

# Food Safety and Innovation

## Food Safety Risk Assessment Service

SOUTH  
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**PIRSA**

The SARDI Food Safety and Innovation Research Program provides specialist food safety risk analysis capability to enable existing and emerging industries effectively manage food safety and related market access issues.

SARDI has led risk analysis for various industries and industry bodies, including Meat and Livestock Australia, Australian Pork Limited, Abalone Council of Australia, Southern Rock Lobster industry, South Australian Scallop industry and the Australian egg industry, covering microbial, chemical and physical hazards from production-to-consumption.

### What is a risk assessment?

Risk assessment is the process that characterises the risk of illness associated with hazards in food. Hazards can be pathogens, heavy metals, natural toxicants or chemical residues. Risk assessment involves hazard identification and characterisation, exposure assessment and risk characterisation.

Risk assessments can be simple risk profiles, describing the food safety problem and its context, or qualitative/quantitative assessments estimating the likelihood and the severity of adverse effects arising from exposure to the hazard. The assessment may include examination of impact of processing and other potential steps in the supply chain.

### Why conduct a risk assessment?

Risk assessments have become the tool of choice for providing the information that underpins risk management and risk communication.

Risk assessments are used to:

- Rank hazard:product combinations according to public health risk, assisting to determine risk commensurate resource allocation
- Support company, industry or government risk management strategies
- Identify data gaps and thereby research priorities
- Enable trade access for products
- Improve market acceptance of products

### How are risk assessments conducted?

Risk assessments follow Codex Risk Assessment Principles. Hazards are identified and characterised through examination of scientific literature, industry data, National databases such as those held by FSANZ and the National Residue Survey, and epidemiological data held by health authorities. Prevalence surveys of product at different points of the supply chain may be required, particularly for new and emerging issues. The severity of acute and chronic health impacts are considered.

The potential level of intake of the hazard through consumption of the food is examined, including assessment of the impact of processing and cooking, and comparing to existing safety estimates.

The final estimate considers the quality of the data collected, and the likelihood and severity of potential illness.



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