MISA snapshot

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Excellence in marine science inspired through Collaboration

European Union market open for Australian abalone

Re-opening market access for Australian abalone to the European Union (EU) has been high on the agenda for the Australian abalone industry since 2007. This has now been achieved with scientific support from the SA Research and Development Institute's Food Safety group.

The EU market has effectively been closed to Australian abalone since March 2007. This was brought about due to implementation of a European Commission (EC) regulation. The regulations require that abalone be sourced from classified production areas – regions that have routine marine biotoxin and microbiological monitoring programs in place. The roving nature of abalone and the vast fishing zones under which the Australian wildcaught industry operates, makes the application of this requirement problematic and, therefore, Australian exports had ceased.

Australian abalone is now exported to the European Union again

To assist negotiations for improved EU export requirements for abalone, SARDI Food Safety undertook research to provide an informtaion package for AQIS to support the exemption of Australian abalone from the EU regulation. The project was supported by the Australian Seafood CRC, MISA, the Abalone Association of Australasia and the Abalone Council of Australia.

A 'low risk' status was demonstrated through novel research components: a laboratory study on the uptake, distribution and depuration of paralytic shellfish toxins (PSTs) in abalone and a human health risk assessment.

A key laboratory finding was that only low levels of PSTs were retained when abalone were fed high doses of the toxins over an extended period. The dosing regime was selected to approximate a worse case scenario harmful algal bloom. The final levels of PSTs recorded in the edible portion of abalone were approximately 50 times lower than the maximum permissible limit of 80µg/100g for PSTs in shellfish as set by Australia and the EU.

Despite the low levels, two potential risk mitigation approaches were also assessed. Firstly, it was shown that scrubbing the pigment from the fringe of the abalone, which is a commercial process that occurs prior to canning, decreased toxin levels by approximately 70%. Secondly, placing abalone in clean seawater and feeding them an uncontaminated diet resulted in a 75 % decrease in toxin levels (> 300 times lower than the maximum permissible limit).

The risk of PST poisoning from the consumption of Australian abalone was also assessed. It was predicted that only one case of illness is expected to occur every 100 years in the EU from the annual consumption of ~420,000 servings of Australian canned abalone. This suggests that the risk of paralytic shellfish poisoning from the consumption of canned Australian abalone is negligible.

The findings of the laboratory study and the risk assessment assisted AQIS to re-negotiate access for Australian abalone to the potentially lucrative EU market. Recent official advice from AQIS indicates that Australian abalone can be exported to the EU with minimal entry requirements as of 6 July 2010.

Key Points

Laboratory studies showed that Australian abalone have a low propensity to accumulate significant levels of marine biotoxins.

The commercial abalone canning process significantly reduces the levels of toxins further.

A human health risk assessment suggests that the probability of consumers becoming ill from PSP via the consumption of canned wild caught Australian abalone is negligible.

Improved market access conditions for Australian abalone to the EU have been implemented in 2010.

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Marine Innovation SA (MISA), an initiative of the South Australian Government, is a partnership between the South Australian Research and Development Institute (SARDI), Flinders University, University of Adelaide, South Australian Museum, Primary Industries and Resources SA and the SA seafood industry.

Government of South Australia