



ALS Food and Environmental NZ
Hamilton

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Authorised Representative

Ms Maya Hasegawa
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Programme

Chemical Testing Laboratory

Accreditation Number 1099

Initial Accreditation Date 11 February 2014

Conformance Standard

ISO/IEC 17025:2017

General requirements for the competence of testing and calibration laboratories

Laboratory Services Summary

Food Chemistry

2.31 Foods
2.70 Instrumental Techniques

Essential oils

2.33 Cosmetics, Perfumes and Essential Oils

ICP-MS

2.24 Textiles and Textile Products
2.31 Foods
2.41 Waters
2.58 Environmental Monitoring

Environmental Chemistry

2.41 Waters
2.58 Environmental Monitoring

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Food Chemistry

2.31 Foods

(f) Dairy products

Analysis by LC-MS/MS in accordance with in-house procedures:

A1 bCN (milk and milk products)

A1/A2 phenotype (milk)

Chlorate & perchlorate (dairy product)

M1 Aflatoxin

Milk Adulterants

- Cyanuric acid
- Dicyandiamide
- Melamine

Nonylphenol Ethoxylates (NPEs)

Quaternary Ammonium Compounds (QACs) (Milk, infant formula, whey protein isolates)

- Benzalkonium chloride
- Didecylmethylammonium chloride

Analysis by UPLC with MS/MS detection in accordance with in-house procedures:

Glyphosate, AMPA and Glufosinate

Analysis by LC-UV/MS in accordance with in-house procedures:

Intact A1 bCN (milk)

(o) Other specified foods – honey

Analysis by UPLC-MS/MS in accordance with in-house procedures:

2'-Methoxyacetophenone

2-Methoxybenzoic acid

3-Phenyllactic acid

4-Hydroxyphenyllactic acid

Analysis by UPLC-PDA / fluorescence in accordance with in-house procedures:

Leptosperin

Analysis in accordance with the following procedures:

- | | |
|----------|------------------------------------|
| • Brix | In-house (refractometry) |
| • Brix | In-house (automated refractometry) |
| • Colour | In-house (refractometry) |

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- | | |
|--|--|
| • Conductivity | Harmonised Methods of the International Honey Commission 2009 (modified) |
| • Conductivity | In-house (automated refractometry) |
| • Glufosinate, Glyphosate and Aminomethylphosphonic acid | In-house (LC-MS/MS) |
| • Moisture | AOAC 969.38B (modified) |
| • Moisture | In-house (automated refractometry) |
| • Tutin | In-house (LC-MS/MS) |

Analysis by HPLC (diode array) in accordance with in-house procedures:

- Dihydroxyacetone (DHA)
- 5-hydroxymethylfurfural (HMF)
- Methylglyoxal (MGO)

C4 Sugars	AOAC 998.12 (Cavity Ringdown Spectroscopy)
C4 Sugars	AOAC 998.12 (Isotopic Ratio Mass Spectroscopy)
C4 Sugars	AOAC 998.12 (Modified Isotopic Ratio Mass Spectroscopy)
C4 Sugar screen	AOAC 998.12 (Modified Isotopic Ratio Mass Spectroscopy)
Diastase activity	Phadebas Analyse Test
Diastase activity	DIN 10750-2:2022-09 (modified) (Nitrophenol based process)

2.70 Instrumental Techniques

(d2) Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS) (2.31)

This technique pertains to classes of tests shown in parentheses and detailed above.

Explanatory Note:

This 2.70 class of test allows specifically approved senior analysts to develop, validate and use a new test method by the specified instrumental technique for a non-routine analysis in the classes of tests specified. The report over the analyst's personal signature may be endorsed with the IANZ Accreditation symbol.

Should the method become routine, an IANZ technical assessment is required before the method can appear on the laboratory's scope of routine accredited tests.

Essential oils

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2.33 Cosmetics, Perfumes and Essential Oils

(c) Essential oils

Kanuka oil terpenoids (α -pinene, p-cymene, viridiflorol) In-house by GC-MS

ICP-MS

2.24 Textiles and Textile Products

(c) Chemical tests

2.31 Foods

- (a) Cereals and cereal products
- (c) Nuts, fruits and vegetables and derived products
- (f) Dairy products
- (g) Meat, poultry and derived products
- (h) Fish and fish products
- (i) Eggs and egg products
- (k) Non-alcoholic beverages
- (o) Other specified foods – honey

2.61 Biological Specimens

(b) Residues in specified veterinary specimens

Microwave Digestion of textiles, food and biological specimens for Elemental Analysis, in accordance with in-house procedures:

Aluminium	Antimony	Arsenic	Barium
Boron	Cadmium	Caesium	Calcium
Cerium	Chromium	Cobalt	Copper
Dysprosium	Erbium	Europium	Gadolinium
Holmium	Iron	Lanthanum	Lead
Lithium	Lutetium	Magnesium	Manganese
Molybdenum	Neodymium	Nickel	Potassium
Praseodymium	Rubidium	Samarium	Selenium
Sodium	Strontium	Thulium	Tin
Uranium	Vanadium	Ytterbium	Yttrium
Zinc			

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Hot block digestion of Foetal Bovine Serum (FBS) for Elemental Analysis, in accordance with in-house procedures:

Aluminium	Antimony	Arsenic	Barium
Boron	Cadmium	Caesium	Calcium
Cerium	Chromium	Cobalt	Copper
Dysprosium	Erbium	Europium	Gadolinium
Holmium	Iron	Lanthanum	Lead
Lithium	Lutetium	Magnesium	Manganese
Molybdenum	Neodymium	Nickel	Potassium
Praseodymium	Rubidium	Samarium	Selenium
Sodium	Strontium	Thulium	Tin
Uranium	Vanadium	Ytterbium	Yttrium
Zinc			

2.31 Foods

(f) Dairy products (milk and milk powders)

The following analytes by ICP-MS, following an alkali digestion, in accordance with in-house procedures:

- Iodine

Analysis of bovine milk by Headspace GC-MS in accordance with in-house procedures:

- Bromoforms

(f) Dairy products

(o) Other specified foods (honey)

The following analytes by ICP-MS, in accordance with in-house procedures:

Aluminium	Antimony	Arsenic	Barium
Beryllium	Bismuth	Boron	Cadmium
Caesium	Calcium	Chromium	Cobalt
Copper	Germanium	Iron	Lanthanum
Lead	Lithium	Magnesium	Manganese
Mercury	Molybdenum	Nickel	Phosphorus
Potassium	Rubidium	Selenium	Sodium
Strontium	Thallium	Tin	Titanium
Tungsten	Uranium	Vanadium	Yttrium
Zinc			

2.41 Waters

(a) Potable waters

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- (b) **Non-potable waters**
(d) **Effluents and trade wastes**
(g) **Marine waters**

The following analytes by ICP-MS in saline water in accordance with in-house procedures based on USEPA 200.8:

Arsenic	Cadmium	Chromium	Cobalt
Copper	Iron	Lead	Manganese
Nickel	Selenium	Vanadium	Zinc

The following analytes (total and soluble) by ICP-MS, in accordance with in-house procedures based on USEPA 200.8:

Aluminium	Antimony	Arsenic	Barium
Beryllium	Bismuth	Boron	Cadmium
Caesium	Calcium	Chromium	Cobalt
Copper	Germanium	Iron	Lanthanum
Lead	Lithium	Magnesium	Manganese
Mercury	Molybdenum	Nickel	Phosphorus
Potassium	Rubidium	Selenium	Silver
Sodium	Strontium	Thallium	Tin
Titanium	Tungsten	Uranium	Vanadium
Yttrium	Zinc		

2.58 Environmental Monitoring

- (c) **Soils and sludges**

Acid extractable using USEPA 1311 and 1312 digestion procedures and TCLP/SPLP extractable metals by ICP-MS:

The following analytes by ICP-MS, in accordance with in-house procedures based on USEPA 200.8:

Antimony	Arsenic	Barium	Beryllium
Bismuth	Boron	Cadmium	Caesium
Calcium	Chromium	Cobalt	Copper
Lanthanum	Lead	Lithium	Magnesium
Manganese	Mercury	Molybdenum	Nickel
Phosphorus	Potassium	Rubidium	Selenium
Sodium	Strontium	Thallium	Tin
Titanium	Uranium	Vanadium	Yttrium
Zinc			

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Environmental Chemistry

2.41 Waters

In accordance with APHA Standard Methods for the Examination of Water and Wastewater, Online Edition except where otherwise stated.

