Overseas Travel Report

Export Study Tour to China

David Padula

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Government of South Australia

AUSTRALIAN SEAFOOD COOPERATIVE RESEARCH CENTRE

SARDI RESEARCH AND DEVELOPMENT

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2009/734 Seafood CRC Research Travel Grant: Mr David Padula "Export Study Tour to China"

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OBJECTIVES OF RESEARCH TRAVEL GRANT

1. Attend Dioxin 2009 Symposium on Persistent Halogenated Organic Pollutants to update knowledge of dioxin contaminant standards that may be introduced in China and the European Union.
2. Inspect testing facilities at Chinese Government port of entry testing stations to better understand priority testing focus on Australian seafood products and laboratory capability at these facilities.
3. Identify mainland Chinese and Hong Kong nutritional labelling and content claims standards, which assist with making the outcomes from Seafood CRC project 2008/905 “Australian seafood compositional profiles” more relevant to the Australian seafood industry.
4. Update trade and market access requirements for the Chinese and Hong Kong markets for new Seafood CRC project 2008/906 (Seafood trade and market access portal).
5. Collect technical information on current and emerging nutritional reference standards to support national technical expert panel for Seafood CRC project 2008/905 (Australian seafood compositional profiles portal).
6. Support for veterinary medicine and agricultural chemical registration activities in Seafood CRC projects 2008/711, 2008/219 and 2003/228 through identification of Chinese and Hong Kong veterinary and agricultural chemical registration process.

Contents

Non Technical Summary

Travel was undertaken to the cities of Beijing, Guangzhou and Hong Kong in the People's Republic of China in August and September 2009 for a period of 18 days. The visit included attendance at the Dioxin 2009 Symposium on Persistent Halogenated Organic Pollutants in Beijing. Meetings were held with Chinese Government officials who have responsibility for food regulatory controls for residues and contaminants, border control inspection and quarantine and nutritional labelling requirements for foods. Information collected during this trip will benefit communal and non-communal Seafood CRC research projects.

China has now established laboratory methodology for the detection of environmental contaminants, dioxins and PCBs, in foods. China currently only has regulatory standards set for some individual PCB congeners in fish but not for dioxins. The Chinese Ministry of Health is currently undertaking several projects to generate baseline occurrence data on these and other environmental contaminants using newly acquired laboratory equipment with a view to establishing standards for dioxins in foods (and revising existing PCB congener standards). International expertise is being offered to China from European Union (EU) member nations such as the Netherlands, to generate this data. New dioxin and PCB standards were announced by the EU at the Dioxin 2009 symposium in Beijing. These standards will help Australian seafood exporters exploit environment integrity attributes which are naturally present in their products. The PCB standard will be set based on a group of indicator PCBs on a concentration basis (reported in an oral presentation to be 300 ppb).

Food safety has become a major priority for the Central Chinese Government following the melamine dairy contamination event in 2008. Melamine has transformed food safety regulatory activity from a minor level activity to a leading public health issue. Food laboratory instrumentation capability has been increased greatly, but this has not translated into greater analytical capability or ability to interpret the public health significance of test results in an internationally acceptable context. There is now a period of training required to fully develop this analytical capability. There are early signs that this new laboratory capability is being used to exploit poorly developed food regulatory standards (or this could be due to a lack of understanding) e.g. detection of the microbiological pathogen *Listeria spp.* in Australian rock lobster which are destined to be cooked not consumed raw.

Both China and Hong Kong have separate food regulatory and border control systems. Nutritional testing and food labelling systems are also managed separately. The Hong Kong system is largely equivalent to that used in Australia, while the Chinese system is in part borrowed from the Swiss International Organization for Standardization model. Exporters should take care to ensure that test results are generated by methods suitable and accepted by the end country market. The Chinese Ministry of Health and its equivalent counterpart in Hong Kong will accept laboratory data generated by a National Association of Testing Authorities (NATA) or International Accreditation New Zealand (IANZ) accredited laboratory.

Efforts have been made in China to allow scanned PDF copies of food regulatory standards to be downloaded from Chinese websites. This is allowing greater accessibility to these standards but is in many ways highlighting the conflicts within the food regulatory system as multiple Chinese agencies can set food regulatory standards without reference to existing standards. The State Council and Departments under the State Council all currently have powers to be able to set food regulatory standards. The highest authority standards are the Guójiā Biāozhǔn (国家标准) or GB standards.

Traceability and provenance attributes have emerged as key consumer purchasing selection criteria at Chinese supermarkets. All products now carry a shelf sticker showing country of origin of ingredients and country of manufacture of product. This information was not present during the November 2008 visit to China. Melamine has reconstructed some of the retail purchasing habits of consumers. In Hong Kong there was a clear preference for purchasing Australian dairy products, even at more than double the price of locally produced products. The Hong Kong Government has introduced a voluntary traceability labelling system for locally produced aquatic animal products. The system requires veterinary drug (only for those which have residue standards set) testing of products and registration of the farm. Currently about 10% of producers in Hong Kong are part of this voluntary scheme. Mainland China has a product traceability system run by the quarantine agency but it has limited market penetration due to its high cost.

Rapid urbanisation of China's consumers and access to information through the internet is changing Chinese shoppers' food choices. The use of internet blogs is being exploited by competitor countries (including domestic) to report, misreport or generate unfounded concerns about Australian food products (in general) which are subsequently shown to be counterfeit products passed off as Australian.. This has occurred with a number of Australian food products including Australian wines (product substitution). The Chinese language electronic and print media is vast and exporters would benefit from seeking expert technical assistance in this field. The emergence of Google in China is another entry means to access new consumers in China with online internet sales of foods emerging as an alternative shopping method.

Outcomes Achieved to Date

Chinese and Hong Kong nutritional testing methods and labelling standards for aquatic products have been obtained to assist in fulfilling Chinese regulatory standards. These will benefit Seafood CRC communal project 2008/905.

Chinese and Hong Kong residue and contaminant standards and regulatory testing methods applicable to aquatic products have been obtained and technical anomalies verified with original authors of these standards where possible. This information is now available online via the Seafood Services Australia website (Seafood CRC communal project 2008/906).

Good Laboratory Practice (GLP) and related laboratory technical competency accreditation schemes are not well understood or widely used in China (these are important for assessing quality of data generated by laboratories, particularly for trade measurements). This travel has helped to identify current laboratory accreditation schemes in use in port of entry testing laboratories and those laboratories generating residue data for Chinese registration (many of the veterinary medicines and agricultural chemicals used in Australia are produced in China). This could assist Australian Seafood CRC participants obtain access to a broader range of legally registered veterinary medicines (anthelmintics) and agricultural chemicals (anti-foulants etc).

