

AUDIT REPORT

Targeted Audit of Sushi
Production and
Processing Facilities

September 2019



CONTENTS

1.	GLOSSARY	2
2.	EXECUTIVE SUMMARY.....	3
3.	INTRODUCTION	4
3.1.	Audit Objective.....	6
3.2.	Audit Scope	6
3.3.	Audit Criteria and Reference Documents	6
3.4.	Audit Methodology	7
4.	AUDIT FINDINGS	8
4.1	Breaches of legislation.....	8
4.1.1	Parasite control	9
4.1.2	Sushi rice controls.....	10
4.1.3	HACCP.....	11
4.1.4	Traceability.....	12
4.1.5	General Hygiene	12
4.2	Microbiological Criteria	12
5.	POSITIVE PRACTICES OBSERVED DURING THE AUDIT.....	13
6.	CONCLUSIONS	13
7.	RECOMMENDATIONS	14

1. GLOSSARY

EHO	Environmental Health Officer
FSAI	Food Safety Authority of Ireland
HSE	Health Service Executive
SFPA	Sea Fisheries Protection Authority
FBO	Food Business Operator

2. EXECUTIVE SUMMARY

The Food Safety Authority of Ireland (FSAI) has overall responsibility for the enforcement of food law in Ireland, which is predominantly carried out through service contract arrangements with official agencies. The FSAI carries out targeted audits of food businesses to determine the level of compliance with food law and the effectiveness of its implementation. This targeted audit of sushi production and processing facilities was undertaken as part of the FSAI's 2018 planned programme of audits, with audits conducted in October 2018 in 11 food businesses.

Sushi is now widely available in Ireland. Sushi is perceived as a healthy food product by consumers and therefore demand is growing. Media reports indicate that the sushi trend in Ireland has experienced a dramatic increase in recent years, with an 80% increase in the number of restaurants offering sushi on their menus since the beginning of 2018. According to one of the most popular food delivery platforms, sushi has become hugely popular, with a 60% increase in the number of orders of sushi through their platform since the company launched in 2015. The purpose of this audit was to assess compliance with the relevant food law in selected food businesses manufacturing, producing or selling sushi and/or sushi-type products. Following a review of menu offerings and taking account of scale, range and types of products being sold, a list of potential food businesses was generated. Food businesses were subsequently selected for audit and included three manufacturers and eight restaurants/takeaways. The food businesses were selected in order to provide a relatively broad overview of industry standards for sushi processing and production.

The manufacturers audited supplied the majority of their products to retail outlets and also produced sushi for corporate events. The restaurants ranged from small manufacturing establishments where the majority of food was served to consumers on the premises to smaller outlets which sold the majority of their product through various food delivery platforms (online food delivery businesses) Each food business operator was provided with an individual report following the audit of its business and these reports were copied to the relevant supervising official agency for close out of the findings.

Both fresh water and salt water fish are a potential source of human infection due to parasites. Controls must be in place to ensure that the raw fish used to make sushi is parasite free and that, sushi rice is to be kept for no longer than the appropriate timeframe and served warm. Sushi rice must be managed to prevent the occurrence of *Bacillus cereus*, a foodborne pathogen commonly associated with rice. Therefore, during this audit, emphasis was placed on the documented and operational controls in relation to the freezing of fish for parasite control and the production of sushi rice which did not pose a threat to the consumer. 90% of the food businesses audited did not have adequate controls in place relating to sushi production and processing activities being carried out at their establishment. A total of 76 breaches of food law were identified in the 11 food businesses audited. 75% of food businesses that should have been freezing fish for parasite control did not meet the requirements of the legislation. Over 90% of the food businesses did not have adequate operational controls with regards to sushi rice production.

Deficiencies relating to the management of product traceability, general hygiene, HACCP and microbiological criteria were also identified. The breaches of microbiological criteria identified during the audit were only applicable to the activities being undertaken in 2 of the 11 food businesses.

One of the food business operators had no breaches of legislation and demonstrated examples of best practice in relation to the documented and operational food safety controls in place.

