



Sedulitas

PEOPLE | PASSION | PRECISION

Products & Services Catalogue



WORLD-CLASS
INSTRUMENTATION
& PPE



WORKER & PUBLIC
EXPOSURE
ASSESSMENTS



WORKER & PUBLIC
HEALTH RISK
ASSESSMENTS



RADIATION
MONITORING &
PROTECTION
PROGRAMMES



WORKPLACE
HAZARD
MAPS



HSE
AUDIT
PROTOCOLS



Sedulitas

PEOPLE | PASSION | PRECISION

SEDULITAS provides innovative, cutting edge solutions to **Workplace Hazard Sampling** using world-class **Instrumentation** that deliver **instantaneous results**, allowing you to keep your employees safe in real-time.

FOLLOW US ON



SEDULITAS can assist your company to become **ISO compliant** and can offer your business uniquely tailored comprehensive **Health, Safety and Environmental Management Solutions** including **Specialised Occupational Hygiene Services**.

**"HEALTHY WORKERS ARE PRODUCTIVE AND HAPPY,
WHICH CONTRIBUTES TO LONG TERM BUSINESS VIABILITY
AND SUSTAINABILITY."**



PJ (JAKES) JACOBS

COMPANY MANAGING DIRECTOR

Master of Public Health Degree (Occupational Hygiene)
Professional Occupational Hygienist (ROH) with SAIOH (0331)
Professional Association Membership: BOHS, AIHA, MVSSA
and Others
Radiation Protection Officer

**LET US HELP YOU KEEP YOUR WORKERS
HEALTHY AND YOUR WORKPLACE PRODUCTIVE.**

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Airborne Pollutants - Personal

Traditional Sampling

Pumps

Personal sampling pumps that are intrinsically safe, reliable, and fitted with flow control which keeps the pumps calibrated to OHSA specifications.

The Escort ELF® sampling pump has a patented laminar flow mechanism — a one-of-a-kind system engineered to maintain a steady flow rate within $\pm 2.5\%$, even when altitude, temperature, battery voltage or sample loads change.



Sampling Media

We offer a full range of sample media including MCE, PVC and Silver Membrane filters and vapour sampling tubes etc.



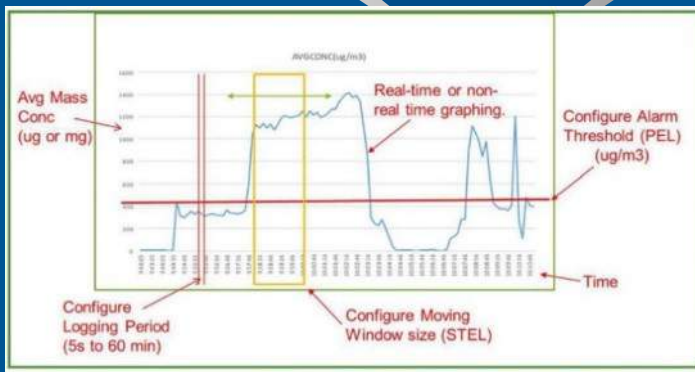
Cassettes and Cyclones

All sample cassettes and premium quality BGI cyclones available to ensure repeatability, reliability, and accuracy of results

Real-Time Sampling



DustCount



The DustCount

combines the advantages of real-time dust monitoring with a built-in filter cassette for sample composition analysis and HSE 4.0 networking for effective efficient dust monitoring.

The 9000 supports interchangeable impactors for PM 2.5, PM 4, and PM 10.

It can be used in combination with the **FTIR** to provide near real-time silica exposure results.



Airborne Pollutants - Environmental

Traditional Sampling



Fallout Dust Sampling

Dust Buckets

Sedulitas can provide both buckets and the servicing of these buckets to assist with the monitoring of dust fallout.

Ambient Particulate Air Sampling

BGI by Mesa Labs

BGI samplers use BGI pioneering technology to meet and exceed the requirements for ambient particulate sampling dictated by the U.S Environmental Protection Agency. This includes the design of reliable PM_{10} , $PM_{2.5}$ and PM_1 Inlets, volumetric sample flow rate control, data logging and software for report and data processing.

Ambient particulate samplers deposit ambient particulate matter onto pre-weighed filters for later gravimetric or speciation analysis in a laboratory (TSP , PM_{10} , $PM_{2.5}$ or $PM_{10-2.5}$)



PQ 200



PQ 100



OmniFT

Real-Time Sampling



Zephyr

Zephyr® sensors provide detailed air quality measurements in real-time to help identify pollution hotspots at localised level such as busy road junctions. Extensive networks can be easily deployed for city-wide analysis and optimisation of pollution-lowering initiatives.

Met One Instruments

Met One Instruments, Inc. offers comprehensive lines of ambient particulate monitors to sample, measure and log the concentration of ambient particulate matter (TSP, PM₁₀, PM_{2.5} or PM_{10-2.5}).



