eurofins

The World's Leading Laboratory Network

Introduction to Eurofins-ELS

www.eurofins.co.nz

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Introduction

Eurofins-ELS is one of New Zealand's leading experts in the areas of:

- Air quality monitoring
- Boiler water
- Environmental water
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- Meat industry services
- Potable water for councils
- Sample Integrity
- Swimming pools
- Biological fluids
- Ceramicware and metal food containers
- Food and Dairy Products
- Legionella
- Metals
- Potable water for small communities
- Sewage and effluent
- Trade waste

The company has its origin as part of the Hutt City Council Laboratory and became a private enterprise in 1994. We grew through natural growth as well as the acquisition of local laboratories until in December 2012 we were acquired by Eurofins - the largest laboratory network in the world.

Eurofins Scientific is an international life sciences company which provides a unique range of analytical testing services to clients across multiple industries. The Group is the world leader in food and pharmaceutical products testing. It is also number one in the world in the field of environmental laboratory services, and one of the global market leaders in agroscience, genomics, pharmaceutical discovery and central laboratory services.

We are based in a purpose built facility of 1450 m^2 at 85 Port Road, Lower Hutt. Eurofins-ELS is comprised of four separate laboratory areas – Instrumental Chemistry, General Chemistry, Biological Fluids, and Microbiology. The latter is further split into three separate rooms with clean, cleaner and ultra clean capabilities. The ultra clean lab is used for pathogenic bacteria determinations.

In mid-2016 Eurofins-ELS opened satellite laboratories in Auckland and Christchurch. These laboratories offer full scope testing and sampling services.

Who Should Read This Brochure?

This brochure contains a brief summary of how we have become one of the country's leading analytical laboratories. It will be read with interest by our clients and competitors alike and will also provide valuable information for laboratory users who have yet to enjoy our service.

Microbiology Laboratory

Eurofins-ELS operates a purpose-built 300m^2 microbiological laboratory with spectacular views over the Wellington harbour. This laboratory features clean rooms, positive and negative pressure rooms, pathogen rooms, a large walk in chiller as well as a dedicated diary sample processing room.

General Chemistry Laboratory

This section of our laboratory specialises in a large number of tests based on the chemistry methods published in volumes such as APHA and AOAC. We also offer tests of specialised matrices that are not accredited.

This section is essentially the original ELS before we branched out into microbiological and instrumental techniques. Most laboratories in New Zealand have a general chemistry capability because most samples we analyse have the need for this type of test.

Examples of the tests performed include, pH, alkalinity, turbidity, TKN, COD, and other tests that we often refer to collectively as 'shorts'.

Instrumental Chemistry Laboratory

This section is comprised of many specialised instruments that together form the automated aspect of our work. This laboratory includes some of the most complex analytical techniques available to laboratories, and we are committed to growing on the equipment and staff skills available to us.

Instruments operated include:

ICP-MS
This technique for analysing metals is the best that is currently available. While very expensive, we are fortunate to own and operate two instruments. Both are capable of performing very low level determinations of metals such as Cadmium, Chromium, Arsenic, Lead and even Tungsten and Uranium.

ICP-OES
This technique also analyses metals, and while considered a simpler technique is better at some elements than our ICP-MS's. The alkali metals such as calcium, potassium, and magnesium perform better on this instrument.

Because of our commitment to the integrity of our results, we run samples through both instruments to ensure the best result is reported.

Ion Chromatography
We operate two Ion Chromatographs for the determination of anions in water and air. Anions include fluoride, chloride, bromide, nitrate, and sulphate and are good water quality indicators. The instruments can also analyse oxyhalides such as bromate and chlorite.

Flow Injection and Discrete Autoanalysers

Nutrient analysis forms a large part of our business and we achieve this through the use of Flow Injection and Discrete Autoanalysers. These instruments perform nitrogen and phosphorus analyses and are also used to determine ammonia, cyanide, and hexavalent chromium. They take slow, manual colorimetric tests and automate them to speeds that are quite amazing.

Samples are processed every few seconds allowing us to perform your analyses in duplicate – a more analytically robust technique than performing the test singly.

