaction efficiency
- Available with dome, frosted flat, or optically-clear caps for qPCR
- Strip tubes are available with angular caps, separate caps, or hinged attached caps
- Available in 8-strip or 12-strip configurations
- Feature robust 3-point interwell linkages for increased rigidity



PCR Plates

- Manufactured from virgin, medical-grade U.S. FDA approved polypropylene
- High thermocycler compatibility
- Well ridges reduce sample evaporation when sealing with film, foil, or associated strip caps
- Alphanumeric indexing
- Ultra-thin, uniform wells ensure optimal heat transfer for high reaction efficiency
- Certified free of detectable DNase, RNase, PCR inhibitors and tested pyrogen-free

CONSUMABLES

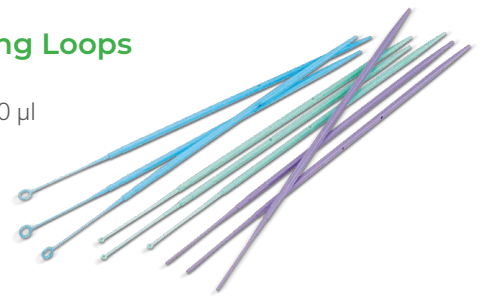
Petri Dishes

- Stackable dishes
- Available in sterile and non-sterile options
- Vents for improved gas exchange
- Made from crystal polystyrene for optimal clarity



Inoculating Loops

- Sterile
- 1 µl or 10 µl
- Plastic



Bunsen Burner

A laboratory tool that produces a controlled gas flame. Used for sterilising equipment, heating samples, and supporting soil or plant analysis ensuring accurate results and preventing contamination during testing procedures.

Typical Applications:

- Sterilising tools
- Heating samples



Traditional Microbiological Media

Neogen™ media and supplements are trusted for reliable bacterial culturing.

- Over 300 media, diluent, broth & supplements available
- Selection of media covers all organisms
- Available in various pack sizes: 500 g, 5 kg, 10 kg and 25 kg
- Compliance with global reference methods and standards across multiple industries



Sample-ready Petrifilm®

Streamline your microbiological testing with Petrifilm® Plates. These ready-to-use solutions enhance efficiency by eliminating the need for traditional agar preparation, saving time and resources in your laboratory.

- Prepared plates with nutrients and indicators for precise culturing
- AOAC / AFNOR validated for trusted performance

Stuart CC-200 Digital Colony Counter

An automated solution for streamlined colony counting, ideal for food microbiologists working with Petri dishes.

- 17x magnifying lens for enhanced visibility during counting
- Detects colonies effortlessly with a simple felt pen activation
- Compatible with 50 to 90 mm Petri dishes for versatile use
- Features adjustable pressure sensitivity and audible feedback for precise results
- Equipped with energy-saving LED illumination and an antimicrobial coating for added reliability



Synbiosis Automated Colony Counter

Designed to meet the demands of high- and low-volume food laboratories, this automated system ensures accurate and efficient colony counting.

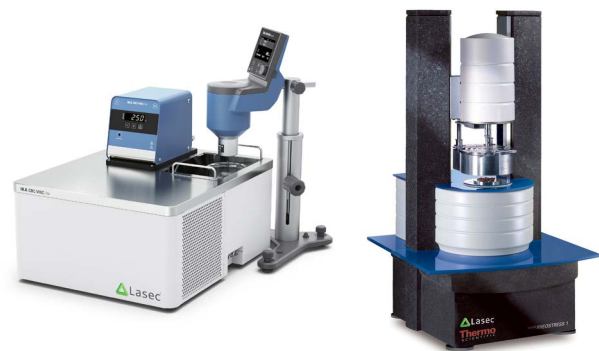
- Handles Total Plate Counts and chromogenic media with ease
- Versatile for gridded filter paper, water samples, pour plates, spiral plates, and streak plates
- Supports species identification and accommodates large plates (up to 150 mm)
- Compatible with dilution series plates, enhancing flexibility for diverse testing requirements

Viscometers

Measures fluid viscosity under controlled conditions.
Used for product quality control and formulation analysis (R&D);
Cell culture, extraction and pre-treatment of biomass.
Ensures quality and compliance.

Typical Applications:

- Fertilisers
- Agrochemicals
- Oils
- Liquid feeds



Ultrasonic Bath

A laboratory device that uses high-frequency sound waves in liquid to clean and prepare equipment or samples. In agricultural settings, it is used to remove contaminants from tools and assist in the preparation of soil, water, or plant samples.

Typical Applications:

- Cleaning lab equipment
- Extracting residues
- Dispersing soil or plant samples

MOLECULAR BIOLOGY & GENETICS

Used for DNA extraction, PCR analysis and genetic studies.

DNA Extraction

Chemagic Automated Extraction Instrument

The Chemagic™ range delivers automated, high-quality automated nucleic acid extraction using advanced magnetic bead technology. Designed for efficiency and reproducibility, these systems enable reliable isolation of DNA and RNA from a wide variety of sample types and throughput requirements.



RBC Manual Extraction Kits

RBC Bioscience's extraction kits are specially designed for the isolation of high-quality nucleic acids, including microRNA, from a variety of sample types, such as whole blood, plasma, bacteria, serum, cultured cells, plants and tissues. These kits are optimised for broad range use, and reagents can be added to this to perform other actions, ensuring flexibility, efficient and consistent results. Ideal for applications in gene expression studies, PCR, qPCR, and Next-Generation Sequencing (NGS), these kits deliver high quality end-product that is ready for any downstream analysis.