- (a) Potable waters
- (b) Non-potable waters
- (d) Effluents and trade wastes

Absorbance and Transmittance	USEPA Method 415.3
Acidic Herbicides	In-house by LC-MS/MS
Acidity	2310 B
Ammonia	In-house by Segmented Flow Analysis
Bicarbonate	2320 B (modified, auto-titrator)
Carbon dioxide	2320 B (modified, auto-titrator)
Carbonate	2320 B (modified, auto-titrator)
Chemical Oxygen Demand	5220 D
Chloride	4110 B
Cyanide – Total and WAD	In-house by Segmented Flow Analysis
Conductivity	2510 B (modified, auto-titrator)
Dissolved Inorganic Nitrogen (Calculation)	4500-N A
Dissolved Reactive Phosphorus (DRP)	In-house by Segmented Flow Analysis
Dissolved Reactive Phosphorus & Ammonia-N (FIA)	4500-NH ₃ H
Fluoride	4500-F C (modified)
Hardness (Calculation)	2340 B
Multi residue pesticide (ONOP)	In-house by LC-MS/MS
Nitrate and Nitrite	4500-NO ₃ I
Nitrate (as Nitrogen)	In-house by Segmented Flow Analysis
Nitrite (as Nitrogen)	In-house by Segmented Flow Analysis
Nitrogen (Ammonia) (FIA)	4500-NH ₃ H
Non-purgable Organic Carbon (NPOC)	5310 B
Organochlorine Pesticides (OCPs)	In-house by GC-MS/MS
Perfluoroalkyl and Polyfluoroalkyl Substances (PFASs)	In-house by LC-MS/MS
pH	4500-H B (modified, auto-titrator)
Polychlorinated Biphenyls (PCBs)	In-house by GC-MS/MS
Polycyclic Aromatic Hydrocarbons	In-house by GC-MS
Semi Volatile Organic Compound	In-house based on USEPA 8270
Solids – Total	2540 B
Solids – Total Suspended Solids	2540 D (modified)
Solids – Volatile	2540 E
Solids – Volatile Suspended Solids	2540 E (modified)
Sulphate	4110 B
Total Alkalinity	2320 B
Total dissolved solids	2540 C
Total Kjeldahl Nitrogen	4500-N _{org} D (modified, Discrete Analyser)

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Total Nitrogen (Calculation)	4500-N A
Total Organic Carbon	5310 B
Total Petroleum Hydrocarbons	In-house based on USEPA 8015
Total phosphorus	4500-P H (modified, Discrete Analyser)
Turbidity	2130 B (modified)
Volatile Organic Compounds	In-house based on USEPA 5021

(b) Non-potable waters
(d) Effluents and trade wastes

Biochemical Oxygen Demand	5210 B
Chromium 6	3500-Cr ⁶⁺ B (modified, Discrete Analyser)
Oil and Grease	5520 D (modified)
Settleable Solids	In-house (based on APHA 2540 F)

(g) Marine waters

Absorbance and Transmittance	USEPA Method 415.3
Ammonia	In-house by Segmented Flow Analysis
Dissolved Inorganic Nitrogen (Calculation)	4500-N A
Dissolved Reactive Phosphorus (DRP)	In-house by Segmented Flow Analysis
Dissolved Reactive Phosphorus & Ammonia-N (FIA)	4500-NH ₃ H
Fluoride	4500-F C (modified)
Hardness (Calculation)	2340 B
Nitrate and Nitrite	4500-NO ₃ I
Nitrate (as Nitrogen)	In-house by Segmented Flow Analysis
Nitrite (as Nitrogen)	In-house by Segmented Flow Analysis
Nitrogen (Ammonia) (FIA)	4500-NH ₃ H
Perfluoroalkyl and Polyfluoroalkyl Substances (PFASs)	In-house by LC-MS/MS
Solids – Total Suspended Solids	2540 D (modified)
Solids – Volatile Suspended Solids	2540 E (modified)
Turbidity	2130 B (modified)

2.58 Environmental Monitoring

(c) Soils and sludges

Cyanide – Total and WAD	In-house by Segmented Flow Analysis
Organochlorine Pesticides (OCPs)	In-house by GC-MS/MS
Perfluoroalkyl and Polyfluoroalkyl Substances (PFAs)	In-house by LC-MS/MS
Polychlorinated Biphenyls (PCBs)	In-house by GC-MS/MS
Polycyclic Aromatic Hydrocarbons	In-house by GC-MS
Semi Volatile Organic Compound	In-house based on USEPA 8270
Synthetic Precipitation Leaching Procedure	USEPA 1312

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(excluding volatile organics)

Total Petroleum Hydrocarbons

In-house based on USEPA 8015

Toxicity characteristic leaching procedure

USEPA 1311

(excluding volatile organics)

Volatile Organic Compounds

In-house based on USEPA 5021

Analysis by LC-MS/MS in accordance with in-house procedures:

- Acid Herbicides
- Organonitrogen Pesticides
- Organophosphate Pesticides
- Organotin Pesticides

(d) Other materials – environmental wipes

Analysis for the following compounds in gauze swabs by LC-MS/MS in accordance with NIOSH 9111 (modified)

- Amphetamine
- Methamphetamine
- Ephedrine
- Pseudoephedrine

Analysis of the following compounds in gauze swabs by LC-MS/MS in accordance with NIOSH 9111 (modified) and with the requirements of NZS 8510:2017 Testing and decontamination of methamphetamine-contaminated properties

- Methamphetamine

References:

AOAC AOAC International
APHA American Public Health Association
NIOSH National Institute of Occupational Safety and Health
USEPA United States Environmental Protection Agency

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