

Guru's Brain Teaser



Brain-teaser no.3: Divide the Camels

Many years ago an Egyptian died leaving behind his estate of 17 camels, to his three sons to be divided amongst his sons as follows:

The eldest son was to get one-half of the camels; the second son was left one-third and the youngest one-ninth of the 17 camels.

The sons could not figure out how to distribute the 17 camels as per their fathers wish without cutting up a camel.

So they went to the Pharaoh for advice. The Pharaoh thought for a moment and then announced a solution. Can you figure out how he divided the camels and how many camels each of the sons got?

If you think you know the answer then email Guru at guru.parkar@nzlabs.co.nz.

Correct answers are drawn out of a hat and the winner gets a box of chocolates!

Congratulations to Autumn issues winner Donna Slinger from North Island Mussel Processors!

Cut out and Keep

A Guide to NZLABS Test Reports

< = a less than sign, > = a greater than sign, cfu = colony forming units

APC	Aerobic Plate Count. This is the total number of colony forming units (CFU) present per gram or square centimetre.
E coli	Total count of Escherichia coli (E coli for short) present. E coli is the predominant organism in the faecal coliform group. <3, <1, <10 and <1.1 all represent negative results or none found.
Faecal coliforms	A group of indicator organisms that can indicate poor hygiene practices. <3 is a negative result.
Staphylococcus aureus	Detects the presence of S aureus. These organisms may produce a toxin that if ingested can lead to food poisoning. A result of <10 or <100 is equivalent to none detected.
Clostridium perfringens	Detects the presence of C perfringens, a possible food poisoning organism. A result of <10 or <100 is equivalent to none detected.
Bacillus cereus	Detects the presence of B cereus, a possible food poisoning organism. A result of <10 or <100 is equivalent to none detected.
Salmonella	Detects the presence or absence of salmonella species. Reported as POSITIVE/NEGATIVE or DETECTED/NOT DETECTED. No salmonella should be present in any food product.
Listeria	Detects the presence or absence of Listeria species and includes confirmation. Reported as either NOT DETECTED or the species identified. No Listeria should be detected in any food product.
Y&M	Yeasts and Moulds. Will detect the number of yeasts and/or moulds present in a sample. A result of <10 or <100 is equivalent to none detected.
Campylobacter	Detects the presence or absence of Campylobacter species and includes confirmation. Reported as either NOT DETECTED or the species identified. No Campylobacter should be detected in any food product.



www.nzlabs.co.nz
New Customers Call:
0800 NZLABS (0800 695 227)

Auckland

P: 09 579 2669
F: 09 571 2285
35 O'Rorke Road
Penrose Auckland
PO Box 12545
Penrose Auckland
E: auckland@nzlabs.co.nz

Hamilton

P: 07 838 5920
F: 07 838 5160
Ruakura Research Centre
East Street, Hamilton
PO Box 281
Hamilton
E: hamilton@nzlabs.co.nz

Hastings

P: 06 870 7416
F: 06 870 7419
303 Eastbourne Street
Hastings
PO Box 359
Hastings
E: hastings@nzlabs.co.nz

Christchurch

P: 03 343 5227
F: 03 343 5226
Unit 1/8 Dakota Crescent
Wigram Christchurch
PO Box 11127
Sockburn Christchurch
E: christchurch@nzlabs.co.nz



Welcome to the 2008 Autumn Edition of Analyse This



Sara Hargraves
Business Development Manager – Nationwide

Welcome to the winter issue of Analyse This!

Well the year is flying by as we find ourselves well into June already!

In this edition we let you know about our exciting new allergen testing capabilities, we give you the quick facts on salmonella, David Woollard gives a report on his latest work within the vitamin testing field and our Hastings lab has moved into its new premises!

Also, come and see us at the NZIFST conference in Rotorua, 24-26 June and go in the draw to win a goodie basket.

Here at NZLABS we are always working hard to continue to improve our service for you and invite you to contact us with any suggestions, ideas or comments so that we can continue to improve both now and in the future.

NZIFST Conference

Sara Hargraves
Business Development Manager – Nationwide

Sara Hargraves (NZLABS Business Development Manager, Nationwide) and Helen Giles (Business Development, Auckland) are exhibiting at the NZIFST conference in Rotorua, 24-26 June.

Sara and Helen look forward to meeting current clients, and hope to meet new people in the industry.

While you are browsing at the NZIFST conference, be sure to enter our competition to win a fabulous goodie basket!

See you all there!

NZLABS Offers Exciting New Allergen Capabilities



Helen Giles Business Development – Auckland

NZLABS are pleased to inform our customers that we have further advanced our allergen testing capabilities and can now offer rapid screening tests to all our customers.

These rapid tests can be used for both environmental (swabbing of equipment etc) and product samples.

