



MPI Consolidated List of Tests for Animal Products: meat, poultry, honey, seafood, dairy, live animals and germplasm

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Part 1 Tests

Purpose

This list of tests is incorporated by reference into the Animal Products Notice: Specifications for Laboratories.

Who should read this List?

Laboratories that are recognised under the Animal Products Act 1999, to conduct tests for live animals, on animal material or animal products, or on materials associated with the processing of animal material or animal products.

This list of tests would be useful for the general public, and for premises, certifiers, and verifiers associated with the processing of animal material or animal products.

| Numerical Reference | Test | Animal Materials and Products and Associated Things | Method | Markets |
|--|--|--|--|------------------------------------|
| 1.0 MEAT, POULTRY & EGG INDUSTRY POTABLE WATER MICROBIOLOGY | | | | |
| 1.1.1 | Total coliforms (coliform bacteria), <i>Escherichia coli</i> | Potable water | MIMM 11.A1.1 rapid MIMM 11.A2 with 11.A2.6 MIMM 11.3/11.4 with 11.5 | EU, US |
| 1.2 | Faecal coliforms | Potable water, HC Spec | MIMM 11.4 mFC MF MIMM 11.A2 MPN | all |
| 1.3 | Colony count 22°C | Potable water | MIMM 11.6 SPC | EU, US |
| 1.6.1 | <i>Clostridium perfringens</i> (including spores) | Potable water | MIMM Membrane filter method for <i>Clostridium perfringens</i> 11.A3 | EU, US |
| 1.8 | <i>Escherichia coli</i> | Potable water, HC Spec | MIMM 11.A1.1 rapid APHA | all |
| 2.0 MEAT & MEAT PRODUCT, POULTRY, EGG & EGG PRODUCT & HONEY MICROBIOLOGY/PARASITOLOGY (not including dairy products or environmental sampling within dairy premises) | | | | |
| 2.1.1 | Aerobic Plate Count (APC) | Minced meat and mechanically separated meat | MIMM 6, APC or as per NMD requirements – must state which method is being used | EU, French Polynesia |
| 2.1.2 | APC spread plate | Bovine, bobby calf, caprine, cervine, ostrich and emu, ovine, and pigs | Must follow all NMD requirements | all |
| 2.1.3 | APC Petrifilm | Bovine, bobby calf, caprine, cervine, ostrich and emu, ovine, and pigs | Must follow all NMD requirements | all |
| 2.1.4 | APC spiral plater | Bovine, bobby calf, caprine, cervine, ostrich and emu, ovine, and pigs | Must follow all NMD requirements | all |
| 2.1.5 | APC | Packed edible tripe products | Must follow all sampling requirements | China |
| 2.1.6 | Total Bacterial Count (TBC) or APC | Fish meal (TBC) | Colony forming unit/gram method | China |
| | | Pet food (APC) | As per ISO 17025 accreditation | India |
| 2.2.1 | <i>Escherichia coli</i> , direct plate or Petrifilm | Minced meat, meat preparations and mechanically separated meat | MIMM 8.4, or as per NMD requirements - must state which method is being used | EU, South Africa, French Polynesia |
| 2.2.2 | <i>Escherichia coli</i> , Petrifilm | Bovine, bobby calf, caprine, cervine, ostrich and emu, and pigs | Must follow all NMD requirements | all |

Note 'all' in column five 'Market' means where testing is a generic New Zealand requirement

| Numerical Reference | Test | Animal Materials and Products and Associated Things | Method | Markets | |
|---|------------------------------|--|--|---|-----------|
| 2.3 | <i>Staphylococcus aureus</i> | Minced meat, meat preparations and mechanically separated meat | MIMM 7.8 | South Africa, French Polynesia | |
| 2.4.1 | <i>Salmonella</i> | Minced meat, meat preparations and mechanically separated meat, ready-to-eat products containing raw egg, meat products intended to be eaten raw | MIMM 7.7 with method verified for defined matrix e.g. gelatine and collagen Molecular microbiological methods in the laboratory scope of ISO 17025 accreditation for the matrix concerned | EU, US, French Polynesia, South Africa, USA | |
| | | Blood products for use in feed | | EU | |
| | | Rendered meals | | Indonesia, Philippines | |
| | | Rendered fats and fish oils not for human food | | EU | |
| | | Processed pet food and flavouring innards | | EU | |
| | | Processed animal proteins for feeding stuffs, pet food | | EU, India | |
| | | Gelatine and collagen for human food, shelf life | | EU | |
| | | Gelatine and collagen not for human food | | EU | |
| | | Hydrolysed protein, di-calcium phosphate, tri-calcium phosphate not for human food | | EU | |
| | | Egg products not for human food | | EU | |
| | | Dried dietary foods for special medicinal purposes for infants below 6 months of age – excluding infant formula | | EU | |
| | | Meat and bone meal | | | Fiji |
| | | Fish meal and fish oil | | Presence/absence method suitable to matrix | China |
| | | Egg and egg products | | | Australia |
| Egg and egg products, environmental samples, cull birds | | Singapore | | | |

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| Numerical Reference | Test | Animal Materials and Products and Associated Things | Method | Markets |
|---------------------|--------------------------------|--|--|--|
| 2.4.2 | <i>Salmonella</i> | Beef, veal and pig meat | Sampling plans and methods prescribed in the EU OMAR must be complied with. ISO 6579:2002(E) or MIMM 7.7 with additional MKTTn broth in parallel as per ISO 6579:2002(E) using XLD and BGM plating media | <i>Sweden, Finland or to countries with same requirements e.g. Iceland</i> |
| 2.4.3 | <i>Salmonella</i> | Bovine, bobby calf, caprine, cervine, ostrich and emu, and poultry (ducks, EOLs, meat chickens and turkeys) | Must follow all NMD requirements | <i>all</i> |
| | | Raw ground beef and raw ground beef products | | <i>US</i> |
| | | Turkeys | | <i>EU</i> |
| 2.5 | <i>Shigella</i> | Fish meal | Presence/absence method | <i>China</i> |
| 2.6 | <i>Listeria monocytogenes</i> | Cooked, ready-to-eat meat products and environmental samples | (1) MIMM 7.5 (2) Molecular microbiological methods in the laboratory scope of ISO 17025 accreditation for the matrix concerned | <i>EU, US</i> |
| | | Ready-to-eat foods including ready-to-eat foods for infants and special medicinal purposes – excluding infant formula. Environmental samples | | <i>EU</i> |
| | | Gelatine and collagen for human food | | <i>EU</i> |
| 2.8 | <i>Clostridium perfringens</i> | Rendered fats and fish oils not for human food | MIMM 7.10 Sulphite reducing anaerobes | <i>EU</i> |
| | | Processed animal proteins for feeding stuffs, pet food | | <i>EU, India</i> |
| 2.8.1 | <i>Clostridium perfringens</i> | Pet food | ISO 7937:2004 See also MIMM 7.10.3 re limits of detection | <i>Customs Union</i> |
| 2.9 | Enterobacteriaceae | Blood products for use in feed | MIMM 8.2 with method verified for defined matrix e.g. rendered fats and fish oils | <i>EU</i> |
| | | Rendered fats and fish oils not for human food | | <i>EU</i> |
| | | Processed pet food or flavoured innards | | <i>EU</i> |
| | | Processed animal proteins for feeding stuffs | | <i>EU</i> |
| | | Gelatine and collagen not for human food | | <i>EU</i> |
| | | Hydrolysed protein, di-calcium phosphate, tri-calcium phosphate not for human food | | <i>EU</i> |

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| Numerical Reference | Test | Animal Materials and Products and Associated Things | Method | Markets |
|---|---|---|---|--|
| | | Egg products not for human food | | EU |
| | | Dried infant formula processing areas and equipment | | EU |
| | | Fish meal | MPN method compatible with limit of ≤ 300 MPN/g | China |
| 2.9.1 | <i>Cronobacter</i> species including <i>Cronobacter sakazakii</i> | Dried dietary foods for special medicinal purposes for infants below 6 months of age - excluding infant formula | FDA BAM current edition ' <i>Cronobacter</i> ' http://www.fda.gov/food/foodscienceresearch/laboratorymethods/ucm289378.htm a molecular biological method or ISO/TS 22964:2006 (IDF/RM 210:2006) confirmed 2013 or later edition. Method chosen must be verified | EU |
| 2.10 | Faecal coliforms | Muslin/vegetable fibre used as wrapping materials | MIMM 8.5 | all |
| 2.10.1 | Total coliforms | Fish oil | MPN method compatible with limit of ≤ 300 MPN/g | China |
| Tests for presence of disease agents | | | | |
| 2.11 | <i>Bacillus anthracis</i> | Inedible meals or other products as defined by MPI | OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals current edition http://www.oie.int/en/international-standard-setting/terrestrial-manual/access-online | |
| 2.12 | <i>Trichinella</i> spp. | Meat and meat products conforming to label requirements or standards | Method as per EU OMAR | EU, Customs Union, Singapore, South Africa |
| 2.13 | Bovine Viral Diarrhoea (BVD) analysis | Bovine serum | Method as per ISO 17025 accreditation | India |
| 2.13.1 | Bovine Viral Diarrhoea (BVD) analysis | Blood (including plasma, serum and purified proteins) | Method as per ISO 17025 accreditation | China |
| 2.14 | American Foul Brood | Honey | Method as per ISO 17025 accreditation | Customs Union |
| 2.15 | Asepsis | Blood (including plasma, serum and purified proteins) | Method as per ISO 17025 accreditation | China |
| 2.16 | Mycoplasma | Blood (including plasma, serum and purified proteins) | Method as per ISO 17025 accreditation | China |
| 22.1 | <i>Campylobacter</i> | Poultry (ducks, EOLs, meat chickens, turkeys) | Must follow all NMD requirements | all |