The high level of non-compliance is indicative of a lack of awareness and lack of training among food business operators (FBO's) and their staff with regards to the food safety risks associated with processing sushi and sushi type products which contain raw, ready-to-eat fishery products. Three recommendations are made in order to strengthen compliance with food safety controls applicable to the food businesses audited. Food business operators must develop and implement procedures for compliance with the specific requirements of food law relating to the production/processing of sushi and sushi type products. They can do this by familiarising

themselves with the newly developed FSAI guidance in this area.

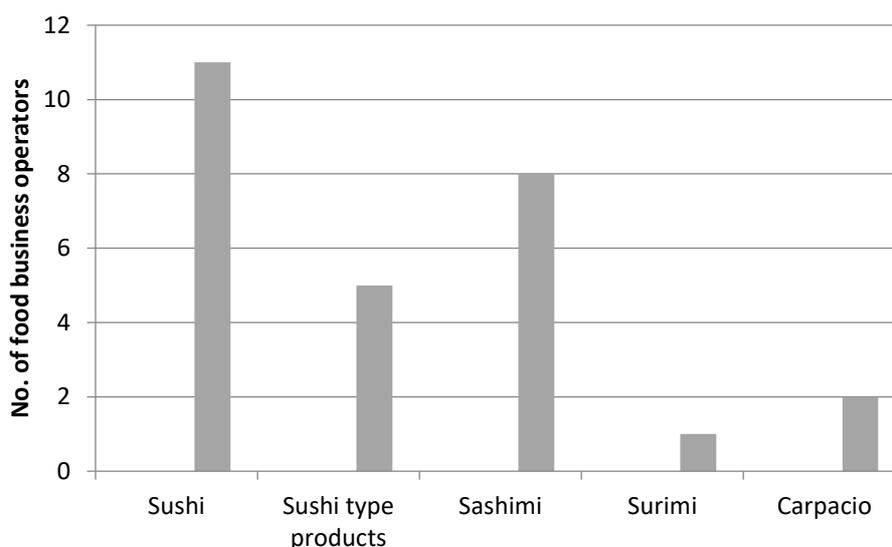
3. INTRODUCTION

The Food Safety Authority of Ireland (FSAI) has overall responsibility for the enforcement of food law in Ireland, predominantly through service contracts with Government Departments and Agencies. The FSAI carries out targeted audits of food businesses each year to determine the level of compliance with current food law and the effectiveness of its enforcement. This audit examined the compliance of a number of manufacturers and restaurants/takeaways producing and processing sushi.

Sushi is now widely available in Ireland and is seen as a healthy alternative by consumers and therefore demand is growing. Media reports indicate that the sushi trend in Ireland has soared with an 80% increase in the number of restaurants offering sushi on their menus since the beginning of 2018. According to a food delivery platform sushi has become hugely popular with a 60% increase in the number of orders of sushi through their platform since the company launched in 2015¹.

The audit focused on four main types of products, Sushi; Sushi type products, Sashimi and Carpaccio. One food business producing surimi was also audited.

Figure 1: Type of Sushi products produced



At the time of this audit little guidance was available in relation to food safety controls for sushi production. The food authorities in New South Wales Australia and the FSA UK have produced guidance both of which were referenced as part of this series of audits ^{2 3}.

¹ <https://www.irishexaminer.com/breakingnews/discover/irelands-most-sought-after-sushi-dishes-in-celebrations-on-international-sushi-day-849606.html>

² Food Standards Agency UK guidance on freezing fish and fishery products

³ New South Wales Food Safety Guidelines for the Preparation and Display of Sushi

Sushi

According to the New South Wales guidelines sushi is generally defined as *ready-to-eat cooked rice* that has been acidified with vinegar. Product forms can include:

- nigiri: small balls of rice with ingredients on top
- maki rolls: layers of rice and nori sheets rolled with a bamboo mat to form cylinders that contain various fillings
- hand rolls: cone shaped rolls formed by a sheet of nori filled with various ingredients