We supply single use test kits to you which come with some very simple instructions; you run the test which gives you an instant allergen screening result. It's simple!

The kits have a relatively low level of detection and are excellent for giving a quick and simple answer.

We will be offering the following single use test kits:

- Gluten
- Shellfish
- Peanut
- Hazelnut
- Almond
- Casein
- Egg

For further info please contact Helen Giles at the Auckland lab 09 579 2669.

Salmonella – The Quick Facts

Helen Giles Business Development – Auckland

Salmonella is part of the Enterobacteriaceae group.

Salmonella classification is complicated as within the main species group there are over 2500 different serotypes.

Salmonella was named after the American scientist who discovered it – a Mr Salmon.

Where is Salmonella found?
Commonly found in poultry and pigs, it is also found in pets such as fish, turtles, frogs and birds.

Salmonella shed in faeces can contaminate pasture, soil and water, which can then get into the food chain.

Salmonella grows at an optimum temperature of 37 degrees and survives well on both food and surfaces. It can survive for long periods while refrigerated and frozen, and it also survives well in dry environments (low water activity foods like chocolate, spices etc).

Methods used to isolate Salmonella - NZLABS uses several different methods to isolate salmonella. These methods can give a negative result in 48-72hrs. If a presumptive is identified further tests are required to confirm that Salmonella is present.

If you have any questions or concerns about Salmonella feel free to contact the team at NZLABS and they'll be happy to help you.

New Compact Soil and Plant Sampling Kits – Available Now!

New compact Soil and Plant sampling kits are now available from NZLABS in Hamilton.

These kits have been re-designed for ease of use and contain sample bags, courier bags, and instructions on how best to take a sample.

Please contact the Hamilton laboratory to order your sampling kits.

P: 07 838 5920

E: hamilton@nzlabs.co.nz





David Woollard Technical Manager

David Woollard is part of a team of four organising a conference in the European Union on Vitamin testing. The conference focuses on the gap between analysis and the information required by nutritionists, regulators and health-food industries. The other organising members are Erik Konings (Netherlands Food Protection Agency), Jette Jacobsen (Danish National Food Institute), Paul Finglas (UK Institute Food Research).

The issues behind vitamin (and any nutrient) testing can be complex because each exists in more than one form. To take an obvious case, should Vitamin A be represented by both retinol and carotenoid contributions? If so, then what is the relative contributions from each; ie the bioavailability factors. Retinol also has cis-isomers, each with a different activity within the body. The same applies to Vitamin K1 where cis-phyloquinone is inactive but is often unknowingly included in label claims.

In addition, Vitamin K2 exists in many products, so should this be assessed during the analysis?

Vitamin D (cholecalciferol) occurs in many foods, but meat products are seemingly depleted of the micronutrient. However, a closer look will indicate minute levels of hydroxylated calciferols that are highly active yet not detected. There is even a case to consider if cholecalciferol is a Vitamin at all because it is produced in vivo by sunlight!

Among the Vitamins, perhaps Vitamin E is the most confusing because there are eight known active forms in nature, each with stereo-isomeric options. Should Vitamin E assessments of food be restricted only to alpha-tocopherol despite the common occurrence of beta- and gamma-tocopherol in vegetable oils? The relative activity of each is also under dispute based upon which biological parameter is used to assess this. Synthetic Vitamin E (as acetate ester) exists in d-(RRR) and l-(RRS) forms, the latter with greatly reduced potency, yet

common chromatographic methods can't separate the two.

Even the 'humble Vitamin C' has multiple forms that challenge analysts and perplex the regulators. Therefore the EU conference is aimed at highlighting the issues; albeit not necessarily providing the answers. The conference will take place in Copenhagen in September 2009 to coincide with the activities of CEN Technical Committee 275 WG9, on vitamins testing of foods.

As a supplier of vitamin data, NZLABS must be able to identify what each test is measuring and how this relates to the health claims of a product. This will answer questions presented by our customers, particularly when the data might deviate from expectation. Different tests are measuring different fractions of the total Vitamin content and we all need to know this.

By tracking and contributing to the situation in Europe we will be able to keep pace with advances in analytical and nutritional information about the Vitamins.

New Hastings Lab

Kerre Mckinley Business Unit Manager – Hastings

Our Hastings team recently moved to a new location. This move is exciting for NZLABS as this new laboratory is not only bigger and brighter, but provides us with increased space for Micro, Chemistry and provides us with

a totally separate Pathogen area. This extra space will allow us to increase our scope and provide a greater experience for our local Hawkes Bay clients.

Thank you to all the Hastings team as they worked hard to ensure the lab was set up quickly.

Importantly – please note the phone numbers will remain the same, however the address details are now: 303 Eastbourne St, Hastings.

Hastings Lab:
P: 06 870 7416
F: 06 870 7419
303 Eastbourne St, Hastings