Organic Chemistry
Our organic chemistry section operates GC-MS, GC-MS triple quad, GC-FID and LC-MSMS instruments. Between them the instruments are capable of analysing a wide range of analytes:

Total Petroleum Hydrocarbons (TPH), BTEX,
Volatile Organic Compounds (VOC)
Semi-Volatile Organic Compounds (SVOC), pesticide and herbicide residues.

Biological Fluids Laboratory

The biofluid laboratory principally serves the Occupational Health industry for New Zealand. We analyse blood, serum, and urine for a wide range of metals and fluoride to check workers health.

We operate this laboratory independently of the rest of the facility including a dedicated Laboratory Information Management System (LIMS). We choose to do this for privacy reasons.

What has made us successful?

The environment we work in has been a very competitive one, due mainly to low entry costs when laboratories were first developed. However, those days have long gone, and laboratories are now faced with increasing compliance costs, as well as expensive equipment costs. We have succeeded through these adversities by applying some simple rules that we pride ourselves on.

Service
We will help you understand your results in simple terms. We have comprehensive brochures available, which will also aid in your understanding of the information we provide. We can receive your samples seven days a week and also offer a sampling service.

Overall Knowledge
A close association with legislators in the food and water areas means we can advise you about current legislative requirements, and have an understanding of upcoming legislation.

Location
Our position in the centre of the country means that we are well served by air and courier services and can easily offer a nation-wide service. Our first samples arrive by courier at 7:30am each workday.

Up Front Costs
We are extremely competitive and offer substantial discounts for both volume submissions and ongoing commitment. We don't hide filtering costs, bottle charges, or reporting fees.

Technology and Expertise
Our technology and ability to apply it in the areas of food, water and occupational health are unequalled by anybody else in the country. Our objective of having a backup for every instrument has cost over a million dollars but has now been achieved.

Integrity and Quality
Our accreditation through NZFSA, MoH and IANZ is extensive and covers a wide range of legislative requirements, including drinking water and product export.

Operation
Eurofins is a global company that only runs laboratories. They are highly skilled, and committed to serving our customers with their laboratory needs.

No Hassles
We present complicated science in a simple manner.

Satisfaction
Our clients' satisfaction really does come first.

The availability of technical information

A recent survey conducted by the Ministry of Health identified information and affordability as the two barriers to meeting proposed compliance regulations.

We know we are cost effective, this is proven by the success we have enjoyed over recent years.

Organisations face ever increasing compliance costs through new government regulations and often there is confusion over what needs to be done. We asked ourselves why should information be kept under lock and key of expensive consultants?

Information is an abundant resource and we want to share it.

We have compiled a series of brochures designed to provide existing and potential clients with the information that has largely been missing from the laboratory industry.

The brochures are clear, concise, and simple to read. Each of the topics on the following pages has its own brochure, describing in detail the capability we have as well as the legislative reasons for performing the tests. Please don't hesitate to ask us for a copy of the full colour A5 brochure.

Tests and Matrices

We have one of the country's largest analytical capabilities of microbiological and inorganic chemistry tests with over 2,400 tests on offer.

However we prefer to separate this test capability into sample matrices. We avoid stating that we can do a particular test and instead state the matrices that we can do the test on.

Clearly a pH in drinking water is different to a pH in soil. We believe that each matrix is unique and that experience is required to confidently analyse and report each type. IANZ agrees with us, and lists each laboratories capability under a test-matrix schedule. Have a look at our scope on the IANZ website. www.ianz.govt.nz in the directory section.

In the unlikely event where we are unable to perform a particular test, we use our worldwide network to find a lab that can. We then treat the test as if it were our own, reporting and invoicing through our own system to simplify yours!

Air Quality Monitoring

Air monitoring is an important function of many companies and local authorities within New Zealand. We carry IANZ accreditation to perform a wide range of tests on matrices that include Fumes and emissions, Atmospheric pollution, Air (filters, extracts, or impinger solutions). Tests include:

- Nitrogen and Sulphate species on passive sampler filters
- Particulate analysis of PM10 filters
- Metals on PM10 filters
- Hydrogen sulphide and ammonia

Our range includes outdoor and indoor monitoring, the latter being performed to identify sick building syndrome.