- Manual Spin Column Extraction Kit
- RNA / DNA from viral, bacterial, plant, tissue & blood
- Consumables included
- Instructions for use included
- Up to 120 ng / µl



Q-Extract DNA Extraction Solution

Enables fast, easy extraction of PCR-ready DNA from diverse samples in as little as 8 minutes.

Also available as:

- A kit with Taq DNA Polymerase 2x MasterMix RED
- A kit with TEMPase Hot Start DNA Polymerase 2x Master Mix A BLUE



G2 DNA / RNA Enhancer

Enhances microbial DNA yield from difficult samples (e.g., soil, clay) by relieving inhibitory DNA-particle complexes; used alongside commercial kits or extraction methods.



Mastermixes

iProof High-Fidelity MasterMix Kit

iProof High-Fidelity features a thermostable polymerase, utilising Sso7d fusion, providing highly accurate amplification targets up to 37 kb, making it a 52-fold more accurate than the standard Taq polymerase. In addition, allows for high processivity, dramatically reducing extension time. Overall it provides successful amplification of long products, with higher yields in a short time for conventional PCR assays.



SSoAdvanced Universal Probe / SYBR Supermix

SSoAdvanced Universal Probe and SYBR Supermix is a high-performance real-time PCR supermix utilising SSo7d fusion technology which provides higher processivity, increased PCR inhibitor tolerance, enhancing sensitivity, and robust performance for challenging templates.

Reliance One-Step Multiplex RT-PCR Supermix

The Reliance One-Step Multiplex RT-PCR supermix is a ready-to-use, room-temperature stable, 4 x reaction master mix which is able to amplify up to 5 targets in a single reaction. Incorporating the SSoAdvanced polymerase technology, it provides great inhibitor resistance, increased sensitivity and accuracy. Ideal for viral / pathogen detection, Gene-expression and diagnostic research.



Taq DNA Polymerase RED

Recommended for routine PCR applications requiring high yield and also reliable DNA amplification. The included inert red dye allows for easy identification of enzyme addition, confirmation of complete mixing and allow direct loading onto your gel. This dye also has no effect on downstream processes.

Also available as:

- A 2x Master Mix with inert RED dye

Multiplex Tempase 2x Master Mix

Allows for simultaneous amplification of two or more amplicons in a single tube. The need for optimisation is minimised and reactions can be set up at room temperature.



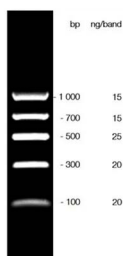
High Fidelity Hot Start

AQ97 Hot-Start High Fidelity DNA Polymerase

A thermostable, engineered DNA polymerase designed for low-bias, high-fidelity amplification across diverse amplicons, featuring a 2-minute hot start and >60× Taq fidelity.

Also available as:

- AQ97 HiFi Hot Start 2x Master Mix
- AQ97 HiFi Hot Start 2x Master Mix RED



Ladders

Iqon Ladders

Cost saving, ready-to-use dsDNA ladders supplied in 0.5 ml packs for 100 lanes. It ranges from 100-500 bp, 100-1000 bp, and 100-3000 bp.

Water

PCR Grade Water

Ultrapure water intended for use in molecular biology applications including PCR. Free of human DNA, endonuclease-, nicking-, and exonuclease activity.



Nuclease Free Water for Molecular Biology

Ultrapure water that is suitable for PCR and other molecular biology techniques requiring nuclease-free conditions such as RT-PCR, cDNA synthesis or qPCR. Free of Human DNA, living organisms, DNase, RNase, and protease activity.

Clean Up

PureIT ExoZAP PCR Cleanup

A rapid one-step PCR cleanup that takes 5 minutes and improves sequencing and SNP analysis, no spin columns or magnetic beads required.



Mycotoxin Testing

AgraStrip® - Qualitative Test

Determine the presence of total aflatoxin in grains, corn, peanuts, and more. The qualitative test strips analyse total aflatoxin at three cutoff levels, namely 4 ppb, 10 ppb and 20 ppb. The cutoff levels allow for an easy visual interpretation of the results after 5 minutes assay time.

- Minimal materials needed
- Storage at 2 – 25 °C
- 5-minute assay
- No sophisticated training necessary



GMO Testing

AgraStrip® Pro Watex®

The Agravision Pro reader is designed specifically for compatibility with AgraStrip® Pro test kits used for detecting mycotoxins, GMOs, and allergens. The device measures the intensity of the test line on AgraStrip® Pro lateral flow devices (LFDs) and boasts the capacity to simultaneously run up to 4 distinct tests, enhancing both efficiency and accuracy.

Available GMO Tests:

ITEM	DESCRIPTION	TRAIT	COMMODITY	ITEM NO
Agrastrip® Pro RUR Bulk Grain Strip Test	50 tests	CP4 EPSPS	Soy	10006554
Agrastrip® Pro LL Bulk Grain Strip Test	50 tests	PAT	Corn, Soy, Canola	10006555
Agrastrip® Pro RUR HS Bulk Grain Strip Test	50 tests	CP4 EPSPS	Corn, Soy, Canola	10006553
Agrastrip® Pro VIP3A Bulk Grain Strip Test	50 tests	VIP3A	Corn	10007131
Agrastrip® Pro Cry1F Bulk Grain Strip Test	50 tests	Cry1F	Corn	10007279
Agrastrip® Pro Cry34Ab1 Bulk Grain Strip Test	50 tests	Cry34Ab1	Corn	10007280
Agrastrip® Pro Cry1A Bulk Grain Strip Test	50 tests	Cry1A.105 / Cry1Ab	Corn	10007278
Agrastrip® Pro Reader	Reader	N / A	N / A	10006324
Quantitive Extraction Buffer - 1 ℓ	Buffer	N / A	N / A	10001348
Quantitive Extraction Buffer - 4 ℓ	Buffer	N / A	N / A	10001349
Quantitive Extraction Buffer - 20 ℓ	Buffer	N / A	N / A	10001350

Instrumentation

Bio-Rad T100

Conventional end-point PCR instrument used for the amplification of DNA or RNA. It's a robust end-point PCR instrument allowing for the amplification of gene regions of interest, providing confirmation of pathogens present, plant species type or variation, microbial presence in soil and plant interaction and an integral part of library preparation for Next-Generation sequencing.