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| Numerical Reference | Test | Animal Materials and Products and Associated Things | Method | Markets |
|---|---|--|--|----------|
| | | Turkeys | | EU |
| 23.1 | <i>Escherichia coli</i> O157:H7 | Bulk manufacturing beef and bobby veal | US OMAR | US |
| | | Raw ground beef and raw ground beef products | | |
| 23.1.1 | Primary <i>Escherichia coli</i> O157:H7 culture isolation using immunomagnetic separation (IMS) | Bulk manufacturing beef and bobby veal. | US OMAR | US |
| | | Raw ground beef and raw ground beef products | | |
| 23.2 | Non-O157 Shiga Toxin-producing <i>Escherichia coli</i> | Bulk manufacturing beef and bobby veal | US OMAR | US |
| 23.3 | Top 7 Shiga Toxin-producing <i>Escherichia coli</i> | Bulk manufacturing beef and bobby veal | US OMAR | US |
| 23.4 | Top 7 Shiga Toxin-producing <i>Escherichia coli</i> molecular confirmation | Bulk manufacturing bobby veal | US OMAR | US |
| 3.0 MEAT – CHEMISTRY | | | | |
| Recognition for proximate analysis requires that all Ash, Fat, Moisture and Protein tests are conducted. | | | | |
| 3.1.1 | Proximate analysis - Ash | Processed meat products | AOAC on-line edition 920.153 | EU |
| 3.1.2 | Proximate analysis - Fat | Processed meat products | (1) AOAC on-line edition 960.39 (2) AOAC on-line edition 991.36 | |
| 3.1.3 | Proximate analysis - Moisture | Processed meat products | AOAC on-line edition 950.46B | |
| 3.1.4 | Proximate analysis - Protein | Processed meat products | AOAC on-line edition 928.08 (II) or equivalent automated procedure | |
| Meat and meat products when being tested for ash need to be either: (1) dried overnight at 101°C and then added to a cool furnace and heated to 550°C; or (2) placed in a muffle which is temperature ramped. Meat and bone meal need to be added to a cooled furnace or pre-heated furnace and heated to 550°C or 600°C. | | | | |
| 4.0 TALLOW AND FATS | | | | |
| Tallow analysis | | | | |
| 4.01 | Insoluble impurities | Rendered fats from ruminant materials and rendered fats for human food | (1) AOAC Ca 3a – 46 most recent edition. (2) MIRINZ 831 | EU US |
| 4.02 | FFA (m/m % oleic acid) | Rendered fats for human food | (1) AOAC Ca 5a-40 most recent edition. (2) MIRINZ 831 | EU |
| 4.03 | Peroxide | Rendered fats for human food | (1) AOCS Cd 8-53 most recent edition. (2) AOAC 965.33 most recent edition (3) MIRINZ 831 | EU |

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| Numerical Reference | Test | Animal Materials and Products and Associated Things | Method | Markets |
|---|---------------------------------|---|--|---------|
| 4.04 | Moisture | Rendered fats for human food | (1) AOCS Ca 2a-45 (Dean and Stark method) most recent edition. (2) AOCS Ca 2b-38 (Hot Plate Method) most recent edition. (3) AOCS Ca 2c-25 air oven method @ 130°C most recent edition. (4) AOCS Ca 2d-25 Vacuum oven method most recent edition. (5) MIRINZ 831 | EU |
| 5.0 POTABLE WATER - PHYSICO-CHEMICAL PARAMETERS | | | | |
| all markets: Surveillance of potable water in meat and game export premises. EU OMAR and US OMAR Group A and Group B parameters are indicated in column three. | | | | |
| 5.01 | Colour | Potable water, Group A | APHA latest edition or latest on-line edition, or as per scope of accreditation | EU, US |
| 5.02 | Conductivity | Potable water, Group A at 25°C | | |
| 5.03 | pH (hydrogen ion concentration) | Potable water, Group A | | |
| 5.04 | Turbidity | Potable water, Group A | | |
| 5.10 | Ammoniacal nitrogen (ammonium) | Potable water, Group A | | |
| 5.11 | Chloride | Potable water, Group B | | |
| 5.12 | Fluoride | Potable water, Group B | | |
| 5.13 | Nitrate | Potable water, Group B | | |
| 5.14 | Nitrite | Potable water, Group A/Group B | | |
| 5.16 | Sulphate | Potable water, Group B | | |
| 5.17 | Aluminium | Potable water, Group A /Group B | | |
| 5.18 | Arsenic | Potable water, Group B | | |
| 5.19 | Boron | Potable water, Group B | | |
| 5.20 | Cadmium | Potable water, Group B | | |
| 5.22 | Chromium | Potable water, Group B | | |
| 5.23 | Copper | Potable water, Group B | | |
| 5.24 | Cyanide | Potable water, Group B | | |
| 5.25 | Iron | Potable water, Group A /Group B | | |
| 5.26 | Lead | Potable water, Group B | | |
| 5.28 | Manganese | Potable water, Group B | | |
| 5.29 | Mercury | Potable water, Group B | | |
| 5.31 | Sodium | Potable water, Group B | | |

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| Numerical Reference | Test | Animal Materials and Products and Associated Things | Method | Markets |
|---|---|---|--|---------|
| 5.45 | Bromate | Potable water, Group B | | |
| 5.46 | Nickel | Potable water, Group B | | |
| 6.0 ANIMAL PRODUCTS IN GENERAL - COMPOSITION (includes vitamins, minerals and other nutrients) | | | | |
| 6.01 | Vitamin A, retinol | Meat and meat products conforming to label requirements or standards of composition | Official Methods of Analysis of the Association of Official Analytical Chemists, most recent edition | EU, US |
| 6.02 | Vitamin B1, thiamine | | | |
| 6.03 | Vitamin B2, riboflavin | | | |
| 6.04 | Vitamin B3, niacin or nicotinic acid | | | |
| 6.05 | Vitamin B5, pantothenic acid | | | |
| 6.06 | Vitamin B6, pyridoxin | | | |
| 6.07 | Folic acid or folate (a B vitamin) | | | |
| 6.08 | Biotin (a B complex vitamin) | | | |
| 6.09 | Vitamin B12, cyanocobalamin or hydroxocobalamin | | | |
| 6.10 | Vitamin C, ascorbic acid | | | |
| 6.11 | Vitamin D3, cholecalciferol | | | |
| 6.12 | Vitamin E, D1-alpha-tocopherol | | | |
| 6.13 | Vitamin K, menaquinone | | | |
| 6.14 | Calcium, mineral | | | |
| 6.15 | Chloride or chlorine, mineral | | | |
| 6.16 | Copper, mineral | | | |
| 6.17 | Fluoride or fluorine, mineral | | | |
| 6.18 | Iodide or iodine, mineral | | | |
| 6.19 | Iron, mineral | | | |
| 6.20 | Magnesium, mineral | | | |
| 6.21 | Manganese, mineral | | | |
| 6.22 | Phosphorus, mineral | | | |
| 6.23 | Potassium, mineral | | | |
| 6.24 | Sodium, mineral | | | |
| 6.25 | Zinc, mineral | | | |
| 6.26 | Choline, amino acid | | | |
| 6.27 | Taurine, amino acid | | | |
| 6.28 | Cholesterol | | | |
| 6.29 | Dietary fibre, total and insoluble | | | |

Note 'all' in column five 'Market' means where testing is a generic New Zealand requirement

| Numerical Reference | Test | Animal Materials and Products and Associated Things | Method | Markets |
|--|------------------------------|---|--|---------------|
| 6.30 | Fatty acid profile | | | |
| 6.31 | pH | | | |
| 6.32 | Sulphated ash | | | |
| 6.33 | Total sugar | | | |
| 7.0 ANIMAL PRODUCTS IN GENERAL – FOOD ADDITIVES and INGREDIENTS | | | | |
| 7.01 | Benzoic acid or benzoates | Meat and meat products conforming to label requirements or standards of composition | Official Methods of Analysis of the Association of Official Analytical Chemists, most recent edition | <i>EU, US</i> |
| 7.02 | Sorbic acid or sorbates | | | |
| 7.03 | Nitrate | | | |
| 7.04 | Nitrite | | | |
| 7.05 | Salt NaCl | | | |
| 7.06 | Sucrose | | | |
| 7.07 | Reducing sugars | | | |
| 7.08 | Invert sugar | | | |
| 7.09 | Sugar profile | | | |
| 7.10 | Sulphur dioxide or sulphites | | | |

