

FF Instrumentation



food | dairy | grain | feed

www.ffi.nz



FOOD & DAIRY

ABOUT US

FF Instrumentation Ltd (along with Formula Foods) have been pioneers in offering expertise in professional food technology services since 1987.

As a 100% New Zealand owned company, they have become leading suppliers of quality and process control instrumentation to the Food, Dairy, Grain and Feed industries.

SPECIALISING IN APPLICATIONS SUCH AS:

- MAP (Modified Atmosphere Packaging)
- Water activity, Sorption isotherms and Moisture control.
- NIR solutions for testing, monitoring and controlling fat, protein, ash and more
- Leak Detection
- Reducing gas costs in MAP
- Meeting MPI regulations
- Texture and Viscosity analysis
- Temperature, pH and humidity tracking and much more...

The company has been built on its reputation and commitment to service.

"We have worked hard to develop a comprehensive suite of analysis tools and resources to ensure our clients maximise shelf life, resulting in less product wastage, increased sales and improved profitability."

- Bob Olayo, Manager



WATER ACTIVITY & MOISTURE

AquaLab by Decagon, now known as Meter, specialise in measuring water activity, moisture content and moisture sorption isotherms.

Around for >34 years, their instruments are made to be stable, accurate and durable to maximise your return on investment.



METER



PAWKIT

Affordable water activity meter. Accuracy ± 0.02 .

Used by most small to medium manufacturers in New Zealand. Very easy to use and maintain.

4TE

Fast – Dew point sensor, results in 5 minutes or less.
Accuracy ± 0.003 , temperature control 15-50°C.

Stable, minimal ongoing calibrations needed.
This model is used by most manufacturers, labs and universities in New Zealand.



PRE

Intermediate dew point water activity meter.
Accuracy ± 0.01 , temperature control 25°C.



TDL

Tuneable diode laser technology enables measurement of water directly in volatiles.

E.g. a_w of ethanol, turmeric etc ± 0.005



VSA

Vapour sorption analyser isotherm generator.

Complete moisture analysis- high resolution isotherms in two days. Identify caking points, crystallisation, essential ingredients mixes, product development etc...

SKALA AQ1

Touch screen based water activity meter with batch traceability. Saves operator time, runs multiple samples and can log data from multiple instruments/applications. Load the sample, and move on to your next task..
Accuracy ± 0.02 .



SKALA

Designed for the lab environment.

Allows technicians to tag samples with information about what batch is being measured and by whom, from multiple samples and multiple machines.



COMPLETE QUALITY CONTROL & ASSURANCE IN MAP

With 30+ years experience, Mocon, previously known as Dansensor, are world leaders in developing modified atmosphere packaging (MAP)/gas flushing technologies.

Their instruments assist companies that require a high level of quality assurance in their production process.



MAP MIX 9001 ME

Affordable manual 2 or 3 gas mixer with pressure alarms and external control.

MAP MIX PROVECTUS

Digital 2 or 3 gas mixer. MFC, low pressure drop with consumption summary and alarms.



MAP CHECK 3

Gas analysis and control for:
FLOW - VFFS, HFFS, flow applications including analysis, control and gas savings.
VACUUM - Thermoformer and tray sealer online analysis.
PRESSURE - Pressurised containers, pipes and buffer tank in-line gas analysis



ISM3

Industrial O₂ sensor module. Low PPM in-line oxygen analyser. With 4-20mA output.



NEW CHECKPOINT 3

Fast, easy-to-use, low cost of ownership...
O₂/CO₂ analysis with in-line pressure sensor and data management. Sensor life >4 years.

CHECKMATE 3

Benchtop, high accuracy O₂/CO₂ analyser.
Full datalogging, control and interface.



CAN PIERCER

Accessory for the CheckMate or CheckPoint.

Ideal for measuring headspace in milk powder cans, soft drink cans, wine bottles, ready-to-drink containers and PET bottles.

OPTECH

Non-invasive oxygen analyser for measuring oxygen in
aclosed package or container.

No gas extraction and fast O₂ reading for shelf life testing.



LEAKPOINTER II

CO₂ based benchtop leak detector for single packages or small boxes.



LIPPKE 4500

Leak and seal strength test systems for flexible and semi rigid packages. Leak, burst, creep.

LEAKPOINTER E2

CO₂ based non-destructive leak detector for large single packages or large boxes.



LEAKMATIC II

CO₂ based non-destructive on-line leak detector for every box/package leaving the line

NEW LEAK PROTEGO

CO₂ based non-destructive leak detector. Single packages up to 96 per minute.



QUALITY CONTROL & IN-PROCESS MONITORING

Over the past 50 years, Perten Instruments has been a leading supplier of analytical and process equipment.

They provide quality services to both large and small organisations in research institutes as well as industry.



LAB MILLS

Robust mills for NIR or falling number.

A range of hammer and disk lab mills for proper and convenient sample preparation for a variety of tests

AQUAMATIC 5200

Accurate, 10 second analysis of moisture, specific weight and temperature in grains and oilseeds, Hardly affected by sample temperature.