Other Products

- Sushi type products usually incorporate chicken or other types of cooked meats and ingredients with the sushi rice
- Sashimi consists of raw fish or meat sliced into thin pieces and often eaten with soy sauce
- Carpaccio is a dish of meat or fish, thinly sliced or pounded thin, which is raw, and served mainly as an appetizer

Freezing of fish and fishery products

According to the Food Standards Agency UK guidance on freezing of fish and fishery products:

Freezing requirements apply to all food businesses that place fish and fishery products to be eaten raw on the market such as restaurants, fish suppliers and fish buyers. This is to protect consumers from any harmful effects that might be caused by parasites that are naturally present in the fish. Raw fish is used in:

- *Sushi*
- *Sashimi*

Annex III Section VIII/Chapter III D of Regulation (EC) 853/2004 states that:

For parasites other than trematodes the freezing treatment must consist of lowering the temperature in all parts of the product to at least either:

- -20°C for not less than 24 hours, or
- -35°C for not less than 15 hours

The European Food Safety Authority (EFSA), in 2010, issued exemptions to the freezing requirements detailed above in certain, restricted circumstances. The exemption has been adopted by the UK and Norwegian authorities to date and includes a general freezing exemption for the following species as they are reared using farming methods that have a minimal risk of parasite infection:

- Atlantic halibut
- Atlantic salmon

- Rainbow trout

This is also legislated for in Commission Regulation (EU) No 1276/2011

Sushi rice

Sushi rice is defined as 'cooked short grain rice mixed with vinegar and other ingredients such as sugar and/or salt'. The food businesses audited were using various varieties of rice sourced mainly from wholesalers in Ireland or the UK.

The New South Wales Food Safety Guidelines for the Preparation and Display of Sushi³ states that:

At pH values of 4.6 or less, most pathogenic bacteria do not grow, sporulate or produce toxins (Hocking, 2003). There are a few exceptions to this, Salmonella spp and enteropathogenic Escherichia coli, although when the pH of the growth medium or food is adjusted using acetic acid, the minimum pH for growth increased to above pH 4.6.

Therefore, acidification of sushi rice using rice vinegar to a pH of 4.6, or below, will assist in stopping the growth of pathogenic bacteria. The pH of the rice must be checked to ensure that the upper limit of a pH of 4.6 has not been exceeded. Sushi rice if served warm must be acidified to prevent the growth of Bacillus cereus, time and temperature controls must also be in place.

If cooked rice is not acidified, it must be stored under refrigeration at or below 5°C at all times.

The New South Wales Guidelines also provides guidance in relation to temperature and pH measurement including calibration of equipment.

During this audit, particular emphasis was placed on the operational controls in relation to the freezing of fish for parasite control and production of sushi rice.

3.1. Audit Objective

The objective of the audit was to assess food business operator compliance with food legislation applicable to their business; with particular emphasis on controls related to sushi production and processing.

3.2. Audit Scope

The scope of the audit was to assess food business operator controls present in relation to production and processing activities related to sushi (including sashimi).

During each audit, the team assessed whether food business operators were complying with the criteria against which the audit was being carried out.

3.3. Audit Criteria and Reference Documents

- [Food Safety Authority of Ireland Act, 1998](#) (S.I. No 29 of 1998), as amended
- [Regulation \(EC\) No.178/2002](#) laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety, as amended
- [Regulation \(EC\) No. 852/2004](#) on the hygiene of foodstuffs, as amended
- [Regulation \(EC\) No. 853/2004](#) laying down specific hygiene rules for food of animal origin, as amended

- European Communities (Food and Feed Hygiene) Regulations, 2009 ([S.I. No 432 of 2009](#)), as amended
- [Regulation \(EU\) No.1169/2011](#) on the provision of food information to consumers
- European Communities (Official Control of Foodstuffs) Regulations 2010 ([S.I. 117 of 2010](#)) as amended
- [Regulation \(EC\) No 2073/2005](#) on Microbiological Criteria for Foodstuffs, as amended
- [Regulation \(EC\) No 1881/2006](#) setting maximum levels for certain contaminants in foodstuffs

All relevant Statutory Instruments transposing the above legislation.