Biological Fluids

The Health and Safety in Employment Act 1992 requires employers to identify and then minimise hazards that cannot be eliminated. All practicable steps are to be taken to ensure a hazard does not harm employees and others.

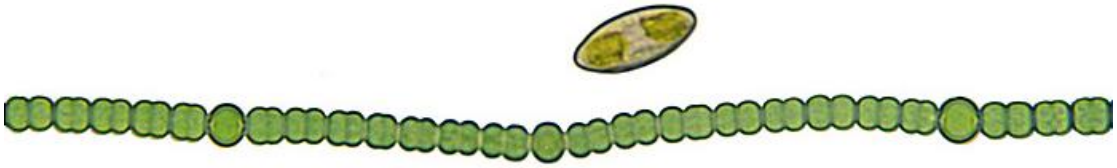
There are two acknowledged techniques to monitor the working environment of your premises. The first is to monitor the environment itself and therefore making the assumption that if a certain level of exposure to hazardous substances is not reached, then it must be safe for your staff to work in.

The second technique looks at each staff member working within that environment, and monitors his or her health directly. This approach treats each person as an individual and is a better way of assuring staff safety.

This biological monitoring of workers evaluates the internal exposure or internal dose of a chemical agent that each person actually ingests from their environment.

We specialise in the measurement of substances in blood, urine and serum samples. We provide valuable information for each worker over time frames appropriate to the substance under evaluation.

Biological Testing



We have a full-scope capability for testing Cryptosporidium, Giardia, Chlorophyll *a* and phytoplankton. This service is enjoyed by both regional and local councils from all around New Zealand.

Boiler Water

We are one of a few laboratories in New Zealand specifically accredited to perform boiler water tests.

OSH is closely monitoring the operation of limited-attendance and unattended boilers and requires them to be tested monthly by an independent IANZ approved laboratory.

We offer a complete range of analyses that covers:

- Feedwater
- Boiler Water
- Condensate

Tests include:

- All Alkalinity species
- Chloride
- Neutralised conductivity
- Neutralised Dissolved Solids
- pH
- Silica
- Soluble and Total Phosphate
- And others so please ask

Environmental Water

Environmental waters include rivers, lakes, streams, and bores that are monitored for reasons other than drinking water or effluent discharge compliance.

Analyses of these waters are performed for various reasons and include:

- To measure the impact of rural and urban development
- For use as a drinking water source
- For compliance against the Ministry for the Environment bathing standards

We perform comprehensive chemistry and microbiology tests on all environmental waters, and specialises in metals and nutrients.

Food and Dairy Products

Food Safety assurance affects everybody in the food industry because the repercussions of releasing unsafe food can have such a disastrous effect for the consumer. The New Zealand government has established the Ministry for Primary Industries (MPI) to assist the many parties involved with a cohesive approach to Food Quality and Safety issues.

Our approach to Food Safety compliments the MPI requirements by assisting food producers in their review of overall processes and product testing. The process control that we offer includes shelf life trials, on-site hygiene checks, air quality monitoring, raw materials analysis, finished product analysis as well as water quality testing.

Our product testing capability covers many general food types as well as more specific industries such as Dairy and Meat.

Our staff can also assist you with the training, preparation, and maintenance of Food Safety Programs.

Landfills

An increased public awareness of environmental contamination has resulted in recent legislative changes to the way councils operate and plan the disposal of solid and liquid waste.

These changes have resulted in a greater emphasis on waste minimisation needs as well as for the need to closely monitor the environmental impact of current and closed landfills.

The management of solid waste disposal is a high priority for councils and environmental engineers around the world, and we are ideally placed to provide the analytical needs of these systems. Through our own laboratory and our partners we offer a comprehensive range of surface, groundwater and leachate analyses including:

- Full microbiological suite
- Low level metals analysis
- Low level nutrient analysis
- Full Organic analyses

Landfill analyses is based on Ministry for the Environment criteria and can vary between locations. We operate a wide range of equipment and test methodologies, capable of meeting all the required parameters.