Note 'all' in column five 'Market' means where testing is a generic New Zealand requirement

| Numerical Reference | Test | Animal Materials and Products and Associated Things | Group | Markets |
|---|--|---|-------------------------|------------|
| <p align="center">8.0 ANIMAL PRODUCTS - CHEMICAL RESIDUE TESTING (NCRP, NCCP & OMAR)</p> <p>Method: relevant to current Animal Products Residue Programme and OMAR requirements. Owing to special requirements of the residue programme, laboratories that hold accreditation under IANZ chemical programme 2.70 class of test may use this for the purposes of the residue programme. Such reports must be signed by 2.70 KTPs for that technique.</p> <p>Product: applied to animal products, including dairy, as defined under the Animal Products Act 1999 conforming to standards.</p> <p>Application: Markets as specified with defined testing of specified material.</p> | | | | |
| 8.1 | Stilbenes plus steroids and resorcylic acid lactones | Mammals, birds, fish, honey & dairy | | <i>all</i> |
| 8.4 | Aminoglycosides | Mammals, birds, fish, honey & dairy | Antibacterial compounds | <i>all</i> |
| 8.5 | Beta-lactams | Mammals, birds, fish, honey & dairy | Antibacterial compounds | <i>all</i> |
| 8.6 | Cephalosporins | Mammals, birds, fish, honey & dairy | Antibacterial compounds | <i>all</i> |
| 8.7 | Tetracyclines | Mammals, birds, fish, honey & dairy | Antibacterial compounds | <i>all</i> |
| 8.8 | Amphenicols | Mammals, birds, fish, honey & dairy | Antibacterial compounds | <i>all</i> |
| 8.9 | Macrolides | Mammals, birds, fish, honey & dairy | Antibacterial compounds | <i>all</i> |
| 8.9.1 | Virginiamycin | Mammals & dairy | Antibacterial compounds | <i>all</i> |
| 8.10 | Sulphonamides | Mammals, birds, fish, honey & dairy | Antibacterial compounds | <i>all</i> |
| 8.11 | Nitroimidazoles | Mammals, birds, fish, honey & dairy | Antibacterial compounds | <i>all</i> |
| 8.12 | Carbadox | Mammals | Anticoccidials | <i>all</i> |
| 8.13 | Benzamidazoles | Mammals, birds, fish & dairy | Anthelmintics | <i>all</i> |
| 8.13.1 | Monepantel | Mammals, birds, fish & dairy | Anthelmintics | <i>all</i> |
| 8.14 | Imidazothiazoles eg levamisol | Mammals, birds, fish & dairy | Anthelmintics | <i>all</i> |
| 8.15 | Polyether coccidiostats | Mammals, birds, fish, honey & dairy | Anticoccidials | <i>all</i> |
| 8.15.1 | Toltrazuril | Mammals and birds | Anticoccidials | <i>all</i> |
| 8.16 | Milbemycin group | Mammals, birds, fish, honey & dairy | Anthelmintics | <i>all</i> |
| 8.17 | Synthetic pyrethroids and carbamate pesticides | Mammals, birds, fish, honey & dairy | Pesticides | <i>all</i> |
| 8.18 | Organophosphates | Mammals, birds, fish, honey & dairy | Pesticides | <i>all</i> |
| 8.19 | Beta-Agonists | Mammals, birds, fish & dairy | | <i>all</i> |

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| Numerical Reference | Test | Animal Materials and Products and Associated Things | Group | Markets |
|---------------------|---|---|-------------------------|--------------|
| 8.20 | Heavy Metals & Chemical Elements | Mammals, birds, fish, honey & dairy | | <i>all</i> |
| | Mercury, cadmium, lead, chromium & arsenic | Fish meal | | <i>China</i> |
| 8.21 | Organochlorines | Mammals, birds, fish, honey & dairy | Pesticides | <i>all</i> |
| 8.22 | Species identity and verification | Mammals, birds, fish, honey & dairy | | <i>all</i> |
| 8.23 | Fluoroacetate/1080 | Mammals, birds, fish, honey & dairy | | <i>all</i> |
| 8.25 | Nitrofurans: furazolidone, furaltadone, nitrofurazone, nitrofurantoin, semicarbazide (SEM), aminooxizolidione (AOZ), aminomorpholino-oxizolidione (AMOX), aminohydantoin (AH) | Mammals, birds, fish, honey & dairy | Antibacterial compounds | <i>all</i> |
| 8.26 | Anticoagulants | Mammals, birds, fish, honey & dairy | | <i>all</i> |
| 8.27 | Dioxins, coplanar PCBs, and polybromodiphenyl ethers (PBrDPE) and PAHs | Mammals, birds, fish, honey & dairy | | <i>all</i> |
| | Dioxins | Fish meal & fish oil | | <i>China</i> |
| 8.28 | Quinolone antibiotics | Mammals, birds, fish, honey & dairy | Antibacterial compounds | <i>all</i> |
| 8.29 | Non-steroidal anti-inflammatory substances (NSAIDs) e.g. phenyl butazone | Mammals, birds, fish & dairy | | <i>all</i> |
| 8.30 | Amprolium | Mammals and birds | Anticoccidials | <i>all</i> |
| 8.31 | Hormonal growth promotants | Mammals | | <i>all</i> |
| 8.32 | Thyrostatic agents | Mammals, birds and fish | | <i>all</i> |
| 8.33 | Prostagentic substances | Mammals, birds and fish | | <i>all</i> |
| 8.34 | Corticosteroids | Mammals, birds, fish & dairy | | <i>all</i> |
| 8.35 | Halofuginone | Mammals and birds | Anticoccidials | <i>all</i> |
| 8.36 | Robenidene | Mammals, birds and fish | Anticoccidials | <i>all</i> |
| 8.37 | Malachite green and triphenyl methane dyes including gentian violet | Fish | | <i>all</i> |
| | Malachite green | Fish meal & fish oil | | <i>China</i> |
| 8.38 | Chlorpromazine | Mammals, birds and fish | | <i>all</i> |
| 8.39 | Nicarbazin | Birds | Anticoccidials | <i>all</i> |

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| Numerical Reference | Test | Animal Materials and Products and Associated Things | Group | Markets |
|---------------------|---|---|-------------------------|--------------|
| 8.40 | Paradichlorobenzene (PDB) | Honey | Pesticides | <i>all</i> |
| 8.41 | Salicylanilides | Mammals, birds | Anthelmintics | <i>all</i> |
| 8.42 | Tutin | Honey | | <i>all</i> |
| 8.43 | Melamine, dicyandiamide (DCD), cryomazine, dicyclanil and cyanuric acid | Mammals, fish and dairy | | <i>all</i> |
| | Melamine | Fish meal | | China |
| 8.44 | Lignocaine and Xylazine | Mammals and dairy | Sedative | <i>all</i> |
| 8.45 | Isoeugenol | Fish | Sedative | <i>all</i> |
| 8.46 | Fungicides | Mammals, birds, fish, honey & dairy | Fungicides | <i>all</i> |
| 8.47 | Herbicides | Mammals, birds, fish, honey & dairy | Herbicides | <i>all</i> |
| 8.47.1 | Glyphosate, including AMPA | Mammals, birds, fish, honey & dairy | | <i>all</i> |
| 8.48 | Mycotoxins (fungal toxins) | Mammals, birds, fish, honey & dairy | | <i>all</i> |
| 8.49 | Neonicotinoids | Mammals, birds, fish, honey & dairy | | <i>all</i> |
| 8.50 | Pyrrolidiazine alkaloids | Honey | | <i>all</i> |
| 8.51 | Fumagillin | Honey | Antibacterial compounds | <i>all</i> |
| 8.52 | Amitraz | Mammals, birds, fish, honey & dairy | Pesticides | <i>all</i> |
| 8.53 | Phthalates | Honey and dairy | | <i>all</i> |
| 8.54 | Cleansing agents: phenols and cresols including chlorinated forms | Mammals, birds, fish, honey & dairy | | <i>all</i> |
| 8.55 | Nitrate and nitrite | Dairy | | <i>all</i> |
| 8.57 | Aldehydes | Dairy | | <i>all</i> |
| 8.58 | Dapsone | Dairy | | <i>all</i> |
| 8.59 | Buparvaquone (BPQ) | Mammals and dairy | | <i>all</i> |
| 8.60 | Quarternary ammonium compounds (QACs) | Dairy | | <i>all</i> |
| 8.61 | Chlorhexidine | Dairy | | <i>all</i> |
| 8.62 | Macrocyclic lactones | Dairy | Anthelmintic | <i>all</i> |
| 8.63 | Thiocyanates | Dairy | | <i>all</i> |
| 8.64 | Bisphenol A | Dairy | | <i>all</i> |

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| Numerical Reference | Test | Animal Materials and Products and Associated Things | Group | Markets |
|---------------------|----------------------------------|---|-------------------------|------------|
| 8.65 | Inhibitory substances | Dairy | Antibacterial compounds | <i>all</i> |
| 8.66 | Chlorate & perchlorate | Dairy | | <i>all</i> |
| 8.67 | Nonphenyl ethoxylates (NPEs) | Dairy | | <i>all</i> |
| 8.68 | 3-monochloropropanediol (3-MCPD) | Dairy | | <i>all</i> |
| 8.69 | Insecticides | Mammals, birds, fish, honey & dairy | | <i>all</i> |