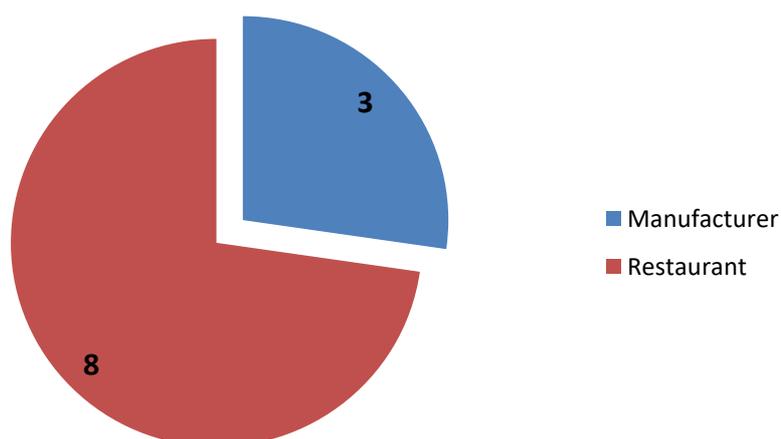
3.4 Audit Methodology

This audit was undertaken using documented procedures which are included in the FSAI Business Management System, namely the FSAI Audit Procedure and Charter. These procedures implement the FSAI audit obligations and are in accordance with the requirements of Regulation 882/2004 (including Article. 6.1 of Commission Decision 677/2006) and Section 48 (9) of the FSAI Act.

The audit team assembled a detailed list of those FBOs manufacturing, producing or selling sushi and sushi-type products. From this, following a review of menu offerings and taking account the scale, range and types of products being sold, a list of potential food businesses to be audited was generated. Food businesses were subsequently selected for audit and included manufacturers and restaurants/takeaways. The food businesses were selected in order to provide a relatively broad overview of industry standards for sushi processing and production.

All on site activity took place in October 2018. On arrival at each food business the rationale of the audit was explained to the operator as part of the opening meeting. Eleven food business operations were audited in total – this included three manufacturers and eight restaurants.

Figure 2: Number & Type of food business establishments audited



An assessment of the Hazard Analysis and Critical Control Point (HACCP) system, as well as documented and operational controls in place with regards to production and processing of sushi was then conducted in each food business. There was a particular emphasis on the controls in place regarding the freezing of fish for parasite control and time and temperature controls for the acidification of sushi rice. All audits were unannounced to the food business operator. An authorised officer from the official agency with responsibility for the supervision of

these food business operations was present for each audit.

4. AUDIT FINDINGS

Three manufacturers and eight restaurants were audited as part of this programme of audits. The manufacturers supplied the majority of their products to retail outlets and also produced sushi for corporate events. The restaurants ranged from large establishments where the majority of food was served to consumers on the premises to smaller outlets which sold the majority of their product on food delivery platforms.

