

Food Safety and Innovation

Microbiology and Molecular Biology Services

SOUTH AUSTRALIAN RESEARCH & DEVELOPMENT INSTITUTE
PIRSA

The SARDI Food Safety and Innovation laboratories have provided a testing facility in traditional and molecular microbiology for researchers and industry clients since 2002. Testing is performed in a cost-effective manner and in accordance with the Australian and international standards.

The laboratories run a comprehensive internal quality assurance program and regularly participate in external proficiency testing. Testing protocols are developed for a wide range of food commodities and processing environments. These can be modified to address unique product characteristics and developmental needs. Additional services such as shelf-life testing, chemical residue testing, advice on testing protocols, risk management practices and research methodologies are provided.

Range of samples:

- Meat, meat products and processing environment
- Poultry, egg, associated products and environmental samples
- Seafood, seafood products and processing environment
- Grains, nuts and seeds
- Fresh produce
- Animal feeds

Microbiological tests:

- Total Viable Counts
- Yeast and Mould Counts
- Coliforms, *Esherichia coli* and *Enterobacteriaceae*
- *Salmonella* species
- *Campylobacter* species

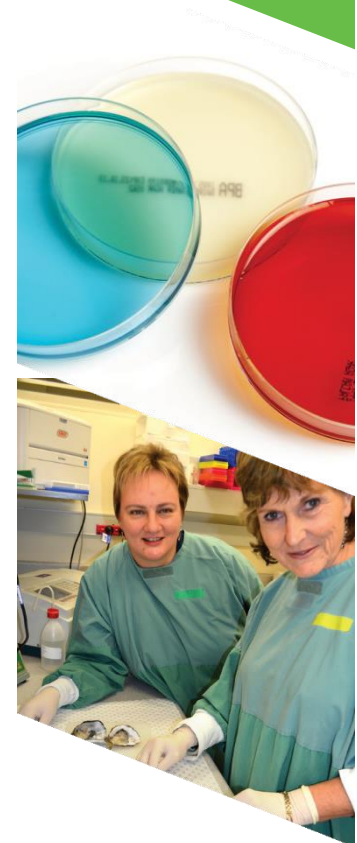
- *Listeria* species
- *Staphylococcus aureus*
- *Bacillus cereus*
- Lactic acid bacteria
- *Vibrio* species
- *Clostridium* species

Molecular biological tests and services:

- Real-time PCR for detection and quantification of food-borne micro-organisms
- Real-time PCR diagnostic assay development
- Microbial community analysis and characterisation
- Norovirus and Hepatitis A virus testing in shellfish and horticultural products
- Toxoplasma testing in meat and meat products
- Novel bioreceptor development for food safety hazards (chemical and pathogen); including development of aptamers
- Bacteriophage as biocontrol agents of food-borne bacteria
- Bacteriophage as environmental indicators of faecal pollution
- Serological testing for food-borne hazards

These tests and services can be carried out in conjunction with:

- Surveys for prevalence of food-borne micro-organisms (bacterial, protozoan and viral)
- Process validation
- HACCP
- Hygiene assessment
- Sanitation validation
- Challenge tests
- Storage trial and shelf-life determination



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