Legionella

Legionella species live happily in cooling towers and in the warm water circulation systems found in retirement homes, hospitals, and swimming pool complexes. It can also live in domestic and hotel spa pools, as well as hot potting mix, and water cylinders that are not set at the correct temperature.

We routinely tests Legionella in the following matrices:

- Cooling Tower water
- Recycled warm water systems
- Soils and compost
- Swimming Pools

Meat Industry Services

We carry accreditation under the Ministry for Primary Industries Laboratory Approval Scheme (LAS) to perform microbiological and chemical analyses of meat and meat products, both for meat exporters, and abattoirs destined for the domestic market.

Our scope also includes water used within the meat works as directed by Overseas Market Access Requirements.

Metals Analyses

With two ICP-MS and ICP-OES capability, we remain one of the frontrunners in metals analyses capability.

Our expertise lies in many different matrices ranging from simple waters through to the very complicated matrices of rock, plaster, and coal. Through the application of our various instruments we can report a total of 69 different metals.

Water Potability

We are one of New Zealand's leading drinking water laboratories with more tests on offer than any other non-organic laboratory in the country.

The areas we test include small community and individual domestic supplies, water tankers, ice and bottled water manufacturers, and dairy farmers.

We also offer a large range of testing suites based on the latest drinking water standards and can offer expert advice if required.

Potable Water for Councils

Councils serving a population of greater than 100 people are required to comply with the New Zealand Drinking Water Standards. We offers a full range of services to fulfil these requirements.

This includes assistance with the National Environment Standard and WINZ – the Ministry of Health database.

We currently test the water quality for over 550,000 New Zealanders!

Sewage and Effluent

With our company origins in the effluent industry we remain a leading provider of influent and effluent analysis for a wide range of treatment plants.

We provide assistance to effluent treatment plant operators and owners, and because all consents are different, we have developed a wide range of test types to cover them. This ranges from the characterisation of influent, through the process to the final effluent quality, and also includes sludge and air quality tests.

Swimming Pools

Under the New Zealand Swimming Pool Standard 5826:2000 a public pool is defined as any pool other than for domestic use, and includes commercial, school, institutional, club, hospitality industry, community and local authority pools.

Under this definition, any pool used by a member of the public must be tested. We assist pool owners with the understanding of testing services available, and also offers a sample collection service.

We offer chemistry and microbiological tests to all clients including private citizens, schools, and large city councils.

Trade Waste

We lead New Zealand in the area of Trade Waste analyses, and offer one of the largest sets of accredited tests.

We offer a service to councils and consent holders alike, maintaining our impartiality at all times.

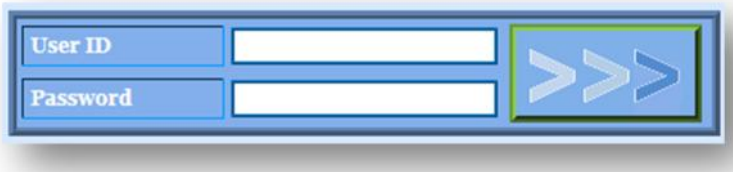
This is a very complicated matrix to work with, and our many years of experience allows us to consistently offer the best service available.

Other Matrices

With such a wide range of tests on offer we have expanded our service to include some very specialised matrices. These include:

- biofilters
- marine and brackish water
- cement and plaster
- coal
- fly-ash
- graphic materials such as crayons, chalk and other playthings
- vegetation
- wood and wood products.

Eurofins On-Line



The Eurofins-ELS on-line portal was introduced to provide our contracted customers with “data as information” - mainly in the form of graphs. This simple to use tool was warmly received by many customers and we have gone on to develop more ways to access data and extract information.