Dual Ambient Monitor/Sampler

E-Sampler



E-BAM Plus

Silica Analysis

Spectrum Two

Silica analysis at your own workplace:

- Save valuable time
- Save costs
- Provide exposure data to action exposure reduction the day it occurs
- Can be used by anyone with basic training and a basic understanding of silica analysis
- **Sedulitas can provide training and commission on-site as per client requirements!**

SPECTRUM TWO **- FTIR**



The **Spectrum Two** breaks new ground in operational simplicity, combining superb performance with low maintenance design.

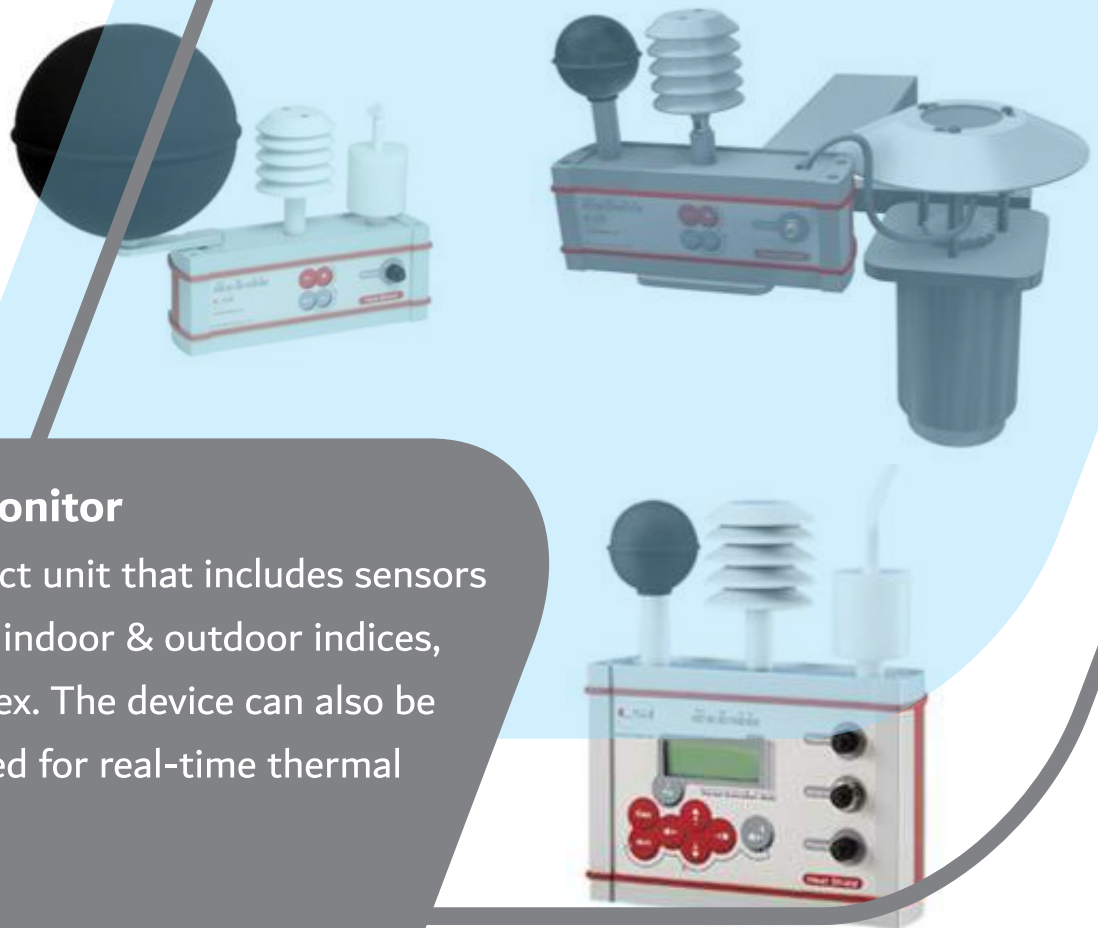
For the first time, true laboratory performance IR for everyday analysis is now possible, for everyone, everywhere. PerkinElmer recognizes that every analysis application is different.

For fast near real-time quantification of silica, the Spectrum Two is unequalled.



Thermal Environment

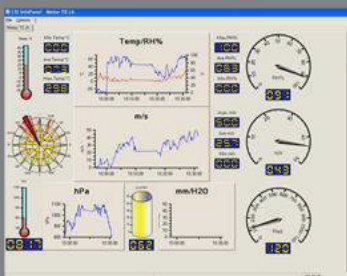
HEAT SHIELD



Real-time WBGT Monitor

Heat Shield is a compact unit that includes sensors to measure the WBGT indoor & outdoor indices, Heat Index and Humidex. The device can also be deployed and configured for real-time thermal sampling.

Heat Shield can be connected to an anemometer: in this case it is able to acquire all the quantities necessary for the GIDAS TEA program to calculate other indices for thermal comfort (PMV-PPD, TO, ISO7730), thermal stress (PHS, ISO7933) and cold stress (IREQ, Dlim, ISO11079).



GIDAS TEA allows in-depth analysis, simulations, and reporting.

Included with Heat Shield is the HS Manager program that allows you to download data, perform analyses and evaluate the operator's limits in the environments according to the variables defined in the ISO 7243 standard.