Typical Applications:

- Amplification of gene regions allowing for PCR analysis using agarose and gel imaging technology or library preparation for Next-Generation Sequencing for microbe, plant and animal gene screening or pathogen detection.



Bio-Rad CFX Opus

Real-Time PCR instrument used for the amplification and analysis of DNA or RNA. It's a modern day, dynamic real-time PCR instrument used for gene analysis including gene expression, end-point analysis for sequence detection, protein thermal shift assays and assay optimisation able to detect up to 5 gene targets in a single well. The instrument provides results in real-time able to analysis up to 5-different gene regions in a single well which can be tailored to the detection of pathogens for plant or animal, study gene expressions within plant or animal and the presence or absence of bacteria within a population.

Typical Applications:

- Amplification of gene regions allowing for PCR analysis in real-time without the need for agarose gels and gel imagers, analysis of gene expression and detection of pathogens and characterisation of plant and animal genes or gene expressions



Biomark™ X9 System by Standard Biotools

A microfluidics-based benchtop platform for high-throughput genomics applications, supporting efficient workflows from discovery through to screening.

- Supports real-time PCR and NGS library preparation in a single system
- Generates up to 9,216 PCR datapoints in 2 hours
- Prepares up to 384 barcoded, NGS-ready libraries in 8 hours
- Enables nanoscale reaction volumes for cost-effective, scalable profiling
- Suitable for gene expression, rare variant detection and pharmacogenomics





Bio-Rad Geldoc Go

Benchtop Imaging system providing high resolution, publication quality images and analysis for nucleic acids or protein gels. Used for the analysis and identification of PCR products after end-point PCR thermal cycling as well as for colorimetric protein detection following SDS-PAGE.

Typical Applications:

- Image capturing of Nucleic acids and proteins following End-point PCR or SDS-PAGE from any type or organism, with specific reference to pathogen detection, plant / microbe protein identification

Bio-Rad Chemidoc MP

Benchtop advanced Imaging system of gels, blots for nucleic acids and proteins with a multiplex fluorescence detection system. It's an advanced, benchtop gel imaging system able to detect nucleic acids and a wide range of different stains for proteins, multiplex fluorescence, chemiluminescence for identifying and quantifying proteins, protein-ligand interactions of plant, animal characterisation and cascades using 3-channel fluorescence system.

Typical Applications:

- Protein, including stain-free and nucleic acid gel imaging and documentation as well as blotting for identifying and quantifying of nucleic acids and protein characterisation including protein-ligand interactions
- The chemidoc MP instruments provides state of the art imaging system to study protein plant, soil and animal breeding characterisations and ligand interactions



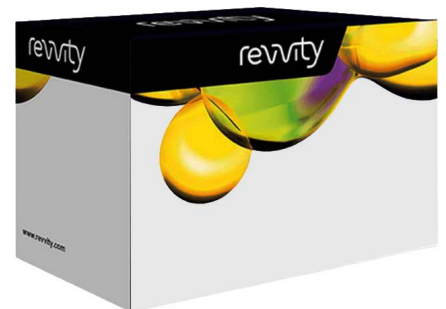
NEXT GENERATION SEQUENCING

NEXTFLEX HT Agrigenomics Low-Pass WGS Kit

Low-pass whole genome sequencing (LP-WGS) offers a cost-effective approach to sequencing entire genomes at coverages ranging from 0.1 x to 10 x. This technique, followed by imputation, is becoming the preferred method for genotyping among plant and animal breeders.

Compatible with Illumina[®] and Element[®] Biosciences platforms:

- Suitable for all kind of plant samples
- Robust – fast and easy protocol
- Wide input range – from 1 ng to 500 ng
- PCR-free – compatible workflow
- High throughput – up to 1,536 UDI barcodes



AUTOMATED LIQUID HANDLING

apricot® Series

Flexible and intuitive automated liquid handling systems to streamline routine workflows.

- Compact design ideal for space-conscious labs
- Simplifies tasks like copying, mixing, pooling, aliquoting, and serial dilutions
- Suitable for a wide range of applications and budgets



mosquito® Series

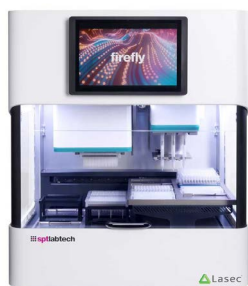
High-precision nanolitre liquid handling to support miniaturised workflows in life sciences.

- Ideal for genomics, crystallography, and drug discovery applications
- Positive displacement pipetting ensures accuracy and consistency
- Reduces sample, reagent, and plastic consumption for cost-effective workflows

dragonfly® Series

Non-contact liquid dispensing with precision and flexibility across a wide volume range.