Core features of EOL now include an easy-to-use interface that allows you to

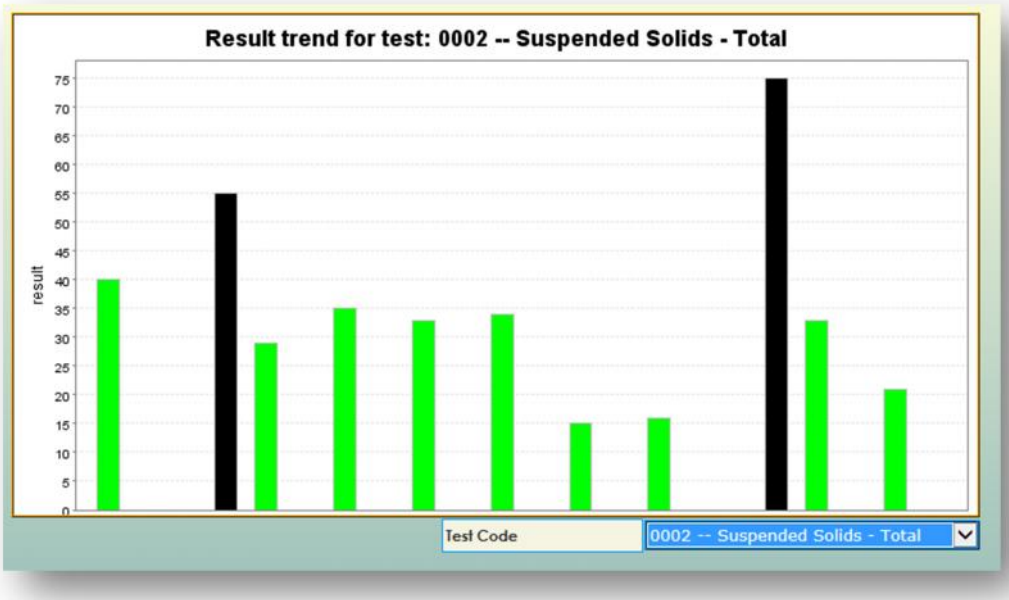
- View unfinished batches of samples with no more than four mouse clicks
- Open data files in excel on your desktop in just three mouse clicks
- View graphs of data in as little as two mouse clicks – and export them to your desktop with one more mouse-click.
- View previous pdf reports and invoices in three mouse clicks

All of this functionality is available on your PC or tablet.

Sampling staff also have the ability to log their own samples, and to enter sample dates and times as well as on-site test results such as temperature, dissolved oxygen, chlorine and turbidity. Any results entered by field staff will be included on the pdf report and will be available for exporting to WINZ if the sample is drinking water. Field staff can use tablets while sampling in the field to record this information.

Powerful Graphing Features

Graphs can be prepared for any time frame and by sample location and test. If test limits have been setup then these will show as different colours making it easy to find non-compliant results. This graph shows real suspended solids data for a sewage treatment plant discharge.

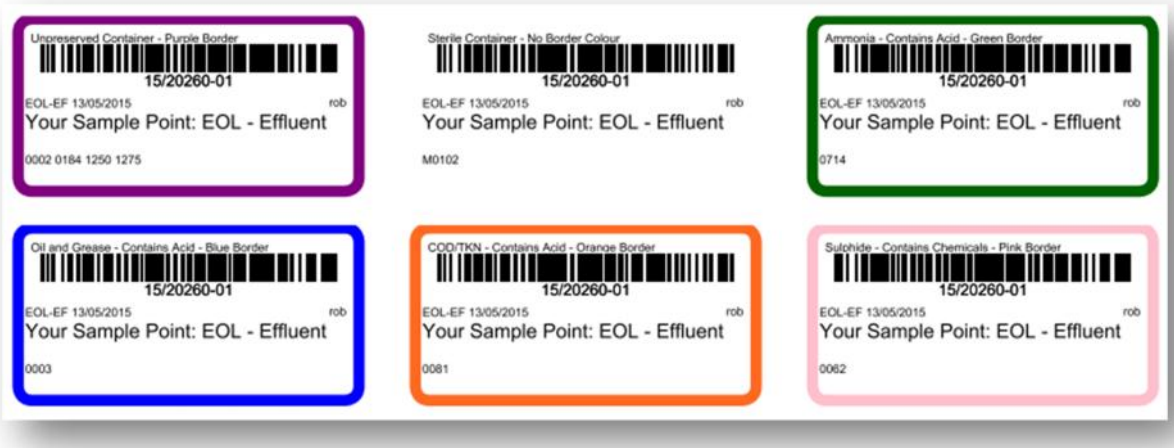


Colour-Coded Bottle Labels

When you register your samples on-line you will now receive a pdf containing the colour-coded labels needed for that sample run. We will provide suitable labels, so you only need to print them onto a nearby colour printer. (The labels can also be printed in monochrome because the border colour is written on the label – but this isn't as much fun though).