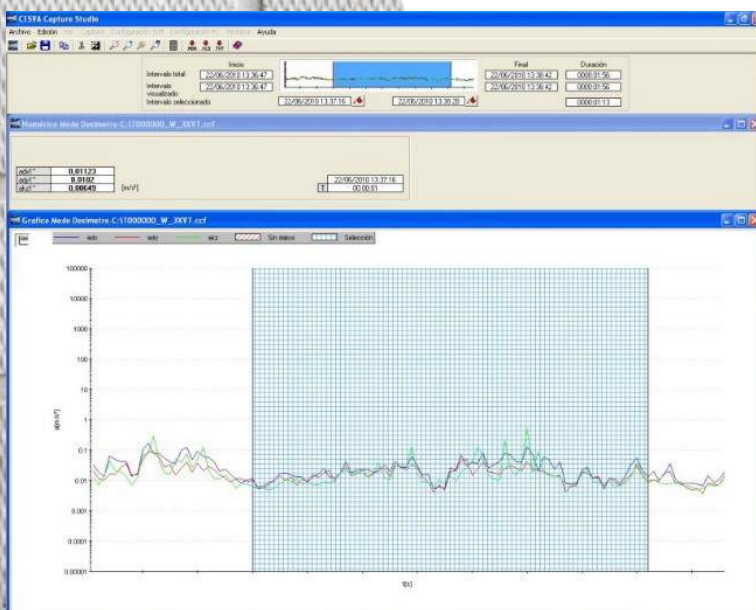
Vibration

VC431 – Triaxial Vibrometer

The **VC431** is a triaxial vibrometer (in accordance with the regulation ISO 8041) and the ideal instrument for vibration measurements in-line with Directive 2002/44/EC on risks arising from the exposure of workers to mechanical vibration.

The **VC431** can also evaluate the effect of vibration on the structure of buildings and terrain (UNE 22-381-93).

With the CESVA Capture Studio software (included) the measurements carried out with the VC431 can be downloaded (USB) and the results analysed quickly and simply.



Its reduced weight, versatility and user-friendliness make it the hand-held instrument par excellence for the assessment of risks related to vibration.

Illumination



Luxmeters

Luxmeters with photometers for measuring illuminance, are equipped with a photoelectric detector and with a silicon photodiode coupled with a filter to modify its response and to get it as close as possible to the reference function $V(\lambda)$ defined in the CIE (International Commission on Illumination).

These are hand-held autonomous instruments, fully automatic designed for measuring illuminance.

SOURCES AND EXAMPLES

With memory storage, it allows the storage of datasets for processing on a computer.

 <p>FLORESCENT TUBE WITH THREE BANDS</p>	 <p>HIGH PRESSURE MERCURY LAMP</p>
 <p>SODIUM VAPOUR LAMP</p>	 <p>METAL HALIDE LAMP WITH THREE ADDITIVES (RARE-EARTH METAL HALIDE LAMP)</p>
 <p>WHITE LED: NEUTRAL COLOUR</p>	 <p>HALOGEN QUARTZ LAMP/ TUNGSTEN (STANDARD SOURCE)</p>

Electromagnetic Fields

Can measure all common sources of EMF:

- Microwaves
- Electricity
- Telecommunications
- Welding
- Wifi

The **SMP2** – EMF equipment designed to measure people's EMF exposure in accordance with ICNIRP, IEC, EN, IEEE, European Directive 2013/35/EU, FCC, Safety Code 6 (2015) and other standards.



EMF Equipment offered provides a unique combination of spectrum analysis, broadband and static field measurements in a single device.



The **WaveMon** is a personal monitor for the continuous monitoring of workers' EMF exposure.

The **MonitEM** provides continuous monitoring of exposure to electromagnetic fields (non-ionising radiation, NIR) generated by telecommunication facilities or other sources of radiation.

Ultraviolet Radiation



Various UV
measurement sensors

and applications are available :

- UV from the sun
- UV from man-made sources
- UV for disinfectant purposes



A smartphone (Android) based UV-Index radiometer with graphic display for hazard assessment of natural UV radiation in workplaces according to ISO 17166 standard (UV-Index).

The **UVI** and **UVC** includes a UV index sensor with PTB traceable calibration, a calibration certificate, and a smartphone.

Specialised Respiratory Protection



RPB Z-Link

Respirators for various applications including sand/shot blasting, spray painting, welding, foundry work and abrasive blasting.



The RPB series of respirators was designed with your comfort as top priority.

The result is a lightweight, ergonomically balanced respirator that reduces aches and strains on your neck and back. With six points of adjustment on the RPB Comfort-Link™ head suspension, you can set your preferences, ensuring a stable, individualized fit. Optional side padding further increases comfort and stability.



Respiratory Fit Testing



Accufit 9000

Today's tough environment means Quantitative Fit Tests can make the difference between safe and at-risk exposures.



It is a simple, easy-to-use device that includes OSHA's streamlined 2019 CNC protocol. Rugged, quick to deploy, and fully featured, AccuFIT and AccuFIT PRO both provide answers you need in a format you can use and come with a 3-year warranty.