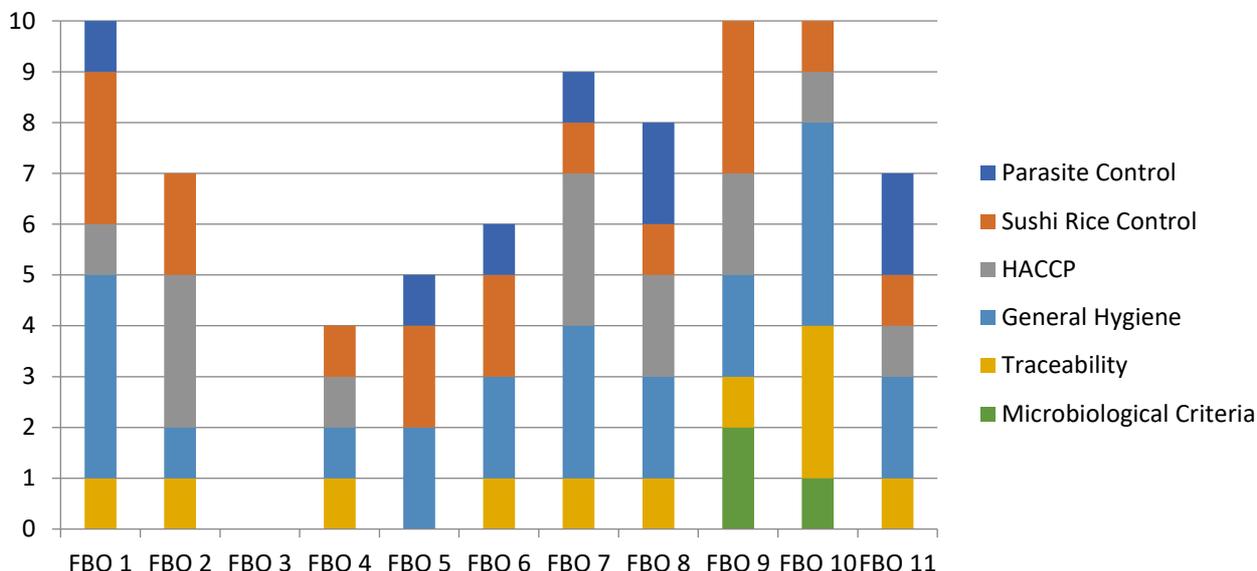
Following audits in which non-compliances with legal requirements were identified, the FBO was informed of these non-compliances verbally at a closing meeting following the audit and was required to implement corrective actions. Subsequently a report detailing the outcomes and findings of the audit was sent to each food business operator. Close-out of these findings will be carried out by the supervising official agency.

4.1 Breaches of legislation

A total of 76 breaches of the following legislative requirements were observed during the programme of audits in the 11 food businesses.

- Eight breaches of Annex III, Section VIII, Chapter III (D2) of Regulation (EC) No 853/2004 on the hygiene of foodstuffs, relating to requirements concerning parasites
- Seventeen breaches of Article 5 of Regulation (EC) No 852/2004 on the hygiene of foodstuffs, relating to hazard analysis and critical control point system. These seventeen breaches related specifically to the documented and operational controls of sushi rice
- Fourteen breaches of Article 5 of Regulation (EC) No 852/2004 on the hygiene of foodstuffs, relating to hazard analysis and critical control point system. These 14 breaches related to operational and documented controls in general
- Eleven breaches of Article 18 of Regulation (EC) No 178/2002 laying down the general principles and requirements of food law relating to traceability
- Twenty-three breaches of Annex II of Regulation (EC) No 852/2004 on the hygiene of foodstuffs relating to general requirements for food premises
- Three breaches of Commission Regulation (EC) No 2073/2005 on microbiological criteria of foodstuffs

Figure 3: Numbers and types of legislative breaches identified



Note: One of the food business operators (FBO No.3) had no breaches of legislation and demonstrated examples of best practice in relation to the documented and operational food safety controls in place.

The remaining ten food business operators had between four and ten breaches of legislation. Food business operators 2, 9 and 10 were manufacturers, the remainder were restaurants.

4.1.1 Parasite control

Regulation (EC) 853/2004 of the European Parliament and of the Council laying down specific hygiene rules for food of animal origin. Annex III/Section VIII/Chapter III D Requirements concerning parasites states that:

“ For parasites other than trematodes the freezing treatment must consist of lowering the temperature in all parts of the product to at least either:

- 20°C for not less than 24 hours, or*
- 35°C for not less than 15 hours “*

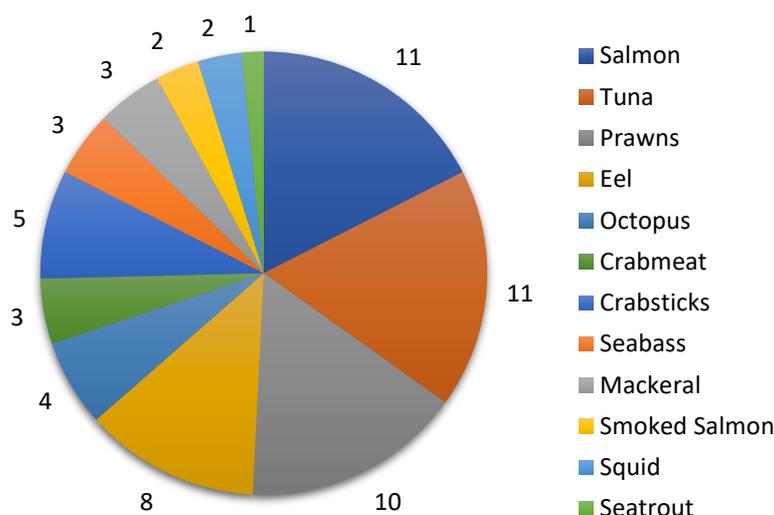
The EFSA opinion of 2010 details the permitted exemptions for freezing of certain farmed fish from the UK and Norway.