The beauty of this feature is that the border colour of the label matches the label colour on the bottles we send you. When you are out sampling in the field, all you need to do is match the label to the bottle.

The process makes it easier to gather the correct bottles for the sample run, and makes sure the correct labels are attached to the correct bottles. All your details will appear on the labels including: the name of your sample location, the sampling date, and the name of the person who registered the samples (in case your colleagues are also registering).



Using Eurofins EOL as your own LIMS

The features contained within the Eurofins-ELS EOL system provides you with your own powerful Laboratory Information Management System (LIMS).

Your data is accessible in many formats, and can be exported into excel on your own desktop for further manipulation.

As well as this, previous reports and invoices can be found easily, and each batch of samples will have your paperwork scanned and attached so you can see the full traceability of those samples.

Service Delivery Options

During the testing process we can send you optional emailed updates from our database. These are colour coded to ensure the information we provide is easy to follow.

All of our emails are sent from the same email address instead of individual staff member names. This simple initiative makes it easy to find alerts, reports and invoices from within your email program.

In addition to this, all the information within the email is searchable and can be used to find any of our emailed communication. Simply type information you are searching for into the search function of your email program and the correct email will be found!

Email Type	**Address the email is sent from**
Sample Confirmation	confirmation at els
Out of spec alerts	alert at els
Reports	reports at els
Invoices	accounts at els

Each of these email processes has its own set of email addresses. This means that we can send each email type to different people within your organisation, and to multiple destinations.

The process has been carefully designed to provide you with the most flexible and easy-to-use information system on the market.

Please keep your contact details with us up-to-date so that we send the right emails to the appropriate people.

Sample Confirmation Receipts – this is optional

If you would like to receive an email notification when your samples have been registered in our system, then please let us know. The email will be sent once the samples have been received at the laboratory, confirming that the testing process has begun.

The email will have a green border (all go!) and will look similar to this example . . .

The following samples have been receipted at the laboratory:-

Sample	Description	Notes	Sample Date	Date Received
08/12345-01	Cooling Tower 1		01/03/2008	02/03/2008
08/12345-02	Cooling Tower 2		01/03/2008	02/03/2008
08/12345-03	Drinking Water Tap 1	Office tap	01/03/2008	02/03/2008
08/12345-04	Drinking Water Tap 2		01/03/2008	02/03/2008

Out-of-Spec Result Alerts – you must provide your limits
During the testing process, some of the results may exceed pre-determined levels and if this happens the database will generate an alert.

We can send you the alert via email, or text. The email will have a red border (a nice alarming colour!) as shown in the example below:

Alert from Environmental Laboratory Services Ltd. re: Boris and Oleg Ltd – Drinking Water Tap 1 (Office Tap)					
Batch Number:	08/12345	Order Number	BO12345	Work Area ID:	ELS
Sample Number:	03	Sample Point Code:	Boris-01	Customer Code:	9999
Sub Sample:		Version:	1	Phone:	(04) 123 4567
Date Received:	2/03/2008	Sample Type:		Primary Email:	boris@boroleg.com
Sampler:	Oleg	Variation:		Factory ID:	
Product Desc:	Drinking Water Tap 1				
Test:	0104 – E.coli				
Notes:	Office Tap				
Result	**Present**			**DNC**	**Does Not Comply**

Please let us know if you wish to receive these alert emails. PLEASE NOTE: due to the reporting requirements of the NZ Drinking Water Standards, we will automatically email our council customers with any E.coli non-compliance.

The levels that drive these must be set in advance by you, our customer, so please let us know if you require this service, and who you want the alert emails to be sent to.

Final Reports sent as a pdf
Once all the tests for all the samples have been completed and validated, the final report will be emailed to you. This will have a blue border just like the example below.