Note 'all' in column five 'Market' means where testing is a generic New Zealand requirement

| Numerical Reference | Test | Animal Materials and Products and Associated Things | Method | Markets |
|---|---|--|--|---------|
| 9.0 GELATINE FOR HUMAN FOOD | | | | |
| In addition to the testing parameters below; shelf-life of product microbiological test methods for gelatine are found in 2.0 Meat & Meat Product, Poultry & Honey Microbiology/Parasitology. | | | | |
| 9.08 | As | Residues parameter | | EU |
| 9.09 | Pb | Residues parameter | | |
| 9.10 | Hg | Residues parameter | | |
| 9.11 | Cr | Residues parameter | | |
| 9.12 | Cu | Residues parameter | | |
| 9.13 | Zn | Residues parameter | | |
| 9.16 | SO ₂ | Residues parameter | Reith Williams | |
| 9.17 | H ₂ O ₂ | Residues parameter | European Pharmacopoeia 1986 (V ₂ O ₂) | |
| 9.18 | Cd | Residues parameter | | |
| 10 HONEY | | | | |
| 10.01 | Hydroxy methyl furfural (HMF) | Honey | | EU |
| 10.02 | Moisture | Honey | Food Standards Code | all |
| 10.03 | Reducing Sugars | Honey | Food Standards Code | all |
| 10.04 | <i>Leptospermum scoparium</i> DNA | Mānuka honey | PCR as per MPI Technical Paper 2016/74 latest version; or other DNA extraction method validated as equivalent, as per scope of accreditation. Substitution or modification of the ManKan™ Honey real time PCR kit is not permitted. | all |
| 10.05 | Four chemical characterisation compounds: 2'-Methoxyacetophenone (2'-MAP) 2-Methoxybenzoic acid (2-MBA) 3-Phenyllactic acid (3-PA) 4-Hydroxyphenyllactic acid (4-HPA) | Mānuka honey | Spectroscopy as per MPI Technical Paper 2016/73 latest version; or other method validated as equivalent, as per scope of accreditation. | all |
| 11.1 SEAFOOD PRODUCTS POTABLE WATER | | | | |
| 11.1.1 | Faecal coliforms | Potable water HC Spec Schedule 1 COP, Part 2, section 4 | APHA 4 th edition 1970 MIMM 11.4 mFC MF MIMM 11.A2 MPN | all |
| 11.1.2 | Total coliforms (coliform bacteria) <i>Escherichia coli</i> | Potable water HC Specs Schedule 1 COP, Part 2, Section 4 | APHA 4 th edition 1970 MIMM 11.A1.1 rapid MIMM 11.A2 with 11.A2.6 MIMM 11.3/11.4 with 11.5 | all |

Note 'all' in column five 'Market' means where testing is a generic New Zealand requirement

| Numerical Reference | Test | Animal Materials and Products and Associated Things | Method | Markets |
|---|---|--|--|-----------------------------|
| 11.2 SEAFOOD PRODUCTS PROCESS WATER | | | | |
| 11.2.1 | Faecal coliforms | Process water for ICSS listed premises HC Spec | APHA 4 th edition 1970 MIMM 11.4 mFC MF MIMM 11.A2 MPN | <i>all</i> |
| 11.2.3 | Total coliforms (coliform bacteria) <i>Escherichia coli</i> | Wet storage process water for ICSS listed premises HC Spec | APHA 4 th edition 1970 MIMM 11.A1.1 rapid MIMM 11.A2 with 11.A2.6 MIMM 11.3/11.4 with 11.5 | <i>all</i> |
| 11.2.4 | Chemical physical parameters | Process water for ICSS listed premises HC Spec | Current editions of AOAC and APHA | <i>all</i> |
| 11.3 SEAFOOD PRODUCTS DEPURATION WATER | | | | |
| 11.3.1 | Faecal coliforms | Depuration process water for ICSS listed premises HC Spec | APHA 4 th edition 1970 MIMM 11.4 mFC MF MIMM 11.A2 MPN | <i>all</i> |
| 11.3.3 | Total coliforms (coliform bacteria) <i>Escherichia coli</i> | Depuration process water for ICSS listed premises HC Spec | APHA 4 th edition 1970 MIMM 11.A1.1 rapid MIMM 11.A2 with 11.A2.6 MIMM 11.3/11.4 with 11.5 | <i>all</i> |
| 11.4 SEAFOOD PRODUCTS SEAWATER | | | | |
| 11.4.1 | <i>Escherichia coli</i> | Clean seawater for land based premises HC Spec Schedule 2 | No method specified | <i>all</i> |
| | | Clean seawater for fishing vessels HC Spec | No method specified Testing only required at the discretion of D-G | <i>all</i> |
| 11.4.2 | Total coliforms | Clean seawater for land based premises HC Spec Schedule 2 | No method specified | <i>all</i> |
| | | Clean seawater for fishing vessels Limited Processing Fishing Vessels RCS clause 20 and HC Spec | No method specified Testing only required at the discretion of D-G | <i>all</i> |
| 11.5 ALL FISH | | | | |
| Note re fish meal and fish oils refer section 2.0 Meat & Meat Product, Poultry & Honey Microbiology/Parasitology and section 8.0 Animal Products Chemical Residue Testing (NCRP & NCCP) and OMAR | | | | |
| 11.5.3 | SPC, also known as total viable count (TVC), total plate count (TPC) or APC | All fish | No method specified | <i>India, Customs Union</i> |

Note 'all' in column five 'Market' means where testing is a generic New Zealand requirement

| Numerical Reference | Test | Animal Materials and Products and Associated Things | Method | Markets |
|--|---------------------------------------|--|---|----------------------|
| 11.5.4 | <i>Staphylococcus aureus</i> | All fish | No method specified | India |
| 11.5.6 | <i>Vibrio parahaemolyticus</i> | All fish | As per current edition APHA or FDA BAM as per laboratory's scope of accreditation | India |
| 11.5.7 | Heavy metals | All fish | As per current edition AOAC and APHA as per laboratory's scope of accreditation | EU |
| | | Fish species and heavy metals as specified | | Mauritius |
| 11.5.8 | Histamine | Fish species as specified | Examinations must be carried out in accordance with reliable, scientifically recognised methods, such as HPLC | EU, Mauritius |
| | | Fish species matured in brine | | EU |
| | | all fish HC Specs | | all |
| 11.5.9 | Total Volatile Basic Nitrogen (TVB-N) | All fish | TVB-N Fish Ziebensen or Journal of Food Protection 52, Issue 6, 1989 or APHA 4 th compendium. | EU, Mauritius |
| 11.5.10 | <i>Escherichia coli</i> | All fish | MPN method | India |
| 11.5.11 | <i>Salmonella</i> | All fish | No method specified | India, Customs Union |
| 11.5.12 | <i>Vibrio cholerae</i> | All fish | As per current edition of APHA or FDA BAM | India |
| 11.6 BIVALVE MOLLUSCAN SHELLFISH UNCOOKED | | | | |
| 11.6.1 | Faecal coliforms | Bivalve molluscan shellfish growing waters Clause 88(1) BMS RCS Specs | Approved methods as recommended by the National Shellfish Sanitation Programme (APHA 4th Ed 1970) | all |
| 11.6.2 | <i>Escherichia coli</i> | Bivalve molluscan shellfish (flesh) Clause 88(1) BMS RCS Specs, EU OMAR | Enumeration of <i>Escherichia coli</i> in Molluscan Bivalve Shellfish, MPI Method | all |
| | | Raw harvested bivalve molluscan shellfish HC Spec | | all |
| | | Live bivalve molluscs and live echinoderms, tunicates and gastropods | | EU |
| 11.6.3 | <i>Salmonella</i> | Raw harvested bivalve molluscan shellfish HC Spec | ISO 6579:2002(E) | all |
| | | Live bivalve molluscs and live echinoderms, tunicates and gastropods | | EU |
| | | Bivalve molluscan shellfish | | Customs Union |
| 11.6.4 | <i>Vibrio parahaemolyticus</i> | Bivalve molluscan shellfish Clause 77 BMS RCS Specs | FDA BAM (most current edition) | all |