The following respirators can be tested:

- N95
- P100 & N99
- FFP1, FFP2, & FFP3
- Full- & Half-Face Elastomeric

**The new
AccuFIT 9000 PRO
has all the capabilities
you need to accurately
fit ALL mask types.**



**QUANTITATIVE
TESTING FOR ALL
RESPIRATOR TYPES**

NEW AccuFit 9000 PRO

**Make a Difference.
Make it Count.**



Indoor Air Quality (IAQ)

Various world class, ISO 17025 calibratable instrumentation available for measuring IAQ parameters such as relative humidity, CO, CO₂, air velocity and air changes per hour in indoor workspaces.

Can also be configured to measure other parameters such as SO₂, H₂S, NO₂, CH₂O and others.

**AMI 310****KCC 320**

Humidity data-logger
- Temperature /
Pressure / CO₂

**DBM 620****SI-AQ PRO**

Air Velocity & Pressure



	VT 110 / VT 115	LV 130
	Hot Wire Probe	Rotating Vane Probe
AIR VELOCITY	0,15 to 30 m/s	0,3 to 35 m/s
AIRFLOW	0 to 99,999 m ³ /h	0 to 99,999 m ³ /h
TEMPERATURE	0 to +50°C	0 to +50°C

Thermo-anemometers

Both hotwire and vane anemometers are available to assist with the measurement of airflow.



Gas Detectors

FG 110 & DF 110

Gas detectors with display of the concentration of measured gas in ppm, %VOL and %LEL, to detect methane, LPG and other hydrocarbons and refrigerant gas leaks.

A Gas leak detector that has been developed to provide efficient, and reliable quality performance.



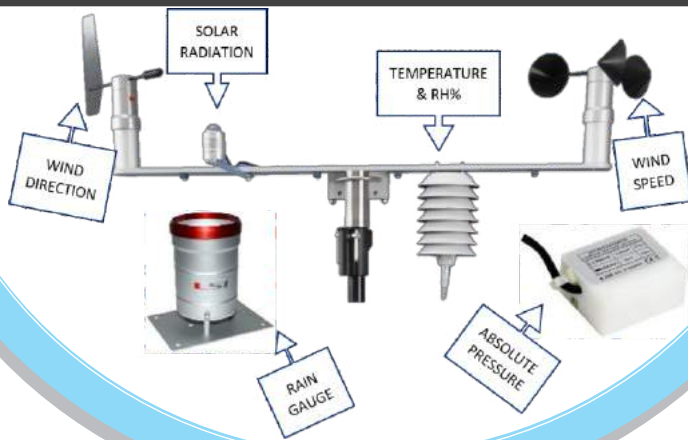
Supplied with a tester to ensure unit works properly

Suitable for use:

- To detect gas leaks
- In refrigerant plants – complies with EN 14624 standard
- To check integrity of gas plants
- To monitor confined spaces