A return visit to Adelaide by South China Sea Fisheries Research Institute senior scientists was arranged in October 2009. This is the second visit to Adelaide by members of the Institute. This visit allowed a Seafood CRC, Southern Barramundi farmer (member of the Australian Barramundi Farmers Association) to discuss market access issues including live fish transportation research with the visiting scientists on farm at Kangarilla, South Australia.

An industry workshop session was held in Adelaide on the Chinese seafood market led by Australian Consulate-General staff from Guangzhou, China.

Outputs Developed as Result of Travel Grant

Networks have been developed with local researchers, Chinese laboratories and technical food regulatory standards experts, including those involved in drafting new standards or having written existing standards.

The Australian Embassy, Beijing has produced a summary extract (300 pages) of all Chinese food regulatory publication titles. This has been provided to Seafood Services Australia China expert Mr Liu Song to assist in verifying validity of information summarised on the web portal for Seafood CRC communal project 2008/906.

Documentation on Chinese laboratory methods has been considered when preparing the request for tender of laboratory services specifications for Seafood CRC communal project 2008/905.

The laboratory accreditation scheme for central Government agencies has been identified and accreditation certificates of key port of entry laboratories obtained.

Background and Need

The travel assisted the Principal Investigator for two Seafood CRC funded projects (*Seafood trade and market access portal* 2008/906 and *Australian seafood compositional profiles portal* 2008/905) in fulfilling the project objectives by providing access to international experts, technical documents and development of networks. This travel has provided opportunities to enhance current projects and benefit all Seafood CRC participants. The use of researcher to researcher contact removes many of the difficulties and technical knowledge gaps when relying on overseas diplomatic post staff to acquire specific trade and market access information. Information gathered by "official" means may not be relevant to the Australian seafood industry and those acquiring it may not have the technical skills to assess its quality and suitability for application to projects.

Prior to this visit, Chinese officials have indicated that China (through the Chinese Ministry of Agriculture) is planning to develop new regulatory standards for the environmental contaminants, dioxins and PCBs, in aquatic animal products (existing standards for PCBs may be retained or modified in light of Chinese surveys). This could impose expensive testing requirements (and delays in laboratory notification of results) to Australian Seafood CRC participants who export to China. The Chinese Ministry of Agriculture, through provincial research institutes, is currently undertaking a survey for the presence of dioxins and PCBs in imported seafood, including Australian Southern Bluefin tuna. This work is also evaluating sampling methods used by Japan for testing bluefin tunas.

The Chinese Food and Drug Administration's role (currently a junior ministry under the Ministry of Health) as a food regulator is being developed with plans for it to become the central competent authority for food regulatory controls in the future. The Chinese State Council implemented the new *Food Safety Law* on June 1 2009. Simultaneously the State Council enacted new regulations (through the General Administration of Quality Supervision, Inspection and Quarantine) that potentially disadvantage Australian exporters with new registration and export certification requirements. The Australian Government Australian Quarantine and Inspection Service (AQIS) is negotiating with their Chinese counterparts for a simplification of the certification requirements for Australian seafood exporters.

SARDI is investing in the potential for obtaining Good Laboratory Practice (GLP) accreditation to allow data generated from veterinary medicine and agricultural chemical evaluation studies to be used directly to support registration with the Australian Pesticides and Veterinary Medicines Authority (APVMA). With this form of accreditation SARDI would be able to supervise residue data generating trials in Australia and overseas which would produce data directly submittable to the APVMA for registration and in other countries such as Japan. This would assist Seafood CRC participants by allowing regulatory quality data packages to be directly used to support registration of veterinary medicines and agricultural chemicals.

Results

The travel allowed a range of formal and informal meetings to take place in China and Hong Kong including at the Dioxin 2009 Symposium. The visit allowed for face to face discussions on technical laboratory methodology issues, interpretation of residue and contaminant standards and access to key technical regulatory officials and hands-on researchers. Updated information on the complex food regulatory standards that apply to residues and contaminants for seafood products has been obtained from principal references (lead authors of current and proposed standards in draft stage). This has advantaged users of the communal Seafood CRC project 2008/906, *Seafood trade and market access portal* (a written enquiry has been received via the web portal from an eel producer in Victoria who is looking to export to China). Laboratory methodology as used by the Chinese and Hong Kong Government for reporting nutritional content on food packages has been obtained. These standards are prescriptive and do not allow innovation or method development to take place. Australian laboratories have greater freedom in the selection and validation of appropriate methodology that is fit for the matrix of interest. Australian and New Zealand laboratory accreditation schemes are recognised in China and Hong Kong (be aware that port of entry testing will be conducted using Chinese laboratory methodology standards). This will advantage Seafood CRC participants in the communal project 2008/905, *Australian seafood compositional profiles portal*. The national technical expert panel on Seafood CRC project 2008/905, has been updated on activities in China and Hong Kong, including new nutritional labelling requirements in Hong Kong.

Visits were made to Chinese and Hong Kong laboratories which undertake port of entry testing of aquatic products. The priorities for testing are shifting to non-traditional areas of residue chemistry such as preservatives and detection of irradiation treatment. Irregularities were noted, such as industry directly providing samples to the laboratories for import testing certification but with no communication of test results from the laboratory back to the border control agency. Laboratory methodology for nutritional testing of foods was discussed at laboratories in China and Hong Kong. Specific areas such as fatty acid determination techniques, including the use of the traditional Folch extraction method, were discussed.

The competent authorities in China and Hong Kong both stated during meetings that they recognise and accept laboratory results reports issued by National Association of Testing Authorities (NATA) and International Accreditation New Zealand (IANZ) accredited laboratories. This is important for the generation of data within project 2008/905 for exporters targeting the Chinese and Hong Kong markets. Although China and Hong Kong are one country they both operate separate food regulatory systems. Laboratory capability in China is growing, however, the methodologies used, laboratory accreditation schemes and public health significance of findings made by border control authorities are not necessarily the same as would be made in other international markets.

Discussions were held with authors of Chinese food regulatory standards which set Maximum Residue Limits (MRLs) in aquatic products. A senior standards writer in the Chinese Ministry of Health advised that there will be a consolidation process of all Chinese standards, triggered by the melamine scandal in dairy products. This process will eventually see the Ministry of Health being the only agency that can issue food regulatory standards. Currently any Chinese Ministry can issue a food regulatory standard without reference to any other agency even if such a standard already exists. The rescinding of other standards has begun with the development of new dairy food safety standards. The Chinese Ministry of Health is looking to model its standards on those of Food Standards Australia New Zealand

(FSANZ). The State Food and Drug Administration is currently a relatively new junior outer Ministry; its future role is to be the central food regulatory agency.