- Positive displacement syringe technology ensures accuracy across viscosities
- Handles nanolitre to millilitre volumes with high repeatability
- Minimises dead volumes and pipetting errors for streamlined workflows
- Ideal for genomics, biochemical assays, and protein crystallisation



firefly® All-in-One System

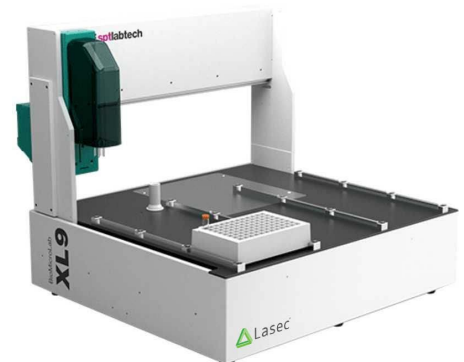
A compact, integrated solution that streamlines genomic research from start to finish.

- Combines pipetting, dispensing, incubating, and shaking in one platform
- Enhances efficiency and reproducibility in sample and library prep
- Designed to simplify complex workflows in genomics labs
- Small footprint ideal for space-conscious environments

BioMicroLab® Sample Management Automation Instruments

Versatile and user-friendly tools designed to streamline and optimise sample handling workflows.

- Ideal for labs at any stage of automation, from entry-level to fully integrated
- Boosts efficiency and throughput while reducing manual errors
- Supports reliable, high-throughput sample processing
- Designed for flexibility across a wide range of lab applications



BioQule™ NGS Solution

Automated DNA sequencing library preparation system designed to streamline genomic workflows with minimal hands-on time and user training.



- Compatible with library prep chemistries from top vendors including Revvity, Illumina, Qiagen, Watchmaker Genomics, and Claret Biosciences
- Reduces hands-on time by up to 80 %, processing up to 8 samples per run
- Integrates DNA extraction, library preparation, and quantification into a single workflow
- Intuitive interface allows quick setup with just a reagent plate and cartridge
- Produces robust DNA libraries optimised for Illumina sequencing platforms
- Ideal for low-throughput labs, requiring no advanced automation expertise

Fontus™ Workstations

Designed to simplify workflows and improve turnaround times, Fontus™ liquid handlers combine easy-to-use software, optimised deck access, and verified protocols to deliver reliable, high-performance automation.

- Three portfolios tailored to your needs: application-specific (including dedicated NGS), customisable, and high-efficiency workstations
- Verified NGS protocols for faster setup and reliable results
- Save time and boost productivity with intuitive, powerful automation
- Reliable support to safeguard your projects and reduce downtime
- Flexible configurations to grow with your evolving research demands





Revvity Sciclone™ Workstations

Proven performance and an open-deck design make the Sciclone™ G3 workstations ideal for automating a variety of laboratory applications. Their integration-friendly architecture supports flexible configurations tailored to your research needs.

- Suitable for genomics, proteomics, immunoassays, and cell-based assays
- Open-deck design allows easy customisation and integration
- Reliable automation to streamline complex workflows
- Configurable to fit diverse laboratory requirements

JANUS® Workstations

Flexible automated liquid handling workstations designed to meet diverse sample preparation needs. Configurable across multiple models and options to suit throughput, capacity, and volume requirements.

- Four versions available: Mini, Standard, Expanded, and Integrator
- Customisable pipetting arm technology and labware movement options
- Supports a broad dynamic volume range and throughput capacity
- Recommended use with Revvity branded pipette tips for maximum precision and accuracy

For research use only. Not for use in diagnostic procedures.



Zephyr™ Workstations

Compact and adaptable automated liquid handling workstations with a small footprint designed for convenient benchtop use. The deck design allows easy access from all sides, enhancing workflow efficiency and flexibility.

- Supports row-wise and column-wise serial dilutions
- Holds lids during dispensing to improve sample handling
- Seamless integration with other lab instruments
- Barcode identification for sample tracking and management

CHEMICAL & NUTRITIONAL ANALYSIS

pH Meters

Portable and benchtop GLP meters that are supported by a wide range of specialised pH electrodes, including options for direct measurement of soils.



EC Meters

Portable and benchtop GLP meters that are supported by high quality conductivity cells for all types of water.



WATER ANALYSIS

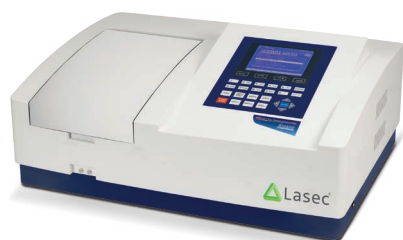
Water quality impacts soil health, making water analysis a critical step in agricultural process to minimise soil degradation, and improve crop yield and quality.

Our wide range of portable and benchtop solutions for water testing allows for both in-field and advanced laboratory testing of water.



KEY WATER TESTING SOLUTIONS

- Photometers and UV / Vis spectrophotometer programmed with methods for water analysis, including methods for heavy metals
- Full range of reagents for the chemical analysis of water
- Specialised equipment for Chemical Oxygen Demand (COD), Biological Oxygen Demand (BOD), Dissolved Oxygen (DO) and Colour determination are also available
- EPA and ISO compliant turbidity meters with a measuring range of up to 4000 NTU



SOIL NUTRIENT TESTING EQUIPMENT

Spectrophotometer

Our range of UV/VIS spectrophotometers can provide crucial information about soil quality. Available as single or dual beam options, these are supported by a wide range of specialised accessories and cuvettes for all applications.



Moisture Analysers

RADWAG moisture analysers are hi-tech measuring instruments intended for quick determination of relative moisture content, dry mass content and other parameters in samples.

Typical Applications:

- Ideal for testing moisture content in grain, seeds, nuts, sugar, yeast, and various processed foods

Calorimeters (Bomb)

Determination of the gross calorific value of animal feeding stuffs, animal products, and faeces or urine via combustion. Used for understanding and optimising agriculture nutritional feed and waste energy analysis. To determine the physiological calorific value the energy content of the food is determined at first. Ensure quality and compliance.