RVA 4800 (140°C)

Rotational viscometer with variable temperature and shear capabilities. For example, it will replicate the 'cooking' process to determine the viscosity at different temperatures.



FALLING NUMBER

The international standard method for determination of alpha-amylase activity in grain and flour.



DOUGHLAB

A flexible dough rheometer with variable temperature and variable energy input to emulate commercial mixing.

TVT 6700

Food texture measurements by compression and tension testing.

Easy to use and very cost effective.

Wide range of rigs and probes available for a variety of tests.



BVM

Accurate volume measurement of bread, baked products and more using laser topography.



GLUTOMATIC

The world standard test for gluten quantity and quality in wheat. Measures wet gluten content, dry gluten content and gluten index.



INFRAMATIC 9500

Certified NIR grain analyser. Protein, moisture and more for wholegrain or flour. Results in less than 30 seconds.



DA 7250 NIR

Anything. Anywhere, Anytime, Anybody

Analyse powder, pellets, liquids, pastes and slurries and more...

At-line or in the lab. 6 second analysis without sample preparation.
Can be used by trained chemists or factory staff.



DA 7250 SD NIR

IP 65 certified sanitary design NIR in stainless steel.

Ideal for use in dusty/dirty or high care, hygienic areas or where cleaning requirements are high.



DA 7300 IN-LINE NIR

In-line NIR analyser best suited for pipes or mixing tank for accurate, real-time analysis of moisture, protein, fat, sugars and many more parameters.



DA 7440 ON-LINE NIR

Top scanning, on top of conveyor belt/line, NIR for accurate real-time analysis of moisture, protein, fat, sugars and many more parameters.



VISCOSITY & RHEOLOGY

VISCOSITY - the state of a fluid that resists the force tending to cause it to flow.

RHEOLOGY - the study of deformation and flow of matter.

We have a wide range of Viscosity and Rheology instruments.



B-ONE TOUCH

Entry level touch screen viscometer comes complete with spindles. Springless, digital, easy-to-use, value for money viscometer.

With L1 - L4 systems: 15 - 6,000,000 mPa·s

With R 2 - 7 systems: 100 - 180,000,000 mPa·s



B-ONE PORTABLE

Portable battery powered viscometer. Allows you to save data on the go. Designed to measure viscosity in process tanks or manufacturing workshops.



EVA MS-DIN

Precise temperature control that can be utilised with other viscometers. High performance by Peltier effect without liquid for heating and cooling your samples.



RM 100 TOUCH GEL TIMER

Determine gel times of resins and scalable products. Ideal for monitoring viscosity changes in your products up to a solid state.



RM 200 TOUCH CP4000

Cone-plate rheometer with automated gap.

For precise quality control that is both simple and effective.
Makes rheology a breeze!

FIRST TOUCH

Touch screen with viscometer, temperature sensor and is ultra sensitive.
Torque range of 0.005 to 0.8 mNm.



VISCO

Compact, battery operated viscometer. Capable of taking measurements with containers other than the included beakers, such as disposable paper cups.

A1 50 to 200,000mPa • s / 50 to 200,000cP

A2 100 to 600,000mPa • s / 100 to 600,000cP

A3 500 to 2,000,000mPa • s / 500 to 2,000,000cP



CONSISTOMETER

Manual, low cost viscosity measurement device.
Used to measure the distance a sample flows in a given time interval.



OPTICAL INSTRUMENTS

Complete range of handheld, benchtop and on-line refractometers, microscopes, density meters, and other analysis solutions.



MICROSCOPES

For biological and laboratory applications. Accessories include adapters for video cameras, photo cameras, image processing and connecting cables.

DIGITAL MICROSCOPES

Enables you to view any small object with ultra sharp magnification and to document/automatically analyse your work with a single click.



POLARIMETERS

Polarimetry - highly efficient technique for analysing optically active liquids such as sugar solutions, lactic acid and tartaric acid.



HANDHELD REFRACTOMETERS

Digital and manual refractometers available.
Wide range of measurement and applications.



DIGITAL REFRACTOMETERS

High accuracy Brix/Refractive index measurements.
Temp. control to 80°C.

PROCESS REFRACTOMETERS

In-line, real-time measurement solutions. Inserted into pipes and tanks. Measure concentration, density of a liquid, Brix °Bx.



MELTING POINT METERS

Analyse the melting point of powdery substances.
Fast, accurate and easy to use.



DENSITY METERS

Measure density, specific gravity and concentration of liquid solutions by the oscillating U-tube method.



PH & TEMPERATURE MEASUREMENTS

From portable testers to multi-parameter benchtop laboratory instruments, We cover the full range of pH and water quality measurement needs.



POCKET SERIES

Portable, battery operated, value for money solutions that measure pH, conductivity, salinity, TDS, ORP, DO, °C, and ion. For general, industrial and educational applications.

THERMOMETERS

Wide variety ranging from -400 to 1200°C. Accuracy 0.001–0.5
Both thermocouple and PT 100 solutions.



HANDHELD pH

Portable, waterproof, data-logging.
Wide variety of applications including liquid, semi solid and solid analysis solutions.