Veterinary drug trials conducted in China are not currently performed by Good Laboratory Practice (GLP) accredited facilities. The Chinese Ministry of Agriculture is responsible for veterinary and agricultural chemical registration processes. Detailed technical information on these processes was not available. Information could not be obtained on current registered antifoulant products for use in aquaculture production environments. Many aquaculture farms in China are State owned enterprises, which appear not to need formal regulatory permissions to use these agricultural chemicals (antifoulants) in food producing animals. As a co-investigator in Seafood CRC project 2008/711 the knowledge gained from this travel has supported the identification of international standards for potential candidate anthelmintic and fouling control biocide chemicals suitable for registration with the Australian Pesticides and Veterinary Medicines Authority (APVMA). This activity has supported fouling control biocide chemical registration process for compounds in use in projects 2003/226 and 2008/219. Seafood CRC participants will benefit from the registration of these potential candidate products and their entitlement to legal usage. Overseas data sources (not published) may be used as supporting information for setting Maximum Residue Limits (MRLs) by the Australian competent authority, Food Standards Australia New Zealand. This will support international and domestic trade.

Counterfeit goods including seafood products claiming to be of Australian origin are appearing on the Chinese market. These products have been picked up in internal domestic testing programs failing to meet Chinese food safety standards (chemical or microbiological) with the results widely reported in local media as Australian products. These products, although found to be fake on further investigation by the Australian embassy and Consulate-General staff, are not subsequently published as corrections in local media. The importance of good traceability systems is critical in China for protection of brand reputation.

The use of the internet in China is growing and electronic means of communicating via blogs and other instant messaging is rapidly emerging as a means for competitors to exploit incorrect media coverage or to cast doubt on the safety of Australian products. Some Australian seafood companies websites are censored in China and cannot be accessed within China.

Dioxin 2009 Symposium

The Dioxin 2009 Symposium on Persistent Halogenated Organic Pollutants www.dioxin2009.org was held in Beijing, China. The Symposium had a range of speakers from Chinese domestic environmental control agencies to international technical experts. A range of poster and oral presentations were given. There was limited representation from Australia at the Symposium. The Symposium covered a broad range of contaminants including dioxins, PCBs, mercury, antifoulants, fluorinated compounds and the brominated flame retardant compounds. International regulations for these residues and contaminants are largely driven by the Stockholm Convention, which Australia is a signatory to. The highlight presentation was on the Irish pork dioxin contamination incident (estimated to have cost Irish pork producers in excess of 20 billion Euros).

The author outside the Beijing venue of the Dioxin 2009 Symposium, Beijing, China

New standards for the environmental contaminants dioxins and PCBs were announced by the European Commission at the Symposium. These standards will help Australian seafood exporters, whose products are naturally low in these environmental contaminants, make product attribute claims as to their safety and the environmental integrity of production and capture systems. The PCB standard will be based on a group of indicator PCBs on a concentration basis (reported in an oral presentation to be 300 ppb). In general Australian wild caught product would be able to satisfy this standard but some aquaculture product may approach or exceed this proposed standard.

Commercial seafood traders in Hong Kong are now requesting laboratory evidence of environmental contaminants including PCBs and mercury before accepting goods (e.g. Southern Bluefin tuna). These are not Government quarantine or border control requirements, but private negotiating tools being used by commercial traders to restrict access to wholesale networks in Hong Kong and subsequently China.

Seafood presentations given at Dioxin 2009

Relevant presentations given at the Dioxin 2009 Symposium are listed below.

Levels and Mass Inventory of DDT in Sediments from Fishing Harbours: the Importance of DDT Containing Antifouling Paint to the Coastal Environment of China. Tian Lin

Assessment of Brominated Flame Retardants in Fish from Asian Countries: Levels, Distribution, Profiles and Health Risk. Agus Sudaryanto

Polybrominated Diphenyl Ethers in Seawater Cage-Farmed Fish from Two Estuarine Bays in South China: Implications For Source Inputs and Biotransformation. Ying Guo

Distribution of Polyfluoroalkyl Compounds and Mercury in Fish from High-Mountain Lakes in France Originating from Atmospheric Deposition. Lutz Ahrens

Dioxin Levels and Congener Patterns in Water, Sediment and Fish from A Coastal Estuary of the Baltic Sea. Magnus Karlsson

Occurrence of Persistent Organic Pollutants (POPs) in Italian Wild and Farmed Fish in the Mediterranean Sea. Gianfranco Brambilla

Levels of POPs in Spanish Commercial Fish Species. Jordi Parera

Prediction of the PCDD/F, DL-PCB, and Total 2005-WHO-TEQ Values on the Basis of Six Congener Concentrations in Fish: Toward A New Screening Strategy for the Control? Ronan Cariou

Genotoxicity and Development Toxicity of Pentachlorophenol in Zebrafish. Qingshun Zhao

Bioaccumulation of β- and γ-Hexabromocyclododecane in Lower Aquatic Food Web. Sami Huhtala

PBDEs in Water and Aquatic Biota of the Pearl River Estuary, South China. Bixian Mai

Occurrence and Fate of Typical PPCPs in the Aquatic Environment of the Pearl River Delta, China. Xianzhi Peng