Typical Applications:

- Animal feed evaluation
- Waste-to-energy studies
- Biomass



Rotary Evaporators

Solvent separation, removal and recycling under reduced pressure. Used for concentration of extracts to a predefined sample volume prior to analysis in HPLC and GC/MS.

Typical Applications:

- Dry pesticide extracts under vacuum distillation for wastewater and groundwater analysis

Microwave Digestion Systems

A microwave digester is a laboratory device that uses microwave energy and strong acids to rapidly break down agricultural samples into a solution for nutrient and contaminant analysis. It's a critical sample preparation step in the agricultural analysis workflow. It ensures that solid samples (soil, plants, fertilisers) are converted into a form suitable for precise chemical testing.

Typical Applications:

- Soil analysis
- Plant tissue analysis
- Fertiliser testing
- Food quality assessment
- Environmental monitoring





Kjeldahl Systems

The Kjeldahl system is a laboratory method used to determine the total nitrogen content in agricultural samples such as soil, plants, fertilisers, and food. It works through three main stages: digestion, distillation, and titration. It's a classical laboratory method used to determine nitrogen content in agricultural samples. It is widely applied because nitrogen is a key indicator of protein content and soil fertility.

Typical Applications:

- Soil analysis
- Fertiliser analysis
- Animal feed testing
- Grain and crop analysis
- Seed analysis
- Plant tissue analysis
- Compost and organic material testing

Water Purification Systems

A water purification system is a laboratory setup designed to produce high-purity water free from dissolved salts, ions, organic matter, and microbes. In agricultural analysis, such water is essential to ensure accurate, reliable, and contamination-free results in soil, plant, fertiliser, and food testing.

Accurate agricultural testing requires high-quality water. Impurities in water (minerals, ions, organics, microbes) can interfere with chemical reactions, digestion, or instrumental analysis. That's why dedicated water purification systems are essential in agricultural labs.

Typical Applications:

- Soil and plant tissue analysis
- Fertiliser testing
- Food / feed quality evaluation
- Environmental monitoring
- Preparation of high-purity water for instrumental analysis



Ovens

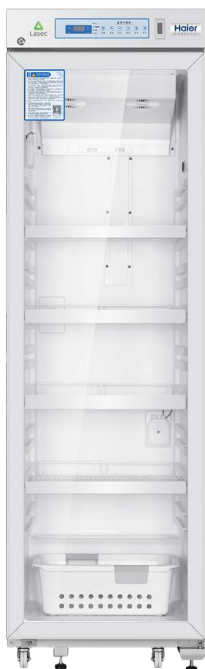
- Dry Heat Ovens are used for a variety of applications in the food industry, agricultural industry and forestry for determining dry content and humidity content (drying oven method) as well as stability testing
- Vacuum Ovens are ideal for drying heat sensitive samples, applications include:
 - **Drying Sensitive Agricultural Products:** Vacuum ovens are used to dry fruits, vegetables, herbs, and other food products while preserving color, flavor, and nutritional value
 - **Moisture and Dry Content Analysis:** They are essential for determining the moisture content of agricultural products, such as milk powder, to ensure quality and compliance with standards
 - **Cannabis and Botanical Processing:** Vacuum ovens are used to process and dry cannabis with solvents like ethanol, ensuring the active pharmaceutical ingredients are not damaged
 - **Research and Development:** They facilitate studies on plant compounds, such as analysing phenolic compounds in botanical samples
 - **Seed and Crop Research:** Vacuum ovens are used to dry seeds and crop samples, allowing for proper storage, stability testing, and research

SAMPLE STORAGE & BIOBANKING



Secure and stable storage of samples for repeat testing, validation, or long-term research.

EQUIPMENT & SOLUTIONS



Laboratory Refrigerators and Freezers

- Immediate to short-term storage for fresh but biologically active samples, or medium-term storage when partial preservation is sufficient
- Storage prior to testing / safety analysis



Ultra-Low Temperature Freezers (-80 °C)

- Long term storage when sample integrity must be preserved at a molecular level
- Prevents enzymatic degradation. Critical for research, traceability and compliance.

The product images shown are for illustration purposes only and may not be an exact representation of the product.

E&OE



Cryogenic Storage Systems (Liquid Nitrogen)

- Ultra-long-term storage where samples must remain viable
- Maintains full biological viability, not just the structure
- Vital for seed banks, biodiversity conservation, crop improvement programs
- Suitable systems for liquid or gas phase storage
- Self-monitoring systems with autofill function available – providing better temperature stability and safer use

Cryoboxes

- Polypropylene (PP) or polycarbonate (PC)
- Suitable for 1 - 2 ml cryotubes
- PC suitable for storage in vapour phase of LN₂
- PP suitable for storage in ultra-low freezers
- 81- and 100-place available
- Alphanumeric indexing
- Various colours



Freeze Dryers (Lyophilisers)

- Post-processing preservation where removing moisture is preferred over freezing
- Drying products and stabilising compounds (nutrients, phytochemicals)
- Ideal for transport, archiving, remote research environments

Data Loggers

Protect valuable agricultural products with continuous temperature and humidity monitoring throughout storage and transport.