The 11 FBO’s visited as part of the audit were assessed against the requirements of Annex III/Section VIII/Chapter III D to determine whether there was a requirement for them to freeze fish for parasite control and what procedures they had in place.

During the audit 12 types of fish were being used to produce sushi and sushi type products. The most common species of fish used in sushi were salmon and tuna. In the case of salmon, 10 of the FBO’s were purchasing salmon subject to the freezing exemption and therefore did not need to freeze onsite. In one FBO they were purchasing salmon which required freezing and therefore did not comply with the requirements for freezing for parasite control.

In relation to tuna; 8 of the 11 FBOs were purchasing fresh tuna which required freezing for parasite control; six of these were non-compliant with the legal requirements. One FBO was purchasing tuna which had already been frozen in line with the requirements for parasite control and therefore did not need to freeze again onsite. Two FBOs were purchasing canned tuna chunks and vac packed tuna chunks in brine, which are not subject to the freezing requirements as the fish is cooked during processing.

Figure 4: Type of fish used in sushi production



4.1.2 Sushi rice controls

Sushi rice is cooked short grain rice mixed with vinegar and other ingredients. The food businesses were using varieties sourced mainly from wholesalers in Ireland or the UK.

Appendix 1 of The New South Wales Food Safety Guidelines for the Preparation and Display of Sushi³ states that:

'At pH values of 4.6 or less, most pathogenic bacteria do not grow, sporulate or produce toxins (Hocking, 2003). There are a few exceptions to this, Salmonella spp and enteropathogenic Escherichia coli, although when the pH of the growth medium or food is adjusted using acetic acid, the minimum pH for growth increased to above pH 4.6.

Therefore, acidification of sushi rice using rice vinegar to a pH of 4.6, or below, will assist in stopping the growth of pathogenic bacteria. The pH of the rice must be checked to ensure that the upper limit of a pH of 4.6 has not been exceeded. Sushi rice if served warm must be acidified to prevent the growth of Bacillus cereus, time and temperature controls must also be in place.

If cooked rice is not acidified, it must be stored under refrigeration at or below 5°C at all times.'

There were varying practices and processes observed in relation to the production of the sushi rice and they are broadly outlined in the below methods:

In the restaurants the typical process for sushi rice production was that the rice is cooked, acidified and held at ambient temperatures. The rice is then formed into the required sushi product as required for service / sale to

consumers. In this method, the controls for microbial growth are two-fold. The acidification of the rice to a pH of less than 4.6, coupled with control over the length of time that the rice is held at ambient temperatures which was approximately 1-3 hours.

In the manufacturer's premises, the sushi rice is cooked, cooled to ambient temperatures and then acidified before being formed into the required shape and blast chilled. The chilled rice shapes are formed into the final sushi / sushi-type product with the other ingredients, packaged, dispatched, and sold as a chilled product in retail outlets. In this method, the food safety control is time / temperature based (blast chilling and holding at chilled temperatures) as well as the acidification of the rice to inhibit microbial growth.

In one manufacturer where a 24-hour shelf life was applied to products the acidification step was as a seasoning agent for flavour rather than to inhibit microbial growth.

Seventeen breaches of Article 5 of Regulation (EC) No 852/2004 on the hygiene of foodstuffs, relating to the hazard analysis and critical control point system were identified during the audit. These seventeen breaches related specifically to the documented and operational controls of sushi rice.