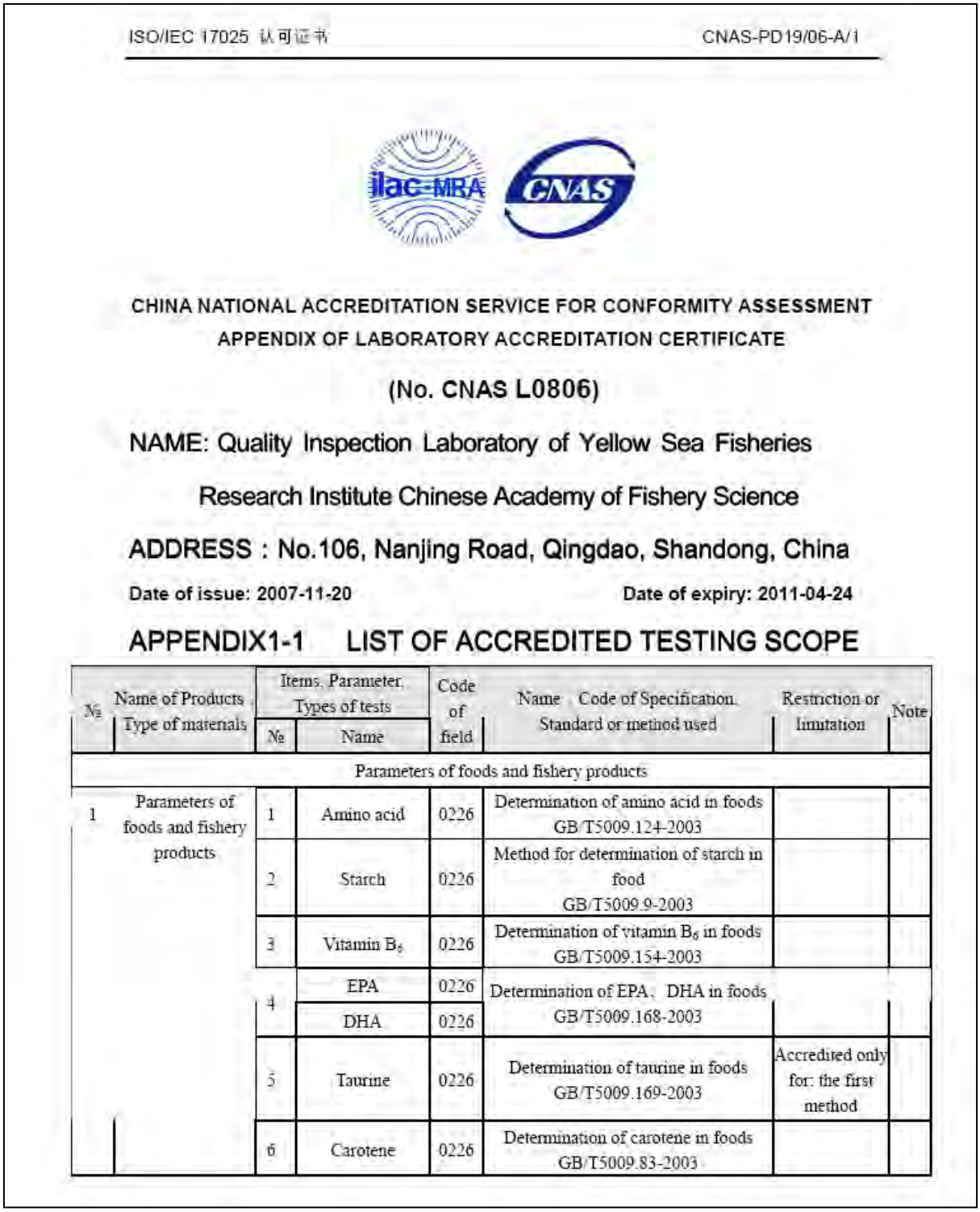
Bioaccumulation of Dechlorane Plus in Aquatic Food Web from an Electronic Waste Recycling Site, South China. Xiaojun Luo

The Dioxin Contamination Incident in Ireland 2008. Christina Tlustos

Dioxins, PCBs, Polybrominated Diphenylethers and Organochlorine Pesticides in European Eels (Anguilla Anguilla). Wim Traag

Chinese laboratory accreditation scheme

The Chinese Government has established a laboratory accreditation scheme, *The China National Accreditation Service for Conformity Assessment* http://eng.cnas.org.cn/index.htm1. This accreditation is based on ISO 17025 which is the technical basis of the Australian and New Zealand laboratory accreditation schemes (NATA and IANZ). However, in China laboratories are only accredited to perform testing to prescriptive Chinese national GB standards. This means that there is no scope for innovation or development of better analytical methods for particular matrices as only official GB methods may be used. Exporters should be aware that they may be subject to residue testing at Chinese ports using testing methodology that may not be equivalent with that used in Australian or New Zealand laboratories (e.g. cadmium testing). An extract of the accreditation certificate held by the Yellow Sea Fisheries Research Institute in Qingdao is shown below.



ISO/IEC 17025 认可证书 CNAS-PD19/06-A/1

CHINA NATIONAL ACCREDITATION SERVICE FOR CONFORMITY ASSESSMENT

APPENDIX OF LABORATORY ACCREDITATION CERTIFICATE

(No. CNAS L0806)

NAME: Quality Inspection Laboratory of Yellow Sea Fisheries Research Institute Chinese Academy of Fishery Science

ADDRESS : No.106, Nanjing Road, Qingdao, Shandong, China

Date of issue: 2007-11-20 Date of expiry: 2011-04-24

APPENDIX1-1 LIST OF ACCREDITED TESTING SCOPE

№	Name of Products Type of materials	Items, Parameter, Types of tests №	Items, Parameter, Types of tests Name	Code of field	Name Code of Specification, Standard or method used	Restriction or limitation	Note
Parameters of foods and fishery products							
1	Parameters of foods and fishery products	1	Amino acid	0226	Determination of amino acid in foods GB/T5009.124-2003		
		2	Starch	0226	Method for determination of starch in food GB/T5009.9-2003		
		3	Vitamin B_6	0226	Determination of vitamin B_6 in foods GB/T5009.154-2003		
		4	EPA	0226	Determination of EPA、DHA in foods GB/T5009.168-2003		
			DHA	0226			
		5	Taurine	0226	Determination of taurine in foods GB/T5009.169-2003	Accredited only for: the first method	
		6	Carotene	0226	Determination of carotene in foods GB/T5009.83-2003		

A typical Chinese laboratory accreditation certificate title page (Yellow Sea Fisheries Research Institute, Qingdao).

An indication of the advancement of Chinese laboratory capability is the issuing by the Chinese Ministry of Health of a laboratory method for the measurement of dioxins and PCBs in foods. China currently only has regulatory standards set for some individual PCB congeners in fish but not yet for dioxins. Dioxins are currently being measured in a wide variety of Chinese foods with a view to setting regulatory limits in the future.

ICS 67.040
C 53

中华人民共和国国家标准

GB/T 5009.205—2007

食品中二噁英及其类似物毒性当量的测定

Determination of toxic equivalencies of dioxin and dioxin-like compounds in foods

Chinese laboratory method for dioxins in foods.

Summary of meetings

Meetings were held with the following organisations (organised by the Australian embassies and diplomatic missions in China and Hong Kong)

National Food Quality Supervision and Inspection Centre
32 Xiaoyun Road, Chaoyang District,
Beijing, Beijing Province
People's Republic of China 100027
www.cfda.com.cn

The National Food Quality Supervision and Inspection Centre is a laboratory of the border control agency, the General Administration of Quality, Safety, Inspection and Quarantine. The laboratory undertook the melamine investigation of raw agricultural products including eggs, dairy products and foods in 2008. The laboratory is accredited by The China National Accreditation Service for Conformity Assessment to undertake testing of seafood for the triphenylmethane dyes, such as malachite green and crystal violet. The laboratory is also a key nutritional reference laboratory for verification of nutritional panels on imported food

products. Much assistance has been provided by the laboratory in providing access to official laboratory methods for regulatory testing of nutrients in foods.

Institute of Nutrition and Food Safety
Chinese Centre for Disease Control and Prevention
29 Nanwei Road
Beijing, Beijing Province
People's Republic of China 100050

The Institute of Nutrition and Food Safety is a part of the Chinese Ministry of Health and was responsible for drafting the melamine regulatory standard in 2008 following the scandal in dairy products. The Institute was responsible at the time for setting up and validating laboratory methodology for the detection of melamine and its metabolites in food products. The Institute was also responsible for the drafting and issuing of the dioxins and PCBs methods GB document. The Institute undertakes a wide range of residue and contaminant testing including the emerging fluorinated and brominated compounds in foods. The Institute is the peak Codex and WHO reference laboratory for China and point of contact for Codex. The realignment of food regulatory standards is being led by the Institute, starting with dairy products. Seafood is expected to be next in line to be reformed (it may be another 2-5 years before this process begins).