Typical Applications:

- Transport monitoring
- Humidity tracking
- Temperature tracking



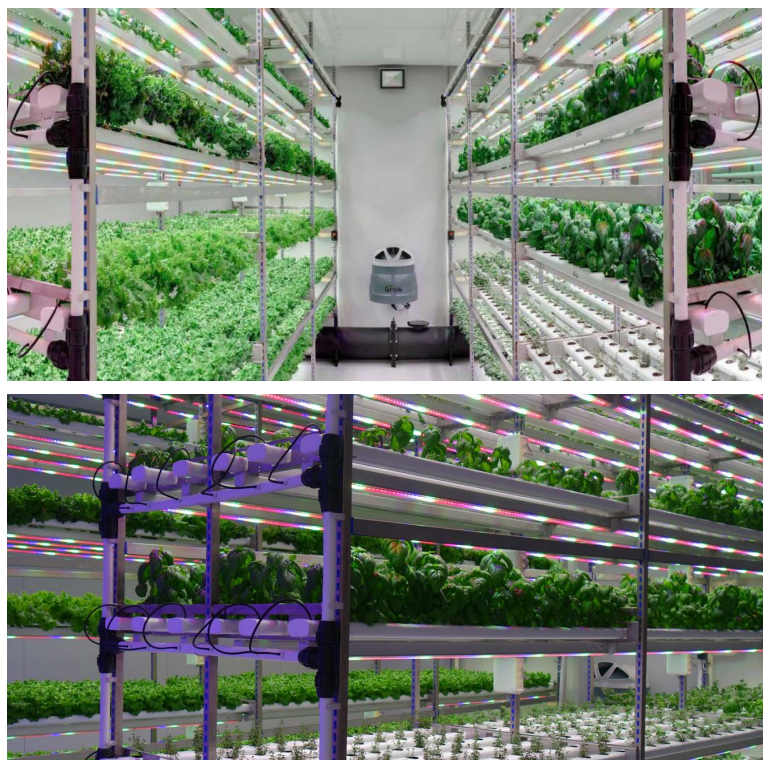
NEED	BEST SOLUTION	APPLICATION
Fresh samples, short-term	Fridge (2 - 8 °C)	Storage prior to testing / safety analysis
Routine storage (weeks–months)	Freezer (-20 °C)	Prevents degradation with partial preservation
Long-term molecular preservation	ULT (-80 °C)	Prevents enzymatic degradation. Critical for research, traceability and compliance
Long-term viability (living material)	Cryogenic (LN ₂)	Maintains full biological viability, not just the structure. Vital for seed banks, biodiversity conservation, crop improvement programs.
Dry, stable, no cold chain	Freeze Dryer	Drying products and stabilising compounds (nutrients, phytochemicals). Ideal for transport, archiving, remote research environments.

CONTROLLED ENVIRONMENTS FOR ADVANCED AGRICULTURAL RESEARCH



Walk-in growth chambers from Aralab are built for precise, repeatable plant research and crop development. Designed to support universities, research institutes, and R&D farms, these chambers enable accurate control of critical environmental parameters including temperature, humidity, airflow, CO₂ concentration, and photoperiod.

Advanced LED lighting systems offer adjustable light intensity and spectra, allowing researchers to simulate natural conditions or isolate specific wavelengths to study plant responses, photosynthesis efficiency, and phenotypic development. Ideal for hydroponic systems and soil-based trials, Aralab chambers provide the consistency required for reproducible results across growth cycles. From climate stress testing and drought tolerance studies to controlled environment agriculture and indoor farming innovation, Aralab solutions empower researchers to accelerate discovery under strict managed conditions.



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E&OE

CONTROLLED ENVIRONMENTS FOR ADVANCED AGRICULTURAL RESEARCH

Standard Incubators

- **Seed Germination & Plant Cultivation:** Precise temperature control (0.1 °C resolution) and gentle heating prevent dehydration, ensuring stable conditions for sensitive plant cultures and seed research from Ambient +5 to 80 °C.
- **Optimal Moisture Control:** All-round heating design ensures minimal evaporation, reducing the need for forced air circulation which can dry out samples
- **Microbiological Quality Control:** Ideal for testing food safety and quality in agricultural products
- **Advanced Hygiene:** IN/IF plus models feature a 160 °C sterilisation routine for the chamber, preventing cross-contamination in agricultural assays
- **Long-Term Testing:** Equipped with internal data loggers (10-year ring memory) and optional software, allowing for comprehensive monitoring and documentation



Peltier Cooled Incubators

- Memmert IPPeco Peltier-cooled incubators are high-precision, energy-efficient environmental chambers ideal for agricultural research, seed testing, and food quality control. Using advanced Peltier technology, these incubators seamlessly handle heating and cooling between 0 °C and +70 °C, offering exceptional stability for sensitive samples.
- **Microbiology & Plant Pathology:** Cultivating microorganisms (bacteria, fungi, yeast) that are pathogens or beneficial organisms in agricultural products requires accurate temperature control, frequently near or below room temperature. They are used for microbial analysis, bacterial count determination, and beer stability tests in food agricultural industries.

Reach-in Climate Chambers

The Memmert Constant Climate Chamber HPPeco is an exceptionally energy-efficient solution designed for precise, long-term stability testing and climate-controlled storage, making it ideal for agricultural research and quality control. Utilising advanced Peltier technology, it offers an environmentally-friendly, low-maintenance, and vibration-free environment for sensitive samples.

- **Plant and Soil Science:** Ideal for plant growth studies, nutrient soil testing, and maintaining precise climate conditions, with optional LED lighting for natural growth simulation
- **Stability and Seed Storage:** Perfect for long-term storage of agricultural products, seeds, and testing the stability of hemp flowers or other dry products
- **Environmental Simulation:** Ensures stable, homogeneous temperature and humidity distribution (10 % to 90 % rh) necessary for reliable bioassays and studies
- **Biological Pest Control Research:** Drosophila and insect breeding



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E&OE

CONTROLLED ENVIRONMENTS FOR ADVANCED AGRICULTURAL RESEARCH

Greenhouse Cooling

Greenhouse environments demand precise temperature control to protect crop quality and ensure consistent yields. LAUDA chillers provide reliable, energy-efficient cooling for hydroponic systems, nutrient reservoirs, and climate control loops. Designed for continuous operation, they maintain stable temperatures even under high solar loads—supporting optimal plant growth and reducing environmental stress.