Sample	Description	Notes	Date	Date Received
08/12345-01	Cooling Tower 1		01/03/2008	02/03/2008
08/12345-02	Cooling Tower 2		01/03/2008	02/03/2008
08/12345-03	Drinking Water Tap 1	Office tap	01/03/2008	02/03/2008
08/12345-04	Drinking Water Tap 2		01/03/2008	02/03/2008

Invoices
Our invoices are emailed to you with an orange border showing all the samples contained. If you supplied an order number, we will put this in the header of the email so you can search for it later.

Sample	Description	Notes	Date	Date Received
08/12345-01	Cooling Tower 1		01/03/2008	02/03/2008
08/12345-02	Cooling Tower 2		01/03/2008	02/03/2008
08/12345-03	Drinking Water Tap 1	Office tap	01/03/2008	02/03/2008
08/12345-04	Drinking Water Tap 2		01/03/2008	02/03/2008

Attached to each invoice will be our latest monthly newsletter. Receiving this newsletter is optional, but we have defaulted the option to Yes. Please let us know if you do not want to receive newsletters.

We prepare invoices on the 10th, 20th and last day of each month.

Sampling, Reports and Invoices

"The result of any test can be no better than the sample on which it is performed".

The objective of sampling is to collect a portion of material small enough in volume to be transported conveniently and handled in the laboratory while still accurately representing the material being sampled.

Sampling
We provide you with colour-coded bottles to make sampling easier. Each bottle corresponds to a particular preservative type and ensures the parameters under examination remain as constant as possible.

For example ammonia is a very unstable chemical that requires either on-site acidifying or freezing depending on the sample type under examination.

We can advise the most appropriate way to accurately record the various parameters under examination, and how to get them to us within acceptable timeframes.

Reports
The Laboratory Information Management System (LIMS) offers several reporting styles to help meet the various needs of our clients. We deliver our hardcopy reports by emailed pdf, and/or by post.

We are fortunate to have a flexible database that allows simple exporting of data into a wide range of formats that includes the ability to deliver reports as an excel based spreadsheet formatted to your database needs. We can send this spreadsheet automatically when we send you a pdf version of your results.

We currently export thousands of data per month into WINZ – the national Water Information New Zealand database on behalf of all our regular potable water clients. This is an automated system that reduces errors and maximises timesaving. Our clients are able to report this data directly from WINZ in their own office.

We also provide electronic data files for direct download into other client databases. Once again, this process is automatic and involves no manual manipulation.

We offer this service free of charge for our term-contract clients.

Invoices
Our laboratory database integrates with our financial one to guarantee that only the tests we perform are invoiced. Your invoice will show the sample description, tests performed and order number (if provided) to ensure complete traceability of your costs.

Contact Details

Please feel free to contact us by any one of the methods shown below.

Main Lines

Wellington	Main Telephone	(04) 576-5016
Christchurch	Main Telephone	(03) 343-5227
Auckland	Main Telephone	(09) 579-2669

Direct Lines

	Accounts	(04) 568-1205
Rob Deacon	General Manager	(04) 568-1203
Sunita Raju	Microbiology Lab Manager	(04) 568-1206
Tracy Morrison	Chemistry Lab Manager	(04) 568-1200
Sharon van Soest	Chemistry Lab Manager	(04) 568-1200
Deb Bottrill	Sample Logistics Manager	(04) 576-5016
Dan Westlake	Christchurch Lab Manager	021-242-2742
Ralph Veneracion	Auckland Lab Manager	021-242-2711

Email can be directed to staff using "first name last name"@eurofins.com

Courier

Wellington: 85 Port Road, Seaview, Lower Hutt, New Zealand 5010

Auckland: 35 O'Rorke Road, Penrose, Auckland 1061

Christchurch: 43 Detroit Drive, Rolleston 7675

Mail

P.O. Box 36-105, Wellington Mail Centre, Petone, New Zealand 5045.

Email

General Information: eurofinswellington@eurofins.com

WEB

www.eurofins.co.nz

IANZ Accreditation Numbers:
Biological 639, Drinking Water 787,
Chemistry 414, RLP 1140