South China Sea Fisheries Research Institute
Chinese Academy of Fisheries Sciences
231 Xingang West Road
Guangzhou, Guangdong Province
People's Republic of China
http://southchinafish.ac.cn/

The South China Sea Fisheries Research Institute is part of the Chinese Ministry of Agriculture and has roles to support the development of regulatory food safety and quality standards through validation of experimental methods. The Institute also undertakes stock assessments in the South China Sea area for resource planning purposes.

The Institute is currently working on generating nutritional profiles, including fatty acids in fish from the South China Sea. Methodology issues were discussed including the application of Chinese GB standards to testing of seafood where only a meat products standard existed.

Food and Environmental Hygiene Department
44/F Queensway Government Offices
66 Queensway
Hong Kong
People's Republic of China
http://www.fehd.gov.hk/indexe.html

The Food and Environmental Hygiene Department is the food regulator for Hong Kong. Its responsibilities include residue and contaminant standards and nutritional labelling for foods. The Department has Dr Paul Brent from Food Standards Australia New Zealand (FSANZ) on its Expert Committee on Food Safety.

The role of the Expert Committee on Food Safety is to advise the Director of Food and Environmental Hygiene on:

1. Operational strategies and measures to protect public health.
2. Domestic and international standards relating to food safety and food composition.
3. Strategies for risk communication to promote food safety.
4. New directions for any research to be commissioned by the Centre for Food Safety.

Government Laboratory
7/F, Ho Man Tin Government Offices
88 Chung Hau Street
Ho Man Tin
Hong Kong
People's Republic of China
http://www.govtlab.gov.hk/english/home.htm

The Hong Kong Government laboratory is the reference laboratory for all official inspection testing of imported foods. The laboratory has connections to the National Measurement Institute (NMI) in Australia.

Agriculture, Fisheries and Conservation Department
5/F Cheung Sha Wan Government Offices
303 Cheung Sha Wan Road
Hong Kong
People's Republic of China
http://www.afcd.gov.hk/eindex.html

The Agriculture, Fisheries and Conservation Department is responsible for quarantine, on-farm food safety controls for aquaculture, veterinary drug registration and implementing the voluntary traceability system for all domestic produced aquatic products.

Hong Kong, through the Agriculture, Conservation and Fisheries Department, has established a voluntary aquaculture products traceability and branding scheme for domestically produced fish. The scheme, in summary, requires producers to be registered, undertake annual veterinary drug residue testing and adhere to a basic HACCP food safety program www.hkaffs.org/en/background.html. The objectives of the program are to:

1. Enhance the quality of domestic aquaculture products by introducing "Good Aquaculture Practices" to local fish farms.
2. Increase transparency of production processes to assist in gaining consumer confidence in local aquaculture products.
3. Highlight the safety of domestic aquaculture products by introducing pre-marketing product tests.
4. Differentiate domestic aquaculture products from imported products by Government branding.

Extension Activities

On 17 September 2009 a workshop was held at Glenside attended by David Padula (SARDI), Mark Cody (Seafood Processors and Exporters Council) and Daniel Teh (Kis Tuna). A presentation was given by Yuling Zhang from the Australian Consulate-General, Guangzhou, People's Republic of China on the Chinese market for aquatic animal products.

The South Australian Aquaculture Council was briefed on the outcomes of the visit during a meeting on 23 September 2009.

A delegation from the South China Sea Fisheries Research Institute visited Adelaide on 9 October 2009. This visit took in a Southern Barramundi farm at Kangarilla, Glenside offices of the SARDI Food Safety Research Program and the SA Food Centre at Regency Park. The visit allowed for an exchange of information on regulatory standards and current research activities in China including development of live fish transportation systems without water.

Southern Barramundi farm, Kangarilla, South Australia (SA). (L-R) Mr Daniel Teh (Kis Tuna), Prof. Lai-Hao Li (South China Sea Fisheries Research Institute), Prof. Xiao-Ping Jia (South China Sea Fisheries Research Institute), Mr Steve Mawer (Owner of Southern Barramundi and Chairman of SA Aquaculture Council, Mr Martin Hernen (Secretary of SA Aquaculture Council) and Mr David Padula (SARDI).

Project Outcomes (that initiated change in industry)

Seafood CRC participants (TSGA members and others) are referring to the Seafood Services Australia online trade portal for access to current trade and market access information. Word of mouth referral from industry members to one another is generating more online enquiries through the trade query service of the SSA website. Cross referral from other parties including the Australian Quarantine and Inspection Service is helping industry members to fulfil AQIS approved arrangements and documentation requirements.

A research proposal has been put to the Seafood CRC to assist in resolving the cadmium issue with Australian prawns into the European Union.

Summary of change in industry

Exporters of live, fresh chilled and frozen seafood may see more stringent interpretation of Chinese quarantine and food safety standards than previously encountered. It would be prudent to verify local interpretation with Chinese import agents as these may differ from "official" documented market access requirements. In particular, crustacean exporters should be wary of cadmium levels in their products and microbiological hazards including *Listeria* spp. Crustacean products have been subjected to a higher level of scrutiny following EU detentions of products for cadmium. The cause of the heightened microbiological attention is unknown but has also been seen in Australian dairy products.

Industry may choose to lobby the Commonwealth to negotiate equivalent Free Trade Agreement (FTA) measures as New Zealand achieved under their FTA with China.

Informal discussions were held with senior officials from the United Kingdom Food Standards, European Commission, Food Safety Authority of Ireland and the German Federal Office of Consumer Protection and Food Safety on the cadmium in Australian prawns issue. All parties were favourable and receptive to Australia's position to amend the current Maximum Level (ML) value. These contacts will be important to the recently submitted Seafood CRC research proposal to address the occurrence and distribution of cadmium in Australian sea-caught prawns.

What future and on-going changes are expected?

Longer term networks will be maintained with Chinese border control inspection laboratories, food regulatory standards agencies and research institutes. These contacts will help to maintain a conduit to emerging regulatory changes occurring in China and Hong Kong. Technical exchange visits between Australian and Chinese researchers are expected to continue.

Further action required in regards to communication

The Seafood Services Australia website will host the most current information obtained from China and Hong on food regulatory standards and relevant trade and market access information.

It is necessary for Australian seafood exporters to engage online in the electronic media which is booming in China and Hong Kong to counter adverse or incorrect information generated by local media or competitors.

Further action required in regards to commercialisation

Nil.