Seed Germination Paper

Brown germination paper is a durable, highly absorbent paper (often unbleached) used to retain moisture and support seed germination. It provides a stable environment for seeds to sprout while allowing root development.

Pleated germination paper is specially folded to create multiple vertical channels. Seeds are placed between folds, allowing roots to grow downward in an organized and observable way.

These papers are used at the pre-planting and early propagation stages of agriculture and can be used in climate chambers:

- **Seed Quality Testing:** Brown and pleated papers are widely used in seed testing laboratories to determine:
 - Germination percentage
 - Seed vigor and uniformity
- **Controlled Germination Environment:** They provide consistent moisture and aeration, ensuring reliable and repeatable results.
- **Root Development Observation:** Pleated paper is especially useful because:
 - Roots grow straight down along folds
 - Makes it easy to assess root length, health, and abnormalities
- **Decision-Making Tool:** Results from these tests guide farmers and producers on:
 - Whether to plant a seed batch
 - Which crop varieties perform best

Typical Applications:

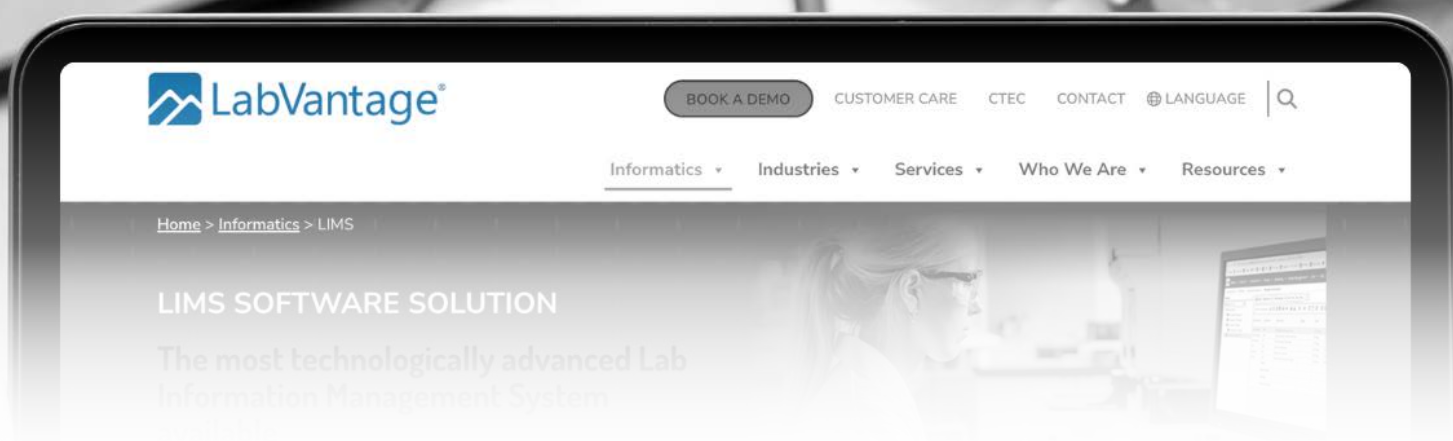
- **Brown Germination Paper**
 - Standard seed germination tests (e.g., roll towel method)
 - Routine seed quality control in laboratories
 - Pre-sowing checks for commercial crops
- **Pleated Germination Paper**
 - Advanced seed testing and research
 - Studying root growth patterns and seedling vigor
 - Breeding programs (comparing varieties)

* Ahlstrom germination paper complies with ISTA and IOSA standards.



The product images shown are for illustration purposes only and may not be an exact representation of the product.

E&OE



LabVantage® LIMS COMPLETES YOUR AGRI WORKFLOW WITH FULL DIGITAL TRACKING



Accurate laboratory data supports informed agronomic decisions, from soil health and crop performance to compliance and yield optimisation.

From real-time soil moisture probes and FLOQSwab® collections to PCR pathogen screening and Kjeldahl nitrogen analysis, every measurement in your field-to-lab pipeline matters. But raw results mean little without seamless integration. Scattered spreadsheets and manual logging fail South African agriculture's demands for export-ready traceability, drought-resilient insights, and precision farming at scale.

LabVantage® LIMS: TRACK IT ALL

LabVantage® Laboratory Information Management System (LIMS) centralises every step - managing samples, instruments, workflows, and results in one powerful platform. With intuitive drag-and-drop configuration, integrated ELN / LES / SDMS, real-time analytics, and customisable dashboards, it transforms fragmented lab data into actionable agronomic intelligence. Pre-configured for food and agriculture labs, LabVantage® ensures end-to-end traceability, workflow automation, and regulatory compliance to drive precision agriculture success.