Automatic Weather Stations



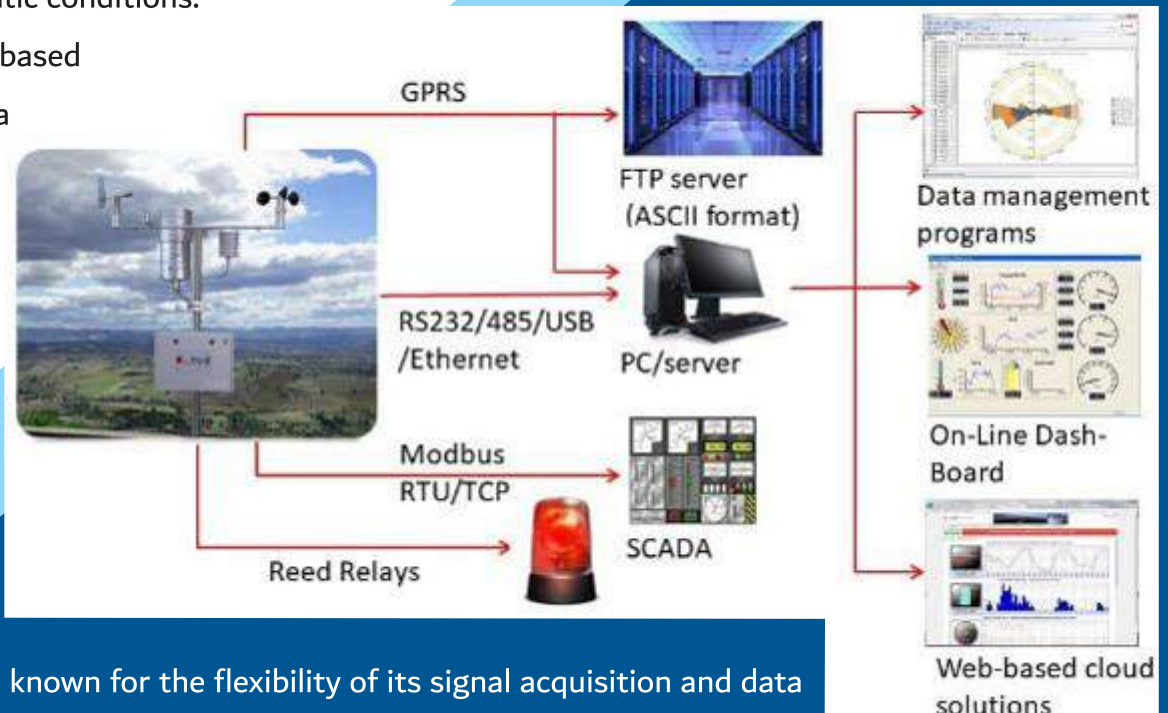
KME Professional Weather Station

Professional weather stations with a suite of sensors for the measurement of the seven typical parameters in meteorological applications fitted with high-quality sensors designed according to WMO.

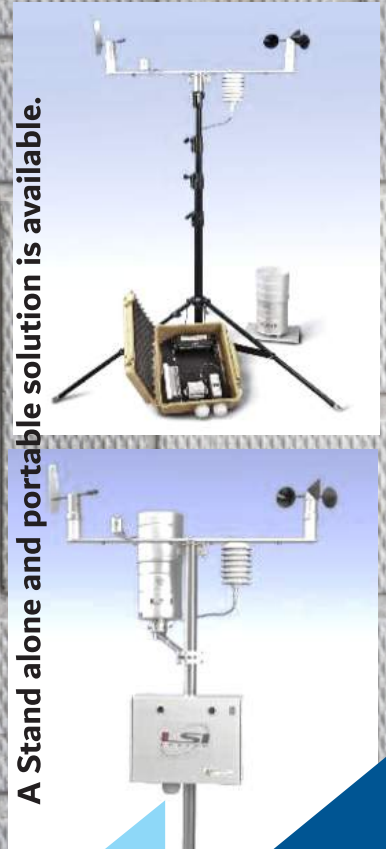
The station provides for free inputs for additional sensors and has operational limits suitable for all climatic conditions.

Web-based and PC based applications for data display and management.

HOW THE TECHNOLOGY MAKES YOUR DATA AVAILABLE:



KME is known for the flexibility of its signal acquisition and data processing system. PC based or Cloud based programs are available.

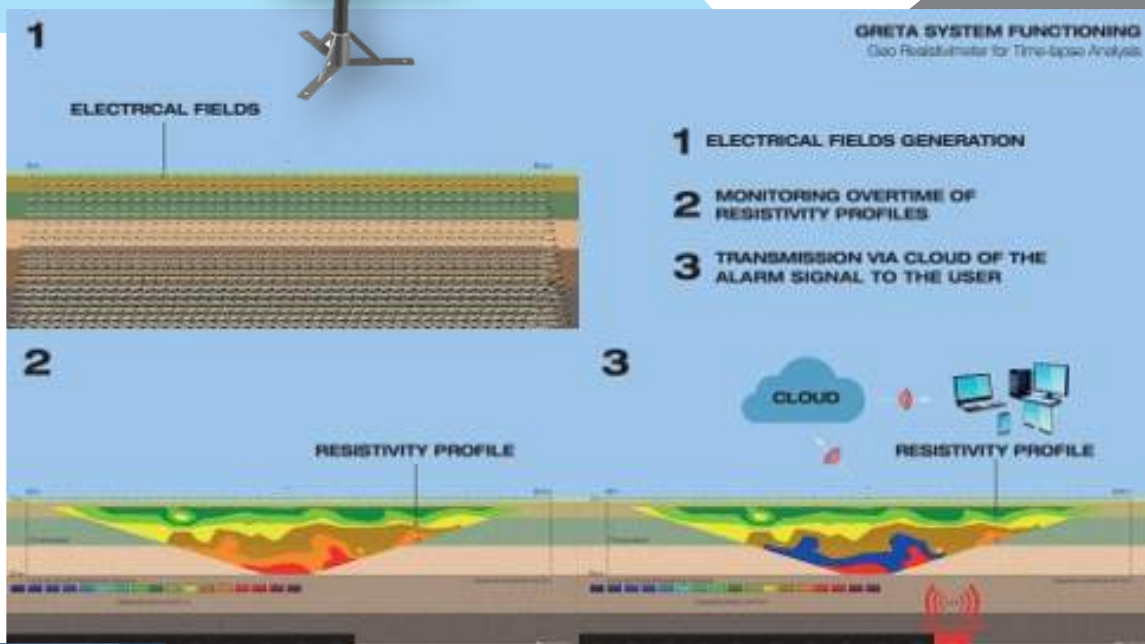


Hydrology & Hydrogeology

G.Re.T.A.

To support the management of the territory subject to breakage of earthen dams, levees or embankments, to infiltration of pollutants in the water table or to landslides risk, LSI LASTEM has designed and built **G.Re.T.A.** in collaboration with the Polytechnic of Milan.

This is the first georesistivity meter for the permanent monitoring of large areas of the subsoil with the ERT method.



