

Food, Metabolism & Microbiology

Food Safety

Consumers worldwide want reassurance that their food is safe to eat. Today's convenience, chilled foods require extra care to protect or improve quality and eliminate bacteria. Our research and experience are world class. We can advise on the microbiological status of the product itself and also on optimal process, storage and handling procedures.

Safe eating is our goal.


Specialist equipment and facilities

- Class II pathogen Transitional and Containment Laboratories
- Special laboratory for culturing obligate anaerobes
- Molecular microbiology facilities (Quantitative PCR and PFGE)
- Vacuum and modified controlled atmosphere packaging



Our focus

- Hygienic Slaughter and dressing of animals
- Rapid detection of food borne pathogens and spoilage bacteria
- Packaging and storage of chilled flesh foods
- Technologies and control methods to enhance safety and extend storage times, whilst maintaining or improving product quality
- Prevalence, virulence and control of microbes on foods
- Predictive modelling of pathogenic and spoilage bacteria in meat
- Improving gut microflora of livestock and controlling potential gut pathogens to enhance product safety and quality

Expertise
Notable achievements
Custom Solutions
over 



Food Safety - Team Capability

Expertise

- Evaluation of packaging materials; development of technologies to extend storage life
- Prevalence, identification and prevention of pathogens, including cold-tolerant species
- Molecular detection of bacteria and toxin genes
- Evaluation of new microbiological media and methods (*Meat Industry Microbiological Methods* - AgResearch MIRINZ manual on-line)
- Distribution of microbial contamination on carcasses and control of microbial contamination of meat
- Development of hygiene standards and microbiological guidelines
- Training, e.g. HACCP, sampling procedures for the NMD
- Process hygiene auditing (See MeatCare™)
- Characterisation of new bacterial species
- Spoilage mechanisms, including pack distension in vacuum packaging
- Rendering hygiene
- Food, water, medical microbiology
- Immunology

Notable achievements

- Standards for importing chilled beef and lamb into Saudi Arabia
- Revolutionary methods for controlled atmosphere packaging
- Meat Industry Microbiological Methods manual
- Isolation and identification of bacteria involved in blown pack spoilage

We can provide custom solutions for you

- Specialist packaging systems
- Process and product hygiene audits
- HACCP plans
- Audit/modelling of processes to develop quality meat production, in consultation with meat science and refrigeration specialists at AgResearch
- Product failure/rejection investigations
- Plant surveys of pathogen and spoilage bacteria

For further information please contact

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