In the 8 restaurants serving the rice warm, 7 FBOs did not have adequate operational controls for food safety as detailed below:

- In one FBO the audit team noted temperature checks for the cooked acidified rice had already been filled in for 4.30pm, 5.30pm and 6.30pm at 3.08pm on the day of the audit, that is, the records had been pre-populated
- There was no method for measuring pH (no pH meter or pH litmus papers)
- The pH meter was not working correctly or was not being used correctly
- There was no procedure for the preparation of sushi rice or for operational controls for food safety

In each of the 3 manufacturers; deficiencies in the operational controls for food safety were identified as detailed below:

- There was no documented procedure/recipe for the preparation of the sushi rice
- The use of vinegar as a seasoning agent only, and not for prevention of microbial growth, had not been tested or proven as part of the sushi rice production process
- Monitoring of the pH of the sushi rice was not adequate, for example, the FBO was using generic pH litmus papers rather than ones tailored to a pH of between 4 and 6 and in one manufacturer the pH meter was not working
- No risk assessment had been conducted and the acidification of the cooked sushi rice and time allowed out of refrigeration had not been identified as a CCP

4.1.3 HACCP

Article 5 of Regulation (EC) No 852/2004 on HACCP states that:

“Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles”

The HACCP based procedures should describe how the food business operator ensures that all operations are carried out hygienically and in compliance with food law. The HACCP system should also include a provision that the FBOs retain relevant documents and records for an appropriate period of time.

Fourteen breaches relating to HACCP based operational and documented food safety controls in general were identified.

The main breaches of food safety controls included:

- Frozen fish being defrosted at room temperature, on countertops or in a bath of water
- Freezers not capable of bringing temperatures to at least to -20°C
- Freezers not operating at the correct temperature
- No temperature checks on incoming fresh and frozen fish
- Operational and documented food safety controls and records were not adequate

4.1.4 Traceability

Article 18 (2) of Regulation (EC) No 178/2002 states that:

“Food and feed business operators shall be able to identify any person from whom they have been supplied with a food, a feed, a food-producing animal, or any substance intended to be, or expected to be, incorporated into a food or feed.

Nine FBOs had eleven breaches for insufficient traceability, this was due to:

- Unlabelled products, including work-in-progress in chills and freezers
- Incorrect date labelling of fish on in house traceability labels
- Labels being applied for work in progress dates and subsequently peeling off

4.1.5 General Hygiene

Annex II, of Regulation EC (No) 852/2004 on the hygiene of foodstuffs (General Hygiene Requirements) states the general hygiene requirements for all food business operators

Twenty-three breaches in relation to general hygiene requirements were identified in 10 of the 11 FBOs. These related to:

- Lack of training for staff in relation to measuring the food safety controls for sushi rice
- Inadequate hand washing facilities in a sushi rice production area and in one instance an operator was observed washing his hands with his gloves on
- There was unsuitable or unclean equipment in a production area (e.g. pH meter, thermos storage boxes, cloths used to wrap raw fish in)
- Inadequate segregation of raw meat for hot meals from ready to eat/cooked vegetables
- Inadequate segregation of staff food in fridges and freezers
- Fitness to work assessment forms not completed at the start of employment or on return to work after illness

4.2 Microbiological Criteria

Microbiological criteria are used to assess the acceptability of food or a food process. When a particular food is tested for a particular microorganism (toxin or metabolite), the results can indicate whether:

- The food is safe to eat or not
- The food is of acceptable quality or not
- The hygiene standards in the food establishment are satisfactory or unsatisfactory.

Commission Regulation (EC) No 2073/2005 on microbiological criteria for foodstuffs sets legal criteria for a range of foods. Article 4 of the Regulation requires that food business operators perform microbiological testing when they are validating or verifying the correct functioning of their procedures based on hazard analysis and critical control point (HACCP) principles and good hygiene practice.