Note 'all' in column five 'Market' means where testing is a generic New Zealand requirement

| Numerical Reference | Test | Animal Materials and Products and Associated Things | Method | Markets |
|------------------------------------|-------------------------------|--|---|----------------------|
| 11.6.5 | <i>Vibrio vulnificus</i> | Bivalve molluscan shellfish Clause 77 BMS RCS Specs | FDA BAM (current edition) | <i>all</i> |
| 11.6.6 | Heavy metals | Bivalve molluscan shellfish, Clause 7(6) BMS RCS Specs | Current editions of AOAC and APHA. | <i>all</i> |
| | | Bivalve molluscan shellfish, crustaceans, cephalopods | | <i>EU</i> |
| 11.6.7 | APC | Bivalve molluscan shellfish | No method specified | <i>Customs Union</i> |
| 11.7 SHELLFISH BIOTOXINS | | | | |
| 11.7.1 | PSP | Bivalve molluscan shellfish HC Spec , EU OMAR, Clause 88(1) BMS RCS Specs | DG approved methods only | <i>all</i> |
| 11.7.2 | DSP | | | |
| 11.7.3 | NSP | | | |
| 11.7.4 | ASP | | | |
| 11.7.5 | PTX | | | |
| 11.7.6 | YTX | | | |
| 11.7.7 | AZP | | | |
| 11.8 COOKED SEAFOOD PRODUCT | | | | |
| 11.8.1 | <i>Escherichia coli</i> | Cooked crustaceans and molluscan shellfish | Enumeration of <i>Escherichia coli</i> in Molluscan Bivalve Shellfish, MPI Method | <i>EU</i> |
| 11.8.2 | <i>Salmonella</i> | Frozen pre-cooked crustaceans (flesh only) and cooked crustaceans Cooked crustaceans and molluscan shellfish | ISO 6579:2002(E) or molecular microbiological methods in the laboratory scope of ISO 17025 accreditation for the matrix tested verified as equivalent to ISO 6579:2002(E) | <i>EU</i> |
| | | Fishery products including bivalve molluscan shellfish | No method specified | <i>Customs Union</i> |
| 11.8.5 | <i>Listeria monocytogenes</i> | Ready-to-eat fish, shellfish, crabs, rock lobster, fish products and environmental samples HC Spec | Presence/absence testing FDA BAM (most current version) or MIMM 7.5 (latest version) or EN/ISO 11290-1 (1996) and subsequent amendment (2004), or any molecular microbiological method within the laboratory scope of ISO17025 accreditation validated for the matrix concerned | <i>all</i> |

Note 'all' in column five 'Market' means where testing is a generic New Zealand requirement

| Numerical Reference | Test | Animal Materials and Products and Associated Things | Method | Markets |
|---------------------|------|--|--|----------------------|
| | | Ready-to-eat foods able to support the growth of <i>Listeria monocytogenes</i> , other than those intended for infants and special medicinal purposes <i>before the product has left the manufacturer's control and where the operator is unable to satisfy MPI that the product will not exceed 100 cfu/g during the product's shelf-life</i> | | <i>EU</i> |
| | | Ready-to-eat foods able to support the growth of <i>Listeria monocytogenes</i> , other than those intended for infants and special medicinal purposes <i>where the operator can satisfy MPI that the product will not exceed 100 cfu/g during the product's shelf-life</i> | Enumeration testing (1) FDA BAM (most current method version) (2) MIMM 7.5 latest edition. (3) EN/ISO 11290-2 | <i>EU</i> |
| 11.8.6 | APC | Fishery products, including bivalve molluscan shellfish | No methods specified | <i>Customs Union</i> |

Note 'all' in column five 'Market' means where testing is a generic New Zealand requirement

| Numerical Reference | Test | Animal Materials and Products and Associated Things | Method |
|--------------------------------------|--|---|---|
| DAIRY (RAW MILK) | | | |
| 30.1 | Somatic Cells | Raw milk | |
| 30.2 | Inhibitory Substances | Raw milk (all species) | One or more methods for this test is listed in http://www.foodsafety.govt.nz/industry/sectors/dairy/monitoring-testing/laboratories/testing.htm under this link http://www.foodsafety.govt.nz/elibrary/industry/Approved_Test.xls |
| 30.3 | Freezing point (to detect water adulterant) | Raw milk (all species) | |
| 30.4 | Urea (milk integrity) | Raw milk (all species) | |
| 30.5 | APC | Raw milk (all species) | |
| 30.6 | Total coliforms | Raw milk (all species) | |
| 30.7 | Thermoturics | Raw milk (all species) | |
| 30.8 | Foreign matter | Raw milk (all species) | |
| DAIRY PRODUCTS - MICROBIOLOGY | | | |
| 31.1 | APC / SPC / TCC | All dairy products | |
| 31.2 | <i>Bacillus cereus</i> | All dairy products | |
| 31.2.1 | <i>Bacillus cereus</i> Enterotoxin | All dairy products | |
| 31.3 | <i>Campylobacter</i> | All dairy products | |
| 31.4 | <i>Clostridium botulinum</i> | All dairy products | |
| 31.5 | <i>Clostridium perfringens</i> | All dairy products | |
| 31.6 | Coliforms (count) | All dairy products | |
| 31.7 | <i>Escherichia coli</i> | All dairy products | |
| 31.8 | <i>Enterobacteriaceae</i> | All dairy products | |
| 31.9 | Faecal coliform | All dairy products | |
| 31.10 | <i>Listeria monocytogenes</i> | All dairy products | |
| 31.11 | Lipolytic organisms | All dairy products | |
| 31.12 | <i>Salmonella</i> (detection) | All dairy products | |
| 31.13 | Staphylococcal Enterotoxin | All dairy products | |
| 31.14 | <i>Staphylococcus aureus</i> (<i>Staphylococcus</i> , Coagulase Positive) | All dairy products | |
| 31.15 | Sulphite-reducing Clostridia (SRC) | All dairy products | |
| 31.16 | Yeasts and Moulds | All dairy products | |

Note 'all' in column five 'Market' means where testing is a generic New Zealand requirement

| Numerical Reference | Test | Animal Materials and Products and Associated Things | Method |
|--|--|---|--------|
| 31.17 | <i>Cronobacter sakazakii</i> (previously genus name was <i>Enterobacter</i>) | Infant formula | |
| DAIRY PRODUCTS - COMPOSITION (includes standards of identity, vitamins, minerals and other nutrients) | | | |
| 32.1 | Fat | All dairy products | |
| 32.2 | Fatty Acids | All dairy products | |
| 32.3 | Moisture | All dairy products | |
| 32.4 | Protein | All dairy products | |
| 32.5 | Solids Non-Fat | All dairy products | |
| 32.6 | Salt | All dairy products | |
| 32.7 | Vitamin A (retinol) | All dairy products | |
| 32.8 | Vitamin D2 (ergocalciferol) & Vitamin D3 (cholecalciferol) | All dairy products | |
| 32.9 | Minerals: Sodium, Potassium, Chloride | All dairy products | |
| 32.10 | Sugar | Icecream | |
| 32.11 | Biotin | Infant formula composition | |
| 32.12 | Calcium | Infant formula composition | |
| 32.13 | Chloride | Infant formula composition | |
| 32.14 | Folic acid | Infant formula composition | |
| 32.15 | Ganglioside | Infant formula composition | |
| 32.16 | Inositol | Infant formula composition | |
| 32.17 | Inulin | Infant formula composition | |
| 32.18 | Iodine value | Infant formula composition | |
| 32.20 | Lutein | Infant formula composition | |
| 32.21 | Nucleotides | Infant formula composition | |
| 32.22 | Protein | Infant formula composition | |
| 32.23 | Taurine | Infant formula composition | |
| 32.24 | Vitamin A | Infant formula composition | |
| 32.25 | Vitamin B1 | Infant formula composition | |

Note 'all' in column five 'Market' means where testing is a generic New Zealand requirement

| Numerical Reference | Test | Animal Materials and Products and Associated Things | Method |
|---------------------|-----------------|---|--------|
| 32.26 | Vitamin B2 | Infant formula composition | |
| 32.27 | Vitamin B3 | Infant formula composition | |
| 32.28 | Vitamin B5 | Infant formula composition | |
| 32.29 | Vitamin B6 | All dairy products including infant formula | |
| 32.30 | Vitamin B12 | Infant formula composition | |
| 32.31 | Vitamin C | Infant formula composition | |
| 32.32 | Vitamin K1 | All dairy products including infant formula | |
| 32.33 | Immunoglobulins | All dairy products | |
| 32.34 | Lactose | All dairy products | |
| 32.35 | Sterol | All dairy products | |

Note 'all' in column five 'Market' means where testing is a generic New Zealand requirement

| Numerical Reference | Test | Animal Materials and Products and Associated Things | Method |
|---|---|---|--|
| DAIRY PRODUCTS - PHYSICAL & CHEMICAL TESTS | | | |
| 33.1 | Foreign Matter | All dairy products | One or more methods for this test is listed in http://www.foodsafety.govt.nz/industry/sectors/dairy/monitoring-testing/laboratories/testing.htm under this link http://www.foodsafety.govt.nz/elibrary/industry/Approved_Test-.xls |
| 33.2 | Sediment | All dairy products | |
| 33.3 | Freezing point (to detect water adulterant) | All dairy products | |
| 33.4 | Phosphatase | All dairy products | |
| 33.5 | Reichart-Meissl Value (fat) | All dairy products | |
| 33.6 | Polenske Value (fat) | All dairy products | |
| 33.7 | pH | All dairy products | |
| 33.8 | Titratable Acidity | All dairy products | |
| 33.9 | Solubility (insolubility index) | All dairy products | |
| 33.10 | Aflatoxin | All dairy products | |
| 33.11 | Peroxide value | All dairy products | |
| 33.12 | Radionuclides | All dairy products | |
| 33.13 | Ash | All dairy products | |
| 33.14 | Hydrogen peroxide | All dairy products | |
| 33.15 | Scorched particles | All dairy products | |