HOW THE LabVantage® FOOD & BEVERAGE CONFIGURATION STANDS OUT

This modular platform excels in agriculture through its Food & Beverage edition, purpose-built for high-volume testing:

- **Batch / Sample Testing:** Handles mycotoxins, pesticides, GMO screening, and nutrient profiling for grains, feeds, and exports
- **Traceability & Monitoring:** Shelf-life studies, environmental stability, and chain-of-custody from field sensors to COAs
- **ERP / MES Integration:** Seamless field-to-factory data flow, linking weather stations with production planning
- **Proven Results:** Deployed in crop protection, dairy testing, and QA / QC labs - reduces turnaround by 30 % while cutting errors

UNLOCK YOUR DATA'S FULL POTENTIAL

LabVantage® LIMS transforms testing into actionable intelligence:

- **Complete Workflow Tracking:** Links field sensors (PAR quantum sensors, weather stations) through prep (Stomachers, RADWAG balances, centrifuges) to final Certificates of Analysis - no data gaps, full barcode / QR support
- **Real-Time Agri Dashboards:** Monitor soil fertility trends, mycotoxin risks, irrigation efficiency, and feed quality across growing seasons and regions
- **Regulatory Ready:** Automated ISO 17025, HACCP, and FDA documentation with comprehensive audit trails for EU exports and local compliance
- **50 % Faster Turnaround:** Direct instrument integration (Bio-Rad PCR, Kjeldahl systems) eliminates manual entry; AI-driven predictive analytics guide planting, harvest timing, and input optimisation

LABORATORY INFRASTRUCTURE & SAFETY



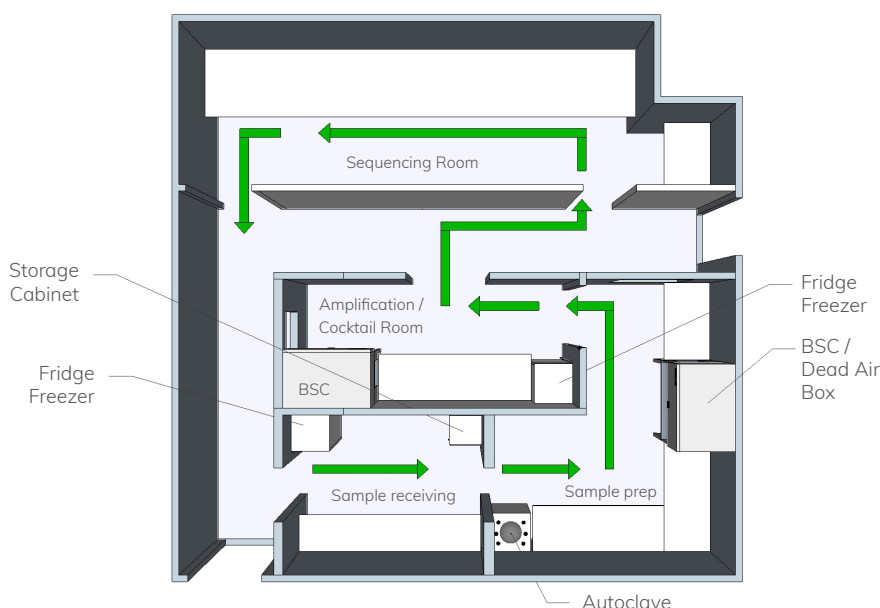
Ensures a compliant, safe, and efficient laboratory environment supporting all stages of the workflow.

LABORATORY FURNITURE AND WORKSTATIONS

CONCEPTUAL DESIGN

Our team of furniture design experts can tailor the perfect furniture to meet your project's requirements.

- ✓ Workflow optimisation
- ✓ Guidance on instrumentation placement
- ✓ 3D render of laboratory layout
- ✓ Various colours of worksurfaces, frames and cupboards available
- ✓ Specialised laboratory taps, gas and waste fittings
- ✓ Additional safety features and accessories



DELIVERY AND INSTALLATION

Our dedicated logistics team will ensure that your furniture is efficiently shipped and delivered to your premises. Once there, it will be ready for installation and oversight by a Lasec® project manager, accompanied by a team of furniture installation specialists.

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E&OE

Ductless Fume Hood

Enclosed filtration workstation designed to capture and filter hazardous fumes, vapours, and particulate matter at the source, providing a safer working environment without the need for external ducting.

Enhances laboratory safety by protecting users from exposure to chemical fumes and odours during handling, mixing, transferring, and analysis of hazardous substances while maintaining flexible installation options.

Typical Applications:

- Chemical handling, solvent dispensing
- Powder weighing
- Sample preparation
- Pharmaceutical applications
- Educational laboratories
- Light chemical processing



Chemical Storage Cabinets

Specialised safety cabinets engineered for the secure storage of hazardous chemicals, flammable liquids, acids, alkalis, and toxic substances, helping to reduce fire risks and prevent chemical exposure in the workplace. Certified according to EN 14470-1 standards with a 90-minute fire resistance rating, offering advanced protection during fire incidents.

Supports safe chemical management and regulatory compliance by providing organised, segregated, and fire-resistant storage solutions that protect personnel, laboratories, and facilities from hazardous incidents while ensuring critical time for emergency response.

Typical Applications:

- Laboratories
- Pharmaceutical facilities
- Industrial plants
- Manufacturing environments
- Educational institutions
- Chemical processing areas
- Safe storage of flammable, corrosive, and hazardous substances

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Lab Coats

Protective lab wear for personnel in laboratory and production environments.

- Available in reusable or disposable formats
- Various sizes available





Safety Glasses

Protective eyewear for laboratory personnel to prevent exposure to chemicals and particles.

Gloves

- Durable gloves for laboratory handling and protection in compliance with safety standards
- Latex or Nitrile



Eyewash Stations

Eyewash solutions designed to provide safe and gentle decontamination in case of eye exposure.

- Eyewash bottle made from polyethylene
- Air vent valve prevents backflow of contaminated liquid
- Perforated spray plate breaks the stream for gentle eye wash

BACTERIA AND BIOFILM DETECTION

Handheld Bacteria & Biofilm Scanners

Bactiscan™, BactiscanPRO™, and Bactiscope™ are user-friendly handheld devices that detect bacteria and biofilm using wave-alternating UV light technology.

- Quickly identify contamination on surfaces and within hard-to-reach pipework
- Ideal as a precursor to ATP swab testing, improving testing efficiency





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