There were two FBO's manufacturing/processing sushi or sushi type products and were applying a shelf life on finished product. One FBO was applying a "Use by Date" of less than five days and the other FBO was applying a "Use by Date" of five days from day of production. Commission Regulation (EC) No 2073/2005 considers a food (regardless of its pH, water activity etc.) with a shelf-life less than five days (so long it is not intended for infants or for special medical purposes) as being unable to support the growth of *Listeria monocytogenes*. Such foods are therefore falling into food category 1.3 of the Regulation, which sets a limit for *Listeria monocytogenes* of 100 cfu/g throughout the shelf life.

A ready-to-eat food with a shelf-life of five days or more may, or may not, be able to support the growth of *Listeria monocytogenes* depending on characteristics of the food such as pH, water activity, etc. If an FBO does not have evidence to demonstrate that it is unable to support the growth, then it is assumed that it is able to support growth and falls into food category 1.2 of the Regulation which states and the criterion of an absence of *Listeria monocytogenes* in 25 g of product applies to the food before it has left the immediate control of the FBO who has produced it.

Both FBO's had microbiological sampling programmes in place for *Listeria monocytogenes*. The main finding's related to:

- One FBO had not confirmed with the laboratory that they were using the test method stipulated in Commission Regulation No 2073/2005 on microbiological criteria for foodstuffs or a validated alternative method.
- The shelf life testing did not incorporate the additional 3 days refrigerated storage of some of the pre-prepared ingredients. This needs to be incorporated into future shelf life testing to take account of the worst-case scenario in relation to shelf life.
- The other FBO had a microbiological testing procedure which was generic and not specific to sushi or the food business.

5. POSITIVE PRACTICES OBSERVED DURING THE AUDIT

In one FBO audited they had detailed guidelines and work instructions which included laminated flow diagrams, which included the critical food safety limits, for the preparation of sushi rice posted in the preparation area for all staff to view. The FBO had also adapted the cooling/freezing record of the FSAI Safe Catering Guide to include detail regarding the storage of sushi rice at room temperature. The operational food safety controls (pH and time control) had been detailed. Overall, they had implemented a strong system of documented and operational food safety controls relating to the production and processing of sushi.

6. CONCLUSIONS

The 76 breaches of legislation identified during the programme of audits highlight the need for food business operators who produce sushi or sushi type products to improve compliance with particular requirements of food law relevant to their businesses. The level of compliance with regards to the food businesses' operational controls in relation to the freezing of fish for parasite control and production of sushi rice was very low. A total of 75% of food businesses that should have been freezing fish for parasite control did not meet this specific legislative requirement. Over 90% of the food businesses did not have adequate operational controls with regards to sushi rice production. This level of non-compliance is indicative of a lack of awareness and training by food business operators and their staff with regards to the food safety risks associated with processing of sushi and sushi type products which contain raw, ready-to-eat fishery products.

Deficiencies relating to the management of product traceability, general hygiene and HACCP were also identified.

In summary, the audit identified that over 90% of the food businesses audited did not have adequate controls in place relating to sushi production and processing activities being carried out at their establishment. One food

business had no breaches of legislation and demonstrated examples of best practice in relation to the documented and operational food safety controls in place.

7. RECOMMENDATIONS

Three recommendations are made as part of this report:

1. Food business operators must put HACCP systems and related procedures in place to ensure full compliance with all the relevant requirements of food law specific to the production of sushi or sushi type products.
2. Food business operators manufacturing, or processing sushi or sushi-type products should ensure adequate training of all staff regarding the food safety controls required for the production of such food items. This should be a central component of their food safety management systems.
3. Since the commencement of this audit FSAI has developed concise guidance in relation to the operational controls required for freezing of fish for parasite control and production of sushi rice. Going forward food business operators should familiarise themselves with this guidance and ensure its requirements are implemented into their HACCP and food safety management systems.

For more information, please see an infographic on the audit results [here](#). Please also see the newly developed FSAI advice on the '[Safe Production of Sushi](#)' on the FSAI website.



Food Safety Authority of Ireland
The Exchange, George's Dock, IFSC,
Dublin 1, D01 P2V6

T +353 1 817 1300
E info@fsai.ie

 Join us on LinkedIn

 Follow us on Twitter @FSALinfo

 Say hi on Facebook

www.fsai.ie