Note 'all' in column five 'Market' means where testing is a generic New Zealand requirement

| Numerical Reference | Test | Method |
|--|---|---|
| LIVE ANIMALS and GERMLASM – DISEASE TESTS | | |
| 51.1 | <i>Aeromonas salmonicida</i> | Bacterial culture, propagation |
| 52.1 | Akabane virus | Virus neutralisation test (VNT), antibody detection |
| 53.1 | Anaplasmosis | Complement fixation test (CFT), antibody detection |
| 54.1 | Avian influenza virus | Agar-gel immunodiffusion test (AGID test), antibody detection |
| 55.1 | Avian influenza virus | Enzyme-linked immunosorbent assay – antibody detection (ELISA-Ab), antibody |
| 55.2 | Avian influenza virus | Hemagglutination inhibition test (HI), antibody detection |
| 55.3 | Avian influenza virus | Virus isolation (VI), propagation |
| 55.4 | Avian paramyxovirus serotype 1 (APMV-1)-NDV | Polymerase chain reaction - RNA, DNA detection (PCR), molecular biology |
| 55.5 | Avian paramyxovirus serotype 2 (APMV-2)-Yucaipa | HI, antibody detection |
| 55.6 | Avian paramyxovirus serotype 2 (APMV-2)-Yucaipa | PCR, molecular biology |
| 55.7 | Avian paramyxovirus serotype 3 (APMV-3) | HI, antibody detection |
| 55.8 | Avian paramyxovirus serotype 3 (APMV-3) | PCR, molecular biology |
| 55.9 | Avian pneumovirus (turkey rhinotracheitis) | ELISA-Ab, antibody detection |
| 56.1 | <i>Babesia caballi</i> | ELISA-Ab, antibody detection |
| 56.2 | <i>Babesia caballi</i> | Immunofluorescence antibody test (IFAT), antibody detection |
| 56.3 | <i>Babesia gibsoni</i> | IFAT, antibody detection |
| 56.4 | <i>Babesia gibsoni</i> | PCR, molecular biology |
| 56.5 | Blood parasites (<i>Babesia</i> spp.) | Blood smear, visualisation |
| 57.1 | Bluetongue virus | AGID test – antibody detection |
| 57.2 | Bluetongue virus | ELISA-Ab, antibody detection |
| 58.1 | Bovine herpesvirus 1 | PCR, molecular biology |
| 59.1 | Bovine viral diarrhoea virus (BVDV) | ELISA-Ab, antibody detection |
| 59.2 | Bovine viral diarrhoea virus (BVDV) | Enzyme-linked immunosorbent assay – antigen detection (ELISA-Ag), antigen detection |
| 59.3 | Bovine viral diarrhoea virus (BVDV) | PCR, molecular biology |
| 59.4 | Bovine viral diarrhoea virus (BVDV) | VI, propagation |
| 59.5 | Bovine viral diarrhoea virus (BVDV) | VNT, antibody detection |
| 59.6 | Bovine viral diarrhoea virus (BVDV) | 2 passages, propagation |
| 60.1 | <i>Brucella abortus</i> | Serum agglutination test (SAT), antibody detection |

Note 'all' in column five 'Market' means where testing is a generic New Zealand requirement

| Numerical Reference | Test | Method |
|---------------------|---|---|
| 60.2 | <i>Brucella abortus</i> | Serum agglutination test - European (SAT EU as per current EU OMAR), antibody detection |
| 60.3 | <i>Brucella canis</i> | Rapid slide agglutination (RSA), antibody detection |
| 60.4 | <i>Brucella ovis</i> | ELISA-Ab, antibody detection |
| 60.5 | <i>Brucella ovis</i> | CFT, antibody detection |
| 60.6 | <i>Brucella</i> spp. (<i>B. abortus</i> and/or <i>B. melitensis</i> and/or <i>B suis</i>) | ELISA-Ab, antibody detection |
| 60.7 | <i>Brucella</i> spp. (<i>B. abortus</i> and/or <i>B. melitensis</i>) | CFT, antibody detection |
| 61.1 | <i>Campylobacter</i> spp. | Bacterial culture, propagation |
| 61.2 | <i>Campylobacter fetus</i> subsp. <i>venerealis</i> | Bacterial culture, propagation |
| 62.1 | Canine/feline heartworm | ELISA-Ag, antigen detection |
| 63.1 | Caprine arthritis-encephalitis (CAE) virus | ELISA-Ab, antibody |
| 64.1 | Cervine herpesvirus type-1 | VNT, antibody detection |
| 65.1 | Cytopathic fish virus | VI, propagation |
| 66.1 | EDS 76 | HI, antibody detection |
| 67.1 | <i>Ehrlichia canis</i> | IFAT, antibody detection |
| 68.1 | Enzootic bovine leukosis (EBL) | ELISA-Ab, antibody detection |
| 68.2 | Enzootic bovine leukosis (EBL) | AGID, antibody detection |
| 69.1 | Epizootic haemorrhagic disease (EHD) | AGID, antibody detection |
| 70.1 | Equine herpes virus | VNT, antibody detection |
| 70.2 | Equine herpes virus - 1 | ELISA-Ab, antibody detection |
| 70.3 | Equine herpes virus - 4 | ELISA-Ab, antibody detection |
| 71.1 | Equine infectious anaemia | AGID, antibody detection |
| 71.2 | Equine influenza virus | HI, antibody detection |
| 71.3 | Equine influenza virus | PCR, molecular biology |
| 72.1 | Equine viral arteritis (EVA) virus | VI, propagation |
| 72.2 | Equine viral arteritis (EVA) virus | VNT, antibody detection |
| 73.1 | Infectious bovine rhinotracheitis (IBR) | ELISA-Ab, antibody detection |
| 73.2 | Infectious bovine rhinotracheitis (IBR) | VNT, antibody detection |
| 73.3 | Infectious bovine rhinotracheitis (IBR) | VI, propagation |
| 74.1 | Infectious bursal disease (IBD) | ELISA-Ab, antibody detection |
| 74.2 | Infectious bursal disease (IBD) | PCR, molecular biology |
| 74.3 | Infectious bursal disease (IBD) | VNT, antibody detection |
| 75.1 | Influenza | PCR, molecular biology |
| 75.2 | Influenza A + B | Lateral flow device (LFD), antigen detection |
| 76.1 | Johne's disease (JD) | AGID, antibody detection |

Note 'all' in column five 'Market' means where testing is a generic New Zealand requirement

| Numerical Reference | Test | Method |
|---------------------|--|--|
| 76.2 | Johne's disease (JD) | CFT, antibody detection |
| 76.3 | Johne's disease (JD) | ELISA-Ab, antibody detection |
| 77.1 | <i>Leishmania</i> spp. | IFAT, antibody detection |
| 77.2 | <i>Leptospira ballum</i> (1) | Microscopic agglutination test (MAT), antibody detection |
| 77.3 | <i>Leptospira bratislava</i> (2) | MAT, antibody detection |
| 77.4 | <i>Leptospira canicola</i> (3) | MAT, antibody detection |
| 77.5 | <i>Leptospira copenhageni</i> (4) | MAT, antibody detection |
| 77.6 | <i>Leptospira grippityphosa</i> (5) | MAT, antibody detection |
| 77.7 | <i>Leptospira hardjo-bovis</i> (6) | MAT, antibody detection |
| 77.8 | <i>Leptospira iceterohaemorrhagiae</i> (7) | MAT, antibody detection |
| 77.9 | <i>Leptospira pomona</i> (8) | MAT, antibody detection |
| 77.10 | <i>Leptospira tarassovi</i> (9) | MAT, antibody detection |
| 78.1 | Lyssa virus | IFAT, antibody detection |
| 79.1 | Maedi visna (MV) virus | ELISA-Ab, antibody detection |
| 80.1 | Malignant catarrhal fever | PCR, molecular biology |
| 81.1 | Microfilariae | Knott's test, visualisation |
| 82.1 | <i>Mycoplasma</i> spp. | Bacterial culture, propagation |
| 82.2 | <i>Mycoplasma agalactiae</i> | ELISA-Ab, antibody detection |
| 82.3 | <i>Mycoplasma capricolum</i> subsp. <i>capricolum</i> | CFT antibody detection |
| 83.4 | <i>Mycoplasma gallisepticum</i> | RSA, antibody |
| 84.5 | <i>Mycoplasma mycoides mycoides</i> Large colony | CFT antibody detection |
| 85.6 | <i>Mycoplasma synoviae</i> | RSA, antibody |
| 86.7 | <i>Mycoplasma meleagridis</i> | RSA, antibody detection |
| 87.8 | <i>Myxobolus cerebralis</i> | Microscopy, visualisation |
| 88.1 | Newcastle disease virus (NDV) | ELISA-Ab, antibody detection |
| 88.2 | Newcastle disease virus (NDV) | HI, antibody detection |
| 88.3 | Newcastle disease virus (NDV) | VI, propagation |
| 89.1 | <i>Ornithobacterium rhinotracheale</i> | Bacterial culture, propagation |
| 90.1 | Palyam virus | AGID, antibody detection |
| 91.1 | Parainfluenza virus type-3 | VI, propagation |
| 92.1 | Parasite eggs | Faecal egg count, visualisation |
| 93.1 | Pestivirus/hairy shaker disease virus/ border disease virus | VI, propagation |
| 93.2 | Hairy shaker disease virus / border disease virus | 2 passages, propagation |
| 94.1 | Porcine parvovirus | ELISA-Ab, antibody detection |
| 95.1 | Q fever | CFT, antibody detection |
| 95.2 | Q fever | ELISA-Ab, antibody detection |
| 95.3 | Q fever | PCR, molecular biology |