Noise - Personal

Dosimeters

High performance dosimeters that are capable of spectrum analysis, datalogging and are ideal for the measurement of noise according to OSHA, MSHA, NIOSH, ACGIH, DoD, EU Directive 2003/10/CE etc.

Noise dosimeters measure and store sound pressure levels (SPL) and, by integrating measurements over time, provide a cumulative noise-exposure reading for a given period, such as an 8-hour workday.



Dosimeters can function as PERSONAL or AREA NOISE monitors.

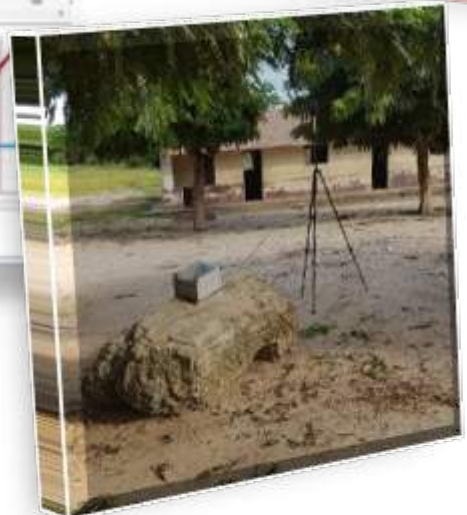
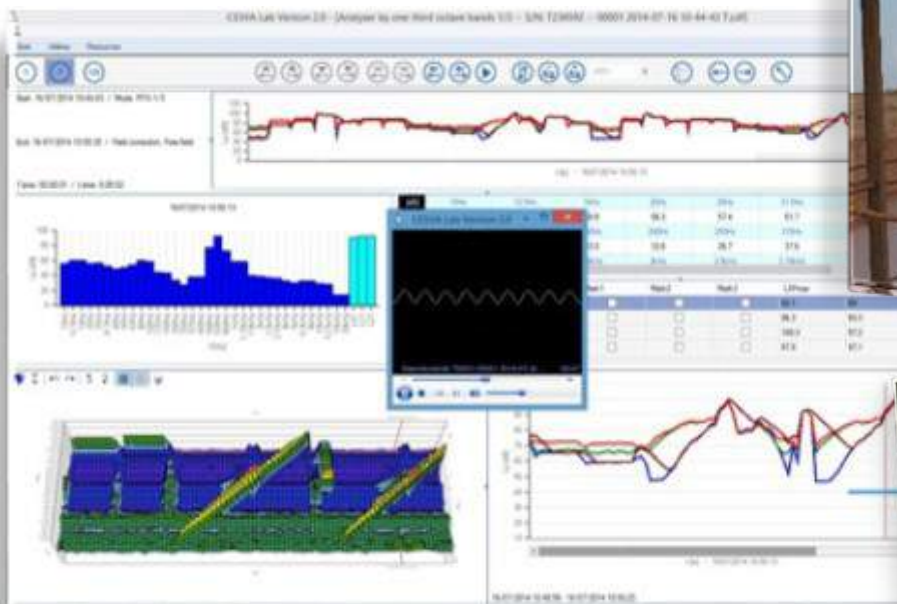


Noise – Area & Environmental

Area Sampling

Integrating sound level meters class 1 with audio recording expandable to spectrum analyser for third octave bands as well as class 2 audiometers available.

Capable of audio recording for environmental sampling.



Environmental Sampling



The TA120 sensor combines the precision of a Class 1 sound level meter, maximum protection of an outdoor kit and full connectivity with CESVA NoisePlatform and open source platforms. NoisePlatform is an on-line platform that displays and dynamically analyses, in real time, the noise measured by a network of sensors that can monitor an entire area affected by noise-generating activities.



MONITORS CAN BE NETWORKED TO PROVIDE LARGE AREA NOISE MONITORING

Calibration Equipment

Calibration of flow pumps using a primary standard calibrator is essential to ensure reliability of results. Three series of calibrators are offered:

Flow Pump Calibrators

Defender Series:



Fast, 1% of reading calibrations of personal sampling pumps, the Defender 510 and Defender 520 provide the flexibility needed to enable you to do your work – defending lives.

FlexCal Series:



The FlexCal offers flow ranges up to 50 LPM with a standardized accuracy of 0.5%, is small, easy to carry and ready for even the most demanding of applications. When you use Mesa Labs' FlexCal, you are guaranteed high accuracy with high confidence without the use of soap bubbles, timers, or heavy provers.

DryCal Metrology Series :



The metrology series is specifically built for laboratory and industrial process applications.

Acoustic Calibrators



CB 006

Portable, user friendly calibrator, ideal for checking class 1 and class 2 dosimeters and sound level meters on the measurement site, or in the laboratory.

The CB006 represents a cost effective yet accurate means of checking, before and after the measurement.

May be used with any microphone suitable for closed coupler checking and of 1/2" diameter and complies with norm IEC 60942:2003 class 1.



Chemicals Management Systems

ChemRADE is an affordable, web-based software solution that allows companies to manage information about hazardous substances.