BENCH pH700

Economical and robust- pH/ORP/°C
Accurate with automatic temperature control (ATC). Ideal for routine applications in laboratories, production plants and schools.



DATA LOGGERS

Versatile range of temperature and humidity dataloggers for all applications- nothing too big or too small.

Portable dataloggers and complete wireless data acquisition systems.



DATANET

Multi-point, online, wireless data monitoring system. 24/7 real-time monitoring for mission critical organisations. Capable of monitoring temperature, humidity, voltage or pulse.

MICROLITE

Temperature and humidity datalogging solutions for transportation, process monitoring and validation.



PICOLITE

Single-trip USB temperature logger. Ideal for monitoring throughout the cold chain transportation network.

IBUTTONS

Temperature and humidity data loggers, designed for use in applications such as pharmaceutical, life science, cold chain distribution, fresh produce distribution, process monitoring and environmental monitoring.

Each device is programmable and can be re-programmed and used for many years.



WEIGHING SOLUTIONS, SCALES & BALANCES

Complete range of micro-balance, benchtop, moisture balances and floor scales for a wide variety of applications including industrial, laboratories and healthcare.



BENCH SCALES

Weighing solutions ranging from wet area applications, dusty and harsh chemical environments. Most industries and applications covered.

MOISTURE BALANCES

Fast, accurate and reprogrammable. Covering a variety of applications including liquids, solids, fats and much more...



FLOOR SCALES

Varied assortment with weighing ranges from 250g - 75kg+

LAB AND ANALYTICAL

Extensive line of balances and scales that meet the demands of virtually any weighing need.



CO₂, O₂ & ALCOHOL IN LIQUIDS



CARBOTECT TR-PT

Carbon dioxide sensor for measurement of CO₂ in beer and beer-based mixed drinks. The CO₂ content is determined by pressure and temperature measurement in the chamber.

CARBOTEC NIR

Measurement of CO₂ in beer and mixed drinks. Optical carbon dioxide sensor for measurement of "true" CO₂ content in beer and beer-based mixed drinks.



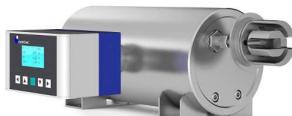
OXYTRANS

Measures O₂ in water and drinks. Precise optical, in-line oxygen sensor for measurement of O₂ in deaerated water and soft drinks. Also available in handheld.



RHOtec ALC-TAX

Certified % alcohol. Allows measurement of alcohol during the production, when alcohol content needs to be determined by a certified instrument for reasons of taxation..



BEER MONITOR

Simultaneously measures alcohol and extract during the production of beer and beer-based mixed drinks.
The original gravity is automatically calculated and displayed by the sensor.



OTHER APPLICATIONS...

COLORIMETERS

EUTECH C401 - tests for chlorine, bromide and ozone.

LOVIBOND LC 100 - Colour analysis. Easy to use, accurate and robust. Measure liquids, solids, powders and a lot more.



VACUUM WATER BATH



Performs a vacuum leak test in less than 30 seconds.

Allows the user to find a leak in the package as well as identify the location of the leak.

VENTURI VACUUM GENERATOR - operates using compressed air, recommended if standard dry plant air is available.

Dimensions: 27.94 x 20.32 x 20.32 (cm) to 81.28 x 66.04 x 50.8 (cm)

ELECTRIC VACUUM PUMP - ideal if compressed air is not available.

Dimensions: 45.72 x 30.48 x 25.4 (cm) to 50.8 x 35.56 x 33.02 (cm)

PORTABLE NIR



Variety of applications including whole fruit analysis while still on the tree, grains, in process foods and much more...



ETHYLENE ANALYSERS

Manage ethylene gas accurately and efficiently. Used in fruit ripening/storage applications and much more...



REPAIRS AND CALIBRATION

At FF Instrumentation, we repair everything we sell right here in New Zealand and also ensure manufacturers warranty obligations are fulfilled.

Fully trained in-house technicians ensure we can locally repair, service and calibrate all our instruments at our work shop or on customers site as applicable.

We work according to manufacturers specifications, use genuine spare parts to ensure accuracy , problem free operation and longevity of the solutions provided.

Complete service and repair reports are provided accompanied by traceable calibration certificates.

We provide a complete peace of mind service by ensuring the availability of back up instrumentation with minimal downtime.

DID YOU KNOW?

FF Instrumentation can provide a free loan unit while yours is being calibrated or repaired (subject to model and availability).



CONTACT US



For any further inquiries, please contact our team at FF Instrumentation Ltd.

If you are sending in your instrument for calibration/repair or returning a loan, please use the Christchurch address stated below...

AUCKLAND OFFICE

Cnr. Freight Place &
Sir Richard Pearce Drive,
Airport Oaks, Mangere,
Auckland,
New Zealand

Ph: (09) 390 4479



CHRISTCHURCH, HEAD OFFICE & SERVICE CENTRE

48 Hayton Road,
Sockburn,
Christchurch,
New Zealand

Ph: (03) 595 2368
Email: sales@ffi.nz

www.ffi.nz



NOTES

FOOD & DAIRY



www.ffi.nz