Note 'all' in column five 'Market' means where testing is a generic New Zealand requirement

| Numerical Reference | Test | Method |
|---------------------|--|---|
| 96.1 | Rabies virus | Rapid fluorescent focus inhibition test (RFFIT), antibody detection |
| 97.1 | <i>Renibacterium salmoninarum</i> | PCR, molecular biology |
| 98.1 | <i>Salmonella</i> spp | Bacterial culture, propagation |
| 98.2 | <i>Salmonella</i> spp | ELISA-Ab, antibody detection |
| 98.3 | <i>Salmonella</i> specific serotypes: including <i>S. Typhimurium</i> and <i>S. Enteritidis</i> | Bacterial culture, propagation |
| 98.4 | <i>Salmonella arizona</i> | Bacterial culture, propagation |
| 98.5 | <i>Salmonella pullorum</i> | SAT, antibody detection |
| 99.1 | <i>Streptococcus equi</i> subsp., <i>equi</i> culture | Bacterial culture, propagation |
| 100.1 | <i>Taylorella equigenitalis</i> | Bacterial culture, propagation |
| 101.1 | <i>Theileria equi</i> | ELISA-Ab, antibody detection |
| 101.2 | <i>Theileria equi</i> | IFAT, antibody detection |
| 102.1 | Ticks | Identification, visualisation |
| 103.1 | <i>Trichinella spiralis</i> | ELISA, antibody detection |
| 103.2 | <i>Trichinella spiralis</i> | Pepsin digestion, visualisation |
| 103.3 | <i>Trichomonas foetus</i> | Bacterial culture, propagation |
| 104.1 | <i>Yersinia ruckeri</i> | Bacterial culture, propagation |
| 105.1 | West Nile Virus | ELISA-Ab, antibody detection |

Note 'all' in column five 'Market' means where testing is a generic New Zealand requirement

Part 2 Designated ILCP

1.0 Background

The objective of the designated Inter-laboratory Comparison Programme (ILCP) is to determine a laboratory's capability to conduct microbiological testing for potable water, meat, poultry and seafood, and chemical testing for meat, tallow, fats, and potable water for tests (as applicable) in the *MPI Consolidated List of Tests for Animal Products: meat, poultry, honey, seafood, dairy, live animals and germplasm (CLT)* as specified in the following Tables 1 to 7.

2.0 Requirements

- (1) Tables 1 to 7 specify the particular designated ILCP test that laboratories that are recognised, under the Animal Products Act 1999 (APA), must conduct in relation to the particular CLT tests that are listed in those tables.
- (2) Laboratories must notify the ILCP provider to obtain proficiency samples if any of these specified CLT tests are in their scope of recognition under the APA and must cover the cost of the samples.
- (3) Tables 1 to 7 specify the minimum number of rounds required. A 'round' means each time the ILCP Provider sends proficiency samples to a laboratory.
- (4) The ILCP provider will send the laboratory a set of samples (e.g. freeze dried vials for potable water, meat, poultry and seafood product microbiological samples, or meat and bone meal or meat paste for meat product chemistry samples, or tallow for tallow and fat chemistry samples, or potable water for potable water chemistry) with an amount of the parameter to be tested e.g. a microbiological organism(s) or chemical(s) of concern of which the presence and quantity is unknown by the laboratory receiving the sample.
- (5) On receipt of an ILCP sample, the laboratories are required to determine presence, absence, identity and/or count (where applicable) of microorganisms present and/or perform chemical analyses to establish the levels present of chemical parameters of concern.
- (6) The laboratory must undertake the designated ILCP test within 48 hours of receipt of any microbiological sample, and as soon as practicable for chemistry samples such that results of either microbiological testing or chemistry testing can be reported to the ILCP provider by the results due date for the round, established by the ILCP provider.
- (7) After the results due date, the round is closed. Statistical analysis is performed on the data sets by the ILCP provider. Laboratory performance is evaluated and reports are distributed electronically by the ILCP provider. A summary of round performance is reported directly to MPI by the ILCP provider each month in addition to the individual reports being sent to each respective participating laboratory.

3.0 Warning or Action performance rating notification responses

- (1) In the event of a 'warning' performance rating reported by the ILCP provider the laboratory must undertake the minimum of an internal investigation as soon as practicable.

4.0 Minor (m) defect category and follow up action

- (1) The ILCP provider must assign a minor defect (m) category when a second 'warning' performance rating is given in the following round for the same ILCP type of test, or where individual results in any round are assigned an 'action' rating.
- (2) In the event of a minor (m) defect category performance rating notification reported by the ILCP provider the laboratory must:
 - a) request a re-test sample within two working days following receipt of the notification by the ILCP provider, except where evidence is provided that the error was not related to performance of the analysis (e.g. was a transcription error); and
 - b) complete testing of re-test samples within five working days following a receipt of a re-test sample and send results back to the ILCP provider; and
 - c) carry out and document an investigation as to the cause of the warning or action rating notification and take corrective action as necessary.

5.0 Major (M) defect category and follow up action

- (1) The ILCP provider must assign a major (M) defect category when a 'warning' or 'action' rating notification is reported on a retest sample.
- (2) In the event of a major (M) defect category performance rating notification reported by the ILCP provider the laboratory must:
 - a) request a further re-test sample within two working days following the receipt of the notification by the ILCP provider, except where evidence is provided that the error was not related to performance of the analysis (e.g. was a transcription error); and
 - b) complete testing of re-test samples within five working days following receipt of a re-test sample and send results back to the ILCP provider; and
 - c) in the case of a major (M) defect category performance rating notification in relation to a test or tests described in Table 1, in addition to the re-tests required in subclause (a) and (b) above, the laboratory must conduct re-tests in the intervening months between the minimum number of rounds per year if such re-test samples are supplied by the ILCP provider; and
 - d) as soon as practicable after receiving the major (M) defect category performance rating notification on a retest sample carry out and document an investigation as to the cause of the 'warning' or 'action' rating notification on the retest sample and take corrective action as necessary.

6.0 Critical (C) defect category and follow up action

- (1) The ILCP provide must assign a Critical (C) defect category in the event of:
 - a) a further 'warning' or 'action' rating notification on a retest sample carried out under clause 5.0; or
 - b) non-participation by a laboratory in the next round following a major (M) performance rating notification reported on that laboratory; or
 - c) failure by the laboratory to follow-up and report back to the ILCP provider on a major (M) defect category performance rating notification; or
 - d) failure by the laboratory to participate in the required number of ILCP rounds for the specified tests for which the laboratory is recognised.

- (2) In the event of a Critical (C) defect category performance rating notification being issued to the laboratory by the ILCP provider, the laboratory must:
 - a) resume participation in the required number of ILCP rounds relevant to all specified tests for which the laboratory is recognised; and
 - b) must demonstrate its capability by:
 - i) determining and undertaking corrective actions to ensure testing proficiency is regained; and
 - ii) undertaking any repeat testing required by the ILCP provider and reporting back to the ILCP provider on the results obtained and;
 - iii) undertaking any other actions required by the Director-General to reinstate laboratory competence.

- (3) In deciding what actions to impose under subclause 2 (b) iii), the Director General must consider the following matters:
 - a) the need to ensure that an ongoing and consistent standard of laboratory performance is maintained by all recognised laboratories conducting tests with public health significance or high levels of market access sensitivity; and
 - b) the need to enable analysis and comparison by MPI of laboratory testing of animal material and animal products concerned to underpin the development of new MPI strategies to improve risk management for key tests.

7.0 Resumption of ILCP testing following closure

- (1) If a laboratory closure occurs following a major (M) defect category being assigned by the ILCP provider or a critical (C) defect category being assigned by the ILCP provider, the first ILCP round following the reopening of the laboratory must be treated as if it had followed immediately on the ILCP rounds prior to the closure.

Table 1: Potable Water Microbiology Comparative Programme (meat, poultry & seafood)

| Numerical reference | CLT Test | Designated ILCP | |
|---------------------|--|---------------------------------|-----------------------------------|
| | | ILCP Test Name | Minimum number of rounds per year |
| 1.3 | SPC 22°C/72 hours | Standard plate count SPC22 | 6 |
| 1.1.1 | Total coliforms (coliform bacteria), <i>Escherichia coli</i> | Total coliforms, <i>E. coli</i> | 6 |
| 11.1.2 | | | |
| 1.2 | Faecal coliforms | Faecal coliforms | 6 |
| 11.1.1 | | | |
| 1.6.1 | <i>Clostridium perfringens</i> (including spores) | <i>Clostridium perfringens</i> | |

Laboratories must complete six rounds of ILCP tests per year, for each method they are recognised for.