Additionally, **ChemRADE** facilitates a straightforward assessment of health risks resulting from the exposure of employees to chemical substances in the workplace. **ChemRADE** helps with:

1. Setting up a Register of Hazardous Substances (with the automatic determination of Occupational Exposure Limits)
2. Inventory of workplaces and activities where hazardous substances are used
3. Assessing the health risks of exposure with use of validated mathematical models
4. Drafting a plan of action (POA) for required management measures
5. Organising all relevant information from inventories, measurements and aspects requiring improvement
6. Preparing workplace instruction cards and reports for internal or external use

Stoffmanager algorithmie schatting					EDCTOC-TN algorithmie schatting				
Schattingsnr	Risico ratio	Actuele situatie	Task	Exp	Schattingsnr	Risico ratio	Actuele situatie	Task	Exp
			(15min-TGQ)	(8h-TGQ)				(15min-TGQ)	(8h-TGQ)
Stofnaam				PEM gebruik	Stofnaam				
Stof 1	1.02	0.85			Stof 1	1.02	0.20		
Stof 2	1.99	0.56			Stof 2	1.99	0.56		

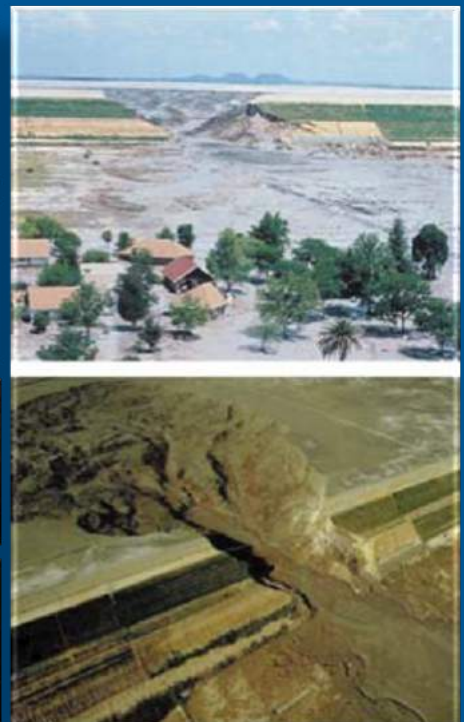
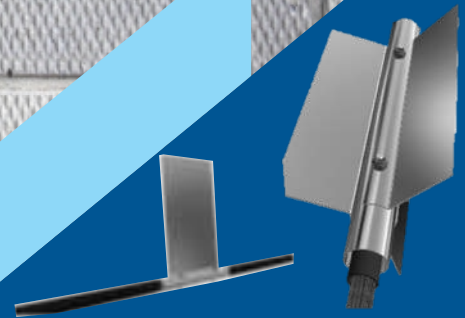
Real-time Tailings Dam Integrity Monitoring

G.Re.T.A or Geo-resistive meter for Time-Lapse Analysis is the new monitor for fixed installations developed by LSI LASTEM s.r.l. in collaboration with the Politecnico di Milano.

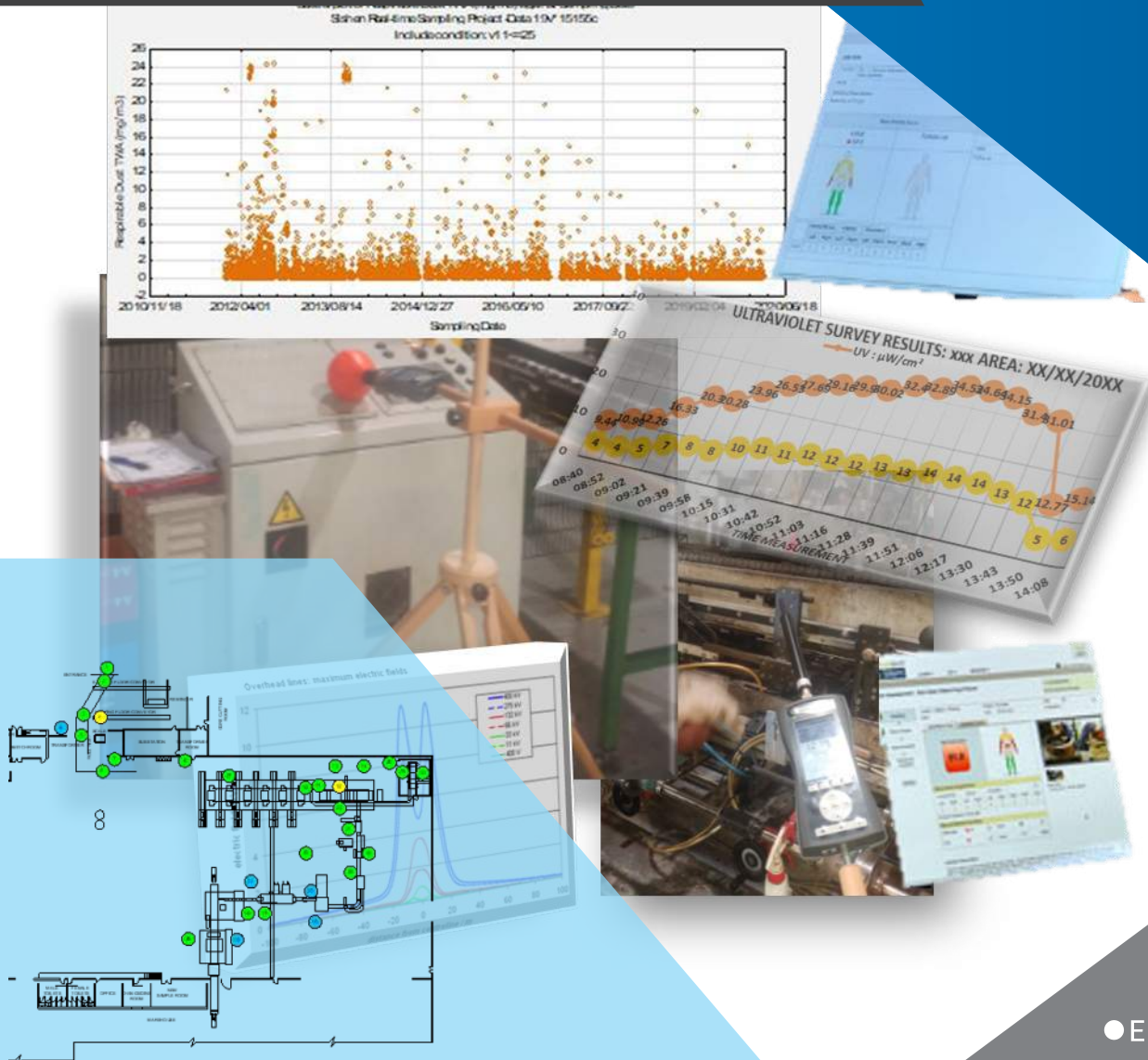
GRETA is the most effective and innovative solution for Permanent Geoelectric Monitoring of the conditions of large sections of soil and the perfect solution for measuring the integrity of mine tailings dams to prevent the collapse of such structures, in real-time.