Lessons learned and recommended improvements

There is a need to develop technical Chinese language documents in both simplified Chinese (for mainland China) and traditional Chinese (for Hong Kong, Singapore and Taiwan). This would assist greatly in penetration of the Chinese bureaucracy and provide greater transparency when negotiating international research collaboration agreements and/or funding arrangements. Specialist technical scientific Chinese language skills development is recommended.

Use of the electronic Chinese media for communication will become more relevant to exporters seeking to develop their product range within China.

Acknowledgements

Australian Consulate-General Guangzhou, People's Republic of China

Australian Consulate-General Hong Kong, People's Republic of China

Australian Embassy Beijing, People's Republic of China

Australian Government Australian Quarantine and inspection Service, Canberra, Australia

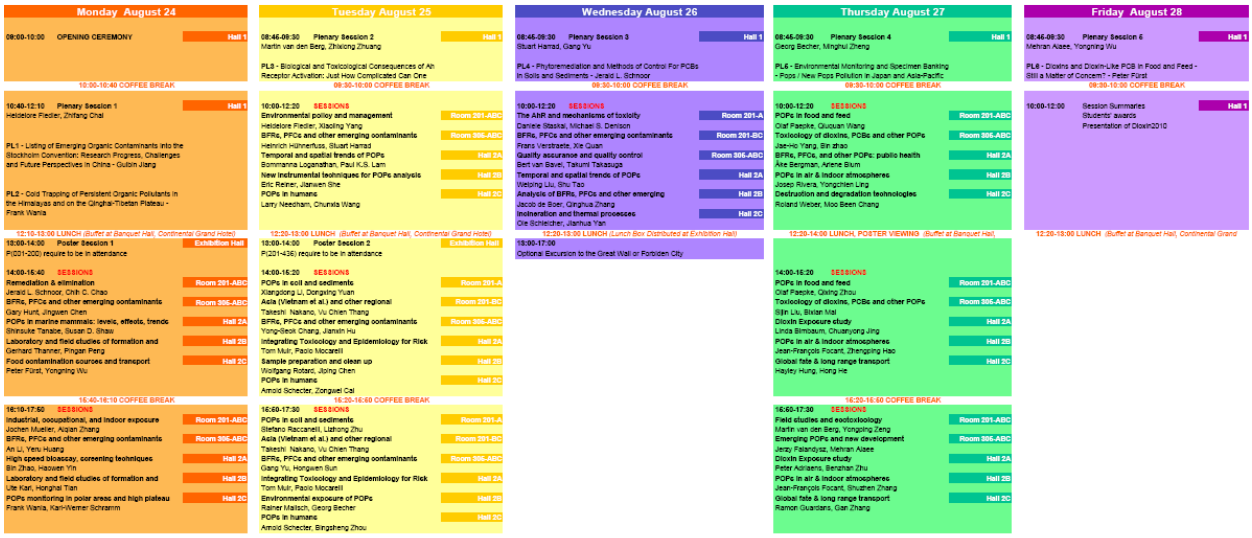
Australian Government Fisheries Research and Development Corporation, Canberra, Australian Capital Territory, Australia

Seafood CRC, Adelaide, South Australia, Australia

Seafood Services Australia, Brisbane, Queensland, Australia

Appendix 1: Dioxin 2009 Program Overview

PROGRAM AT GLANCE



Appendix 2: Quality Issues at Dioxin 2009

There were many quality issues with the presentations given and poster presentations at Dioxin 2009.

1. Many presentations were difficult to interpret due to poor data presentation and lack of clarification by presenting authors.
2. Data presented was often difficult to interpret as concentration data instead of Toxic Equivalence (TEQ) levels were often presented or no description of units was given.
3. It was often unclear whether presenters were referring to dioxins, furans or PCBs in data presented individually or as summed totals.
4. Generally, it was not made clear whether dioxin data being presented was upper bound, medium bound or lower bound.
5. Often data presented only represented limited dioxin or PCB congeners and not congeners of public health or regulatory interest e.g. PCB 126.
6. It was sometimes unclear whether it was fresh weight, lipid weight or dry weight data being presented.
7. Presenting authors did not clarify whether the results for fish samples represented skinless samples or from which portion of the fish the sample was collected.
8. The country of origin of fish samples tested was often not provided.
9. It was not made clear how blanks had been treated in the calculation of TEQs presented.
10. Data was sometimes presented only as a percentage contribution to total TEQ i.e. no actual TEQ levels were given.
11. Data was sometimes presented in terms of a Tolerable Daily Intake with no TEQ levels given for the individual commodities.
12. Dioxin data was often presented as a mean level instead of the data range.
13. Data was not always presented for muscle tissue in fish (sometimes liver reported).
14. Outlier data points were often removed (without adequate explanation) because they didn't suit the conclusions of the presenting author.
15. There was a lack of clearly stated conclusions from studies presented, such as the significance of findings to public health or market and trade access.
16. It was not always made clear which Toxic Equivalence Factor (TEFs) values had been used (WHO, NATO, US EPA, Norwegian etc) in the calculation of TEQs reported and whether they were mammalian values or otherwise. 1998 and 2005 TEF values were sometimes used in mixed data sets preventing any comparison from being made.
17. There was often ambiguous terminology and acronyms used in presentations without explanation by the presenter.
18. There was a failure to disclose funding sources for studies presented.
19. Often little, if any, information was provided on the sample collection methods used, the size of the fish sampled and the fat content.

20. Common generic names were often used to describe fish species tested instead of scientific names.
21. Information was not always provided on whether fish was farmed or wild.
22. It was not made clear whether data presented was reported from a laboratory holding internationally recognised accreditation for that particular commodity for dioxin.
23. Expression of units e.g. pg TEQ/g and pg/g are not the same.
24. Species taxonomy was seldom given or inadequately described.
25. Information on whether individual or pooled samples had been used for analysis was seldom provided.
26. Dates of sample collection were not given by some authors.
27. Illegible graphs.
28. Lack of QA/QC information.
29. Significant figure usage.
30. Use of "borrowed" data sets without satisfactory attribution or references.
31. Not disclosing analytical methodology used adequately.
32. Use of non-English language text and or figures in table titles or in graphs.
33. Use of non-compatible data sets from multiple experiments without adequate explanation.

Appendix 3: About the Author

David Padula is employed by the Food Safety Research Program, South Australian Research and Development Institute (a division of the South Australian Government Department of Primary Industries and Resources South Australia) and Marine Innovation South Australia (a South Australian Government initiative). His main areas of work are technical trade and market access research for Australian seafood exporters including the management of a Deed of Agreement with the Commonwealth, for the delivery of the European Union (EU) residue control program for nearly all of Australia's aquaculture producers. This program is now in its third year of official operation.