Table 2: Meat and Poultry Microbiology Comparative Programme

| Numerical reference | CLT Test | Designated ILCP | |
|---------------------|---|--------------------------------|-----------------------------------|
| | | ILCP Test Name | Minimum number of rounds per year |
| 2.1.1 | Aerobic Plate Count (APC) | APC 30 (SPC) | 11 |
| 2.1.2 | APC spread plate | | |
| 2.1.3 | APC Petrifilm | | |
| 2.1.4 | APC spiral plater | | |
| 2.2.1 | <i>Escherichia coli</i> , direct plate of Petrifilm | <i>E. coli</i> | 11 |
| 2.2.2 | <i>Escherichia coli</i> , Petrifilm | | |
| 2.3 | <i>Staphylococcus aureus</i> | <i>Staphylococcus aureus</i> | 2 |
| 2.8 & 2.8.1 | <i>Clostridium perfringens</i> | <i>Clostridium perfringens</i> | 2 |
| 2.9 | Enterobacteriaceae | Enterobacteriaceae | 2 |
| 2.10 | Faecal coliforms | Faecal coliforms | 2 |

Table 3: Seafood Microbiology Comparative Programme

| Numerical reference | CLT Test | Designated ILCP | |
|---------------------|---|------------------------------|-----------------------------------|
| | | ILCP Test Name | Minimum number of rounds per year |
| 11.5.3 | SPC, also known as Total Viable Count (TVC), Total Plate Count (TPC) or Aerobic Plate Count (APC) | APC (SPC) | 4 |
| 11.6.7 | APC | | |
| 11.8.6 | APC | | |
| 11.5.10 | <i>Escherichia coli</i> | <i>E. coli</i> | 4 |
| 11.6.2 | <i>Escherichia coli</i> | | |
| 11.8.1 | <i>Escherichia coli</i> | | |
| 11.6.1 | Faecal coliforms | Faecal coliforms | 4 |
| 11.5.4 | <i>Staphylococcus aureus</i> | <i>Staphylococcus aureus</i> | 4 |

Table 4: Pathogen microbiology comparative programme (meat, poultry & seafood)

| Numerical reference | CLT Test | Designated ILCP | |
|---------------------|---|--|---|
| | | ILCP Test Name | Minimum number of rounds per year |
| 2.4.1 | <i>Salmonella</i> | <i>Salmonella</i> | 2 rounds per year for each <i>Salmonella</i> method the laboratory is recognised for. |
| 2.4.2 | <i>Salmonella</i> | | |
| 2.4.3 | <i>Salmonella</i> | | |
| 11.5.11 | <i>Salmonella</i> | | |
| 11.6.3 | <i>Salmonella</i> | | |
| 11.8.2 | <i>Salmonella</i> | | |
| 2.6 | <i>Listeria monocytogenes</i> | <i>Listeria monocytogenes</i> presence/absence and enumeration | 2 rounds per year for each <i>Listeria monocytogenes</i> method the laboratory is recognised for. |
| 11.8.5 | <i>Listeria monocytogenes</i> | | |
| 22.1 | <i>Campylobacter</i> | <i>Campylobacter</i> enumeration | 2 |
| 23.1 | <i>Escherichia coli</i> O157:H7 | <i>Escherichia coli</i> O157:H7 and Top 6 nSTECs | 2 |
| 23.2 | Non-O157 Shiga Toxin-producing <i>Escherichia coli</i> | | |
| 23.3 | Top 7 Shiga Toxin-producing <i>Escherichia coli</i> | | |
| 23.1.1 | Primary <i>Escherichia coli</i> O157:H7 culture isolation using immunomagnetic separation (IMS) | <i>Escherichia coli</i> O157:H7 isolation using IMS | 2 |
| 11.5.6 | <i>Vibrio parahaemolyticus</i> | <i>Vibrio parahaemolyticus</i> | 2 |
| 11.6.4 | <i>Vibrio parahaemolyticus</i> | | |

Table 5: Meat chemistry comparative programme

| | | Designated ILCP | |
|---------------------|-------------------------------|-----------------|-----------------------------------|
| Numerical reference | CLT Test | ILCP Test Name | Minimum number of rounds per year |
| 3.1.1 | Proximate analysis - Ash | Ash | 6 |
| 3.1.2 | Proximate analysis - Fat | Fat | 6 |
| 3.1.3 | Proximate analysis - Moisture | Moisture | 6 |
| 3.1.4 | Proximate analysis - Protein | Protein | 6 |

The laboratory must complete 6 rounds per year for each of the two matrices (meat and bone meal, and meat paste).

Table 6: Tallow and Fats; rendered fats from ruminant materials comparative programme

| | | Designated ILCP | |
|---------------------|---|------------------------|-----------------------------------|
| Numerical reference | CLT Test | ILCP Test Name | Minimum number of rounds per year |
| 4.01 | Insoluble impurities | Insoluble impurities | 2 |
| 4.02 | Free fatty acids (FFA) (m/m % oleic acid) | FFA (m/m % oleic acid) | 6 |
| 4.03 | Peroxide | Peroxide | 6 |
| 4.04 | Moisture | Moisture | 6 |

Table 7: Potable water chemistry comparative programme; all markets - surveillance of potable water in meat & game export premises

| | | Designated ILCP | |
|---------------------|---------------------------------|--------------------------------|-----------------------------------|
| Numerical reference | CLT Test | ILCP Test Name | Minimum number of rounds per year |
| 5.02 | Conductivity | Conductivity | 2 |
| 5.03 | pH (hydrogen ion concentration) | pH | 2 |
| 5.04 | Turbidity | Turbidity | 2 |
| 5.10 | Ammoniacal nitrogen (ammonium) | Ammoniacal nitrogen (ammonium) | 2 |
| 5.13 | Nitrate | Nitrate | 2 |
| 5.14 | Nitrite | Nitrite | 2 |

Part 3 Abbreviations and Definitions

- AOAC = Association of Official Analytical Chemists
- AOCS = Official Methods and Recommended Practices of the American Oil Chemist's Society AOCS
- APC = Aerobic Plate Count
- APHA 4th edition 1970 = American Public Health Association. 1970. Recommended Procedures for the Examination of Sea Water and Shellfish, 4th edition, APHA, New York, N.Y. Note that this edition is out of print, but this is the edition specified by FDA. Library copies are held at ESR Christchurch and ESR Mt Albert
- APHA = Standard Methods for the Examination of Water and Wastewater (American Public Health Association) latest edition
- BMS RCS Specs = Animal Products (Specifications for Bivalve Molluscan Shellfish) Notice 2006
- COP = Code of Practice, Processing of Seafood Products
- *E. coli* = *Escherichia coli*
- EOLs = End of lay chickens
- FFA = free fatty acids
- FDA BAM = U.S. Food and Drug Administration Bacteriological Analytical Manual (BAM)
- HC Spec = Animal Products Notice: Specifications For Products Intended For Human Consumption (current edition)
- HPLC = high pressure liquid chromatography
- ILCP = inter-laboratory comparison programme
- ILCP provider means a supplier of proficiency testing services for laboratory testing who is accredited to ISO/IEC 17403
- IMS = immunomagnetic separation
- MF = membrane filtration
- MIMM = Meat Industry Microbiological Methods, latest edition
- MIRINZ 831 = Morris M.A., Methods for Determining the Physical and Chemical Properties of Products and Wastes of Rendering Departments
[Volume 831 of MIRINZ \(Series\)](#)
- NCCP = National Chemical Contaminants Programme (dairy)
- NCRP = National Chemical Residue Programme (non-dairy)
- NMD = Animal Products Notice: Specifications for National Microbiological Database Programme (current edition)
- nSTEC = non-O157 Shiga Toxin-producing *Escherichia coli*
- OMAR = Overseas Market Access Requirement
<http://www.foodsafety.govt.nz/industry/exporting/market-access/omars.htm>
- pH = hydrogen ion concentration
- RCS = Regulated Control Scheme
- SPC = Standard Plate Count
- spp. = species
- TBC = Total Bacterial Count
- Top 6 nSTEC = non-O157 Shiga Toxin-producing *Escherichia coli* which are positive for both the *eae* gene and for one or both *stx* genes (*stx1*, *stx2*) and are one of the following O serotypes: O26, O45, O103, O111, O121 and O145
- Top 7 STEC = Shiga Toxin-producing *Escherichia coli* which are positive for both the *eae* gene and for one or both *stx* genes (*stx1*, *stx2*) and are one of the following O serotypes: O26, O45, O103, O111, O121, O145 and O157

- TPC = Total Plate Count
- TVC = Total Viable Count

Part 4 Composite Sampling

- (1) Microbiological composite testing must only be used to determine presence or absence of particular pathogens (not enumeration);
- (2) Microbiological or chemical composite sampling must provide:
 - a) clear identification of:
 - i. the type of product being sampled; and
 - ii. the production lot(s) or batch(es) or consignment(s) from which the product concerned is sampled; and
 - b) defined criteria for the selection of representative product to sample; and
 - c) defined procedures for mixing of samples to form the composite and the aliquot of the composite sample selected; and
 - d) robust validation for the analysis including:
 - i. the maximum sample/volume weight that is suitable for the test; and
 - ii. level of sensitivity that will be achieved by compositing compared to discrete sample testing; and
 - iii. clarity that when compositing the whole production lot(s) or batch(es) or consignment(s) of the product sampled will pass or fail the test.
- 3) The test report must clearly identify the nature of the composite;
- 4) Composite testing must not be undertaken where discrete testing of a specified quantity of representative samples is stipulated in the test method.