GRETA can assess:

- the evolution of the **water content, saturation, seepage**
- the triggering of possible **landslides, instabilities**
- the triggering of possible **fractures, cavities, voids**
- the triggering of **pollutants contamination**



Consulting & Big Data Analytics



Bespoke consulting services on ways to analyse, systematically extract information from, or otherwise deal with data sets that are too large or complex to be dealt with by traditional data-processing, including:

- Electromagnetic Emission and Exposure studies
- Hazardous chemicals substances control and management
- Commissioning of instrumentation including noise detection and measurement equipment, analytical instrumentation, and general occupational hygiene sampling equipment
 - Mine environmental control measurement
- Environmental dust fallout studies
- Environmental pollution and impact studies
- Big data analytics and modelling – we can take your historic exposure data and create exposure profiles and other meaningful management reports to help you to better understand workplace health and hygiene risks
- Ergonomics studies using the Humantech ergonomics assessment platform

Training



Sedulitas

In association with OHTA,
(Occupational Hygiene Training Association)



**Contact our
office to book
your training course**

These modules include:

1. **W201:** Basic Occupational Hygiene Principles
2. Core subjects:
 - **W501** Measurement of Hazardous Substances
 - **W503** Noise - Measurement and its Effects
 - **W505** Control of Hazardous Substances
 - **W507** Health Effects of Hazardous Substances
3. Optional subjects:
 - **W502** Thermal Environment
 - **W504** Asbestos and Other Fibres
 - **W506** Ergonomics Essentials

Sedulitas is an approved OHTA Course Provider and offers Occupational Hygiene Training Modules to promote improved standards of occupational hygiene practice and to train hygienists to an internationally accepted and recognised standard.





Sedulitas

PEOPLE | PASSION | PRECISION

AGENTS FOR:



ENVIRONMENTAL
MONITORING SOLUTIONS



INDOOR AIR QUALITY MEASURING
& CONTROL INSTRUMENTS



SENSING AND MODELING OF
AIR POLLUTION ON A GLOBAL SCALE



ENVIRONMENTAL INSTRUMENTATION
& CALIBRATION



RESPIRATOR
FIT TESTING SYSTEMS



EMF EXPOSURE
INSTRUMENTATION



THE UV EXPERTS



NOISE
MEASURING INSTRUMENTS



ADVANCED
RESPIRATORY PROTECTION



DUST
MONITORING INSTRUMENTATION



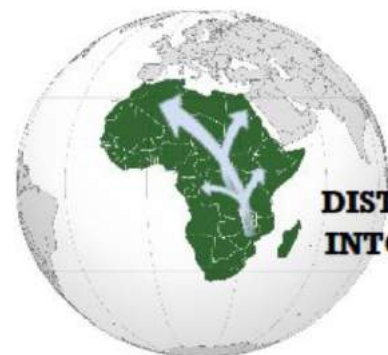
AIR QUALITY SAMPLING
INSTRUMENTS AND SUPPLIES



FTIR
SPECTROMETERS & INSTRUMENTATION

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