David is also a part-time PhD student through the National Centre for Marine Conservation and Resource sustainability at the University of Tasmania. His current research projects for the Seafood CRC include veterinary drug trials to support Australian registration, a market access web portal providing consolidated information on international residue and contaminant standards and a nutritional compositional profiles portal which will generate reliable data on the occurrence of nutrients of public health significance in Australian seafood products.

The author at the Great Wall of China, Badaling, People's Republic of China

Publications

Padula, D.J., Daughtry, D.J., & Nowak B.F., (2008). Dioxins, PCBs, metals, metalloids, pesticides and antimicrobial residues in wild and farmed Australian Southern Bluefin tuna (*Thunnus maccoyii*). Chemosphere. 72, 34-44

Padula, D.J., Madigan, T., Kiermeier, A., Daughtry, B., & Pointon, A., (2004). Levels of dioxin (PCDD/F) and PCBs in a random sample of Australian aquaculture-produced Southern Bluefin tuna (*Thunnus maccoyii*). Organohalogen Compounds. 66: 2074-2079

Vimont, A.J.M., Kiermeier, A., **Padula, D.J.,** Holds, G.L., Pointon, A.M., (2005) The adequacy of sample type/weight and incubation period on detection of Salmonella spp. in slaughter cattle. Journal of Veterinary Diagnostic Investigation. 17: 430-435

Madigan, T.L., Lee, K.G., **Padula, D.J.,** McNabb, P., Pointon, A.M., (2006) Diarrhetic shellfish poisoning (DSP) toxins in South Australian shellfish. Harmful Algae. 5:119-123

External Grant Funded Projects held as Principal Investigator

1. 2008/905 Australian seafood compositional profiles portal. (Seafood CRC)
2. 2008/906 Seafood trade and market access portal. (Seafood CRC)
3. 2009/734 Export study tour to China. (Seafood CRC)
4. 2007/709 Review of technical market access issues relevant to Australian seafood industry members of the Australian Seafood CRC (seafood CRC)
5. 2004/401 A market access guide for seafood exporters: International Residues standards.
6. 2004/206 Management of food safety hazards in farmed Southern Bluefin tuna to exploit market opportunities (Aquafin CRC)
7. 2003/229 Identification and management of potential food safety issues in aquaculture-produced Yellowtail Kingfish (*Seriola lalandi*) (FRDC)
8. 2003/227 Development and validation of baitfish sampling methods to address international residue standards for Southern Bluefin tuna (*Thunnus maccoyii*) (Aquafin CRC)

Appendix 4: Summary of Chinese Residue and Contaminant Standards for Seafood Products

RESIDUE OR CONTAMINANT	SEAFOOD WHICH STANDARD APPLIES	PORTION TO WHICH THE STANDARD APPIES TO	STANDARD	COMMENTS
Metals & metalloids				
Arsenic (As)	Algae (based on dry weight)	Not set	1.5 (mg/kg)	As inorganic arsenic
	Fish	Not set	0.1 (mg/kg)	As inorganic arsenic
	Shellfish and crustaceans (based on fresh weight)	Not set	0.5 (mg/kg)	As inorganic arsenic
	Shellfish and crustaceans (based on dry weight)	Not set	1 (mg/kg)	As inorganic arsenic
	Other aquatic food (based on fresh weight)	Not set	0.5 (mg/kg)	As inorganic arsenic
Cadmium (Cd)	Aquatic products	Not set	0.1 (mg/kg)	
Chromium (Cr)	Fish and shellfish	Not set	2 (mg/kg)	
Copper (Cu)	Aquatic products	Not set	50 (mg/kg)	
Fluorine (F)	Fresh water fish	Not set	2 (mg/kg)	
Lead (Pb)	Aquatic products	Not set	0.5 (mg/kg)	
Mercury (Hg)	Other aquatic products		0.2 (mg/kg)	As methylmercury
	Other aquatic products	Not set	0.3 (mg/kg)	As total mercury
	Fish (excluding carnivorous fish) and other aquatic products	Not set	0.5 (mg/kg)	As methylmercury
	Carnivorous fish (Shark, tuna and others)	Not set	1 (mg/kg)	As methylmercury
Selenium (Se)	Fish	Not set	1 (mg/kg)	
Zinc (Zn)	Fish	Not set	50 (mg/kg)	
Environmental contaminants				
Polychlorinated biphenyl-138	Edible parts of marine produced fish, shellfish, shrimp and algae	Not set	0.5 (mg/kg)	
Polychlorinated biphenyl-153	Edible parts of marine produced fish, shellfish, shrimp and algae	Not set	0.5 (mg/kg)	

RESIDUE OR CONTAMINANT	SEAFOOD WHICH STANDARD APPLIES	PORTION TO WHICH THE STANDARD APPIES TO	STANDARD	COMMENTS
Polychlorinated biphenyls	Edible parts of marine produced fish, shellfish, shrimp and algae	Not set	2 (mg/kg)	Total expressed as sum (upper bound basis) of PCB-28, PCB-52, PCB-101, PCB118, PCB-138, PCB-153, and PCB-180.
Pesticides				
DDT	Aquatic products	Not set	0.5 (mg/kg)	Sum of p,p'-DDT, o,p'-DDT, p,p'-DDE and p'p'-TDE(DDD). Extraneous maximum residue limit (EMRL)
HCH	Aquatic products	Not set	0.1 (mg/kg)	Sum of α-HCH, β-HCH, γ-HCH and δ-HCH. Extraneous maximum residue limit (EMRL)
Veterinary medicines				
Amoxicillin	All food animals	Muscle, Fat, Liver & Kidney	50 (µg/kg)	
Ampicillin	All food animals	Muscle, Fat, Liver & Kidney	50 (µg/kg)	
Benzylpenicillin	All food animals	Muscle, Fat, Liver & Kidney	50 (µg/kg)	
Cloxacillin	All food producing animals	Muscle, Fat, Liver & Kidney	300 (µg/kg)	
Danofloxacin	All other animals	Muscle	100 (µg/kg)	
	All other animals	Liver & kidney	200 (µg/kg)	
	All other animals	Fat	50 (µg/kg)	
Deltamethrin	Fish	Muscle	30 (µg/kg)	
Difloxacin	All other animals	Muscle	300 (µg/kg)	
	All other animals	Fat	100 (µg/kg)	
	All other animals	Liver	800 (µg/kg)	
	All other animals	Kidney	600 (µg/kg)	
Enrofloxacin and Cyprofloxacin	Other animals	Muscle & Fat	100 (µg/kg)	
	Other animals	Liver & kidney	200 (µg/kg)	
Florfenicol	Fish	Muscle & skin	1000 (µg/kg)	
Flemequine	Fish	Muscle & skin	500 (µg/kg)	
Fluvalinate	All food animals	Muscle, fat & by products	10 (µg/kg)	
Oxacillin	All food animals	Muscle, fat, liver & kidney	300 (µg/kg)	
Oxolinic acid	Fish	Muscle & skin	300 (µg/kg)	
Oxytetracycline, Chlortetracycline & Tetracycline	Fish & shrimp	Meat	100 (µg/kg)	
Sarafloxacin	Fish	Muscle & skin	30 (µg/kg)	

RESIDUE OR CONTAMINANT	SEAFOOD WHICH STANDARD APPLIES	PORTION TO WHICH THE STANDARD APPIES TO	STANDARD	COMMENTS
Sulfonamides	All food animals	Muscle, fat, liver & kidney	100 (µg/kg)	Sum of all substances belonging to the sulfonamide group
Trimethoprim	Fish	Muscle & skin	50 (µg/kg)	
Thiamphenicol	Fish	Muscle & skin	50 (µg/kg)	
Dyes				
Malachite Green	All food animals	All edible tissues	Shall not be detected	
Banned substances				
Amitraz	Aquatic animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Antimony potassium tartrate	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Calomel	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Camahechlor	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Carbofuran	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Chloramphenicol	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Chlordimeform	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Chlorpromazine	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Cimaterol	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Clenburerol	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Dapsone	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Diazapam	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Diethylstibestrol (DES)	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Dimetridazole	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Estradiol	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.

RESIDUE OR CONTAMINANT	SEAFOOD WHICH STANDARD APPLIES	PORTION TO WHICH THE STANDARD APPIES TO	STANDARD	COMMENTS
Furaltadone	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Furazolidone	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Lindane	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Mengestrol acetate	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Mercurous nitrate	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Methaqualone	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Methyltestosterone	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Metronidazole	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Nadrolone	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Nitrovin	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Pyridyl mercurous acetate	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Ronidazole	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Salbutamol	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Sodium nifurstyrenate	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Sodium nitrophenolate	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Sodium pentachlorophenol	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Testosterone	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Trenbolone	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.

RESIDUE OR CONTAMINANT	SEAFOOD WHICH STANDARD APPLIES	PORTION TO WHICH THE STANDARD APPIES TO	STANDARD	COMMENTS
Tryparsamile	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Zeranol	All food animals	All edible tissues	Shall not be detected	Banned substance. Any detection is a violation.
Biotoxins				
Diarrhetic Shellfish Poisoning (DSP)	Aquatic products	Not set	600 (pg/kg)	
Paralytic Shellfish Poisoning (PSP)	Aquatic products	Not set	800 (pg/kg)	
Histamine				
Histamine	Sphyraenidae and carangidae	Not set	1000 (mg/kg)	
	Other fish with red meat	Not set	300 (mg/kg)	
Melamine				
Melamine	Other foods containing ≥15% milk	Not set	2.5 (mg/kg)	
Carbon monoxide	Tunas	Not set	0.2 (mg/kg)	Applicable only to tuna to be consumed raw. Voluntary industry standard not national mandatory GB standard. Only applicable for frozen vacuum packed tuna products.
Other				
N-nitrosodimethylamines	Seafood	Not set	4 (µg/kg)	
N-nitrosodiethylamines	Seafood	Not set	7 (µg/kg)	
Nitrites	Fish	Not set	3 (mg/kg)	

Appendix 5: Summary of Hong Kong Residue and Contaminant Standards for Seafood Products

RESIDUE OR CONTAMINANT	TYPE OF SEAFOOD WHICH THE STANDARD APPLIES TO	PORTION TO WHICH THE STANDARD APPIES TO	STANDARD	COMMENTS
Metals & metalloids				
Antimony	Fish, crab meat, oysters, prawns & shrimps	Not stated	1 (mg/kg)	
Arsenic (As)	Fish & fish products	Not stated	6 (mg/kg)	As inorganic arsenic
	Shellfish & shellfish products	Not stated	10 (mg/kg)	As inorganic arsenic
Cadmium (Cd)	Fish, crab meat, oysters, prawns & shrimps	Not stated	2 (mg/kg)	
Chromium (Cr)	Fish, crab meat, oysters, prawns & shrimps	Not stated	1 (mg/kg)	
Lead (Pb)	All food in solid form	Not stated	6 (mg/kg)	
Mercury (Hg)	All food in solid form	Not stated	0.5 (mg/kg)	As total mercury
Tin (Sn)	All food in solid form	Not stated	230 (mg/kg)	
Veterinary medicines				
Amoxycillin	Muscle, liver and kidney of all food animals	Not stated	50 (mg/kg)	
Ampicillin	Muscle, liver and kidney of all food animals	Not stated	50 (mg/kg)	
Benzylpenicillin	Muscle, liver and kidney of all food animals	Not stated	50 (mg/kg)	
Chlortetracycline	Muscle of all food animals	Not stated	100 (mg/kg)	
Cloxacillin	Muscle, liver and kidney of all food animals	Not stated	300 (mg/kg)	
Oxytetracycline & Tetracycline	Muscle of all food animals	Not stated	100 (mg/kg)	
	Liver of all food animals	Not stated	300 (mg/kg)	
	Kidney of all food animals	Not stated	600 (mg/kg)	
Dicloxacillin	Muscle, liver and kidney of all food animals	Not stated	300 (mg/kg)	
Sulfonamides	Muscle, liver and kidney of all food animals	Not stated	100 (mg/kg)	Sum of all substances belonging to the sulfonamide group
Dyes				
Crystal violet	All seafood	Not stated	Shall not be detected	Banned substance. Any detection is a violation.
Malachite green	All seafood	Not stated	Shall not be detected	Banned substance. Any detection is a violation.
Banned substances				
Avoparcin	All seafood	Not stated	Shall not be detected	Banned substance. Any detection is a violation.
Chloramphenicol	All seafood	Not stated	Shall not be detected	Banned substance. Any detection is a violation.
Clenbuterol	All seafood	Not stated	Shall not be detected	Banned substance. Any detection is a violation.

RESIDUE OR CONTAMINANT	TYPE OF SEAFOOD WHICH THE STANDARD APPLIES TO	PORTION TO WHICH THE STANDARD APPIES TO	STANDARD	COMMENTS
Dienoestrol	All seafood	Not stated	Shall not be detected	Banned substance. Any detection is a violation.
Diethylstilbestrol	All seafood	Not stated	Shall not be detected	Banned substance. Any detection is a violation.
Hexoestrol	All seafood	Not stated	Shall not be detected	Banned substance. Any detection is a violation.
Salbutamol	All seafood	Not stated	Shall not be detected	Banned substance. Any detection is a violation.
Melamine				
Melamine	Any food intended to be consumed principally by persons of an age group into which children under the age of 36 months fall	Not stated	1 (mg/kg)	
	Any food intended to be consumed principally by pregnant or lactating women	Not stated	1 (mg/kg)	
	Any other food	Not stated	2.5 (mg/kg)	