

## H. Retail Food-Seafood Markets

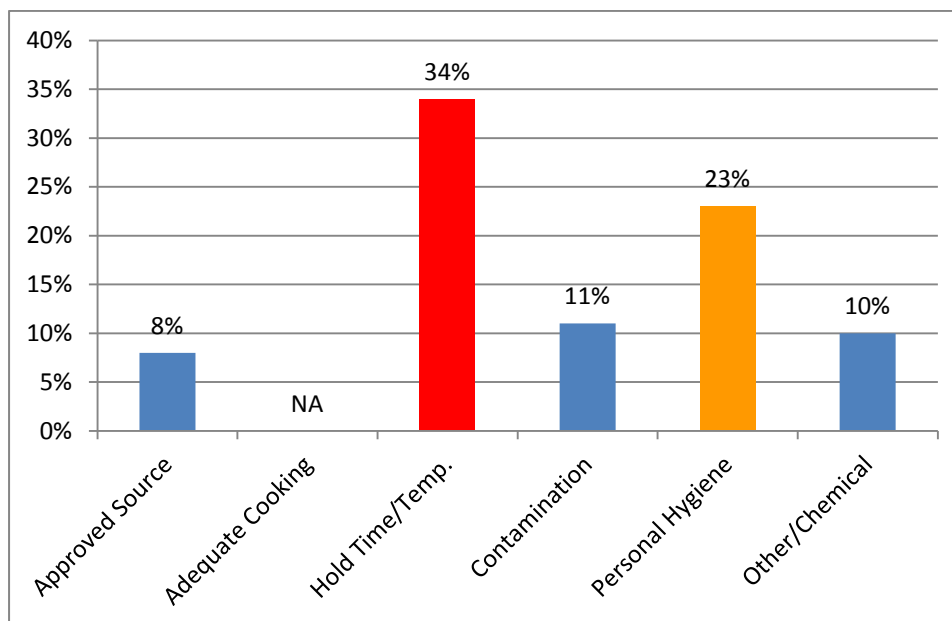
### *Introduction*

For the 2010 Wake County Baseline survey, 29 seafood markets were surveyed. For the 46 possible individual data items on the survey instrument 496 observations were made at 29 seafood markets. See Appendix H for complete data related to seafood markets.

*Certified food protection managers (24%):* For this survey, a certified food protection manager had to be present, and possess a State-approved course certificate, in order to be marked IN compliance. A certified food protection manager was present at seven of the 29 facilities (24% IN compliance). This is the lowest compliance for a facility type in the survey.

### Results and Discussion

**Table 1-Seafood:** The following diagram represents OUT of compliance risk factors by category as a percentage of total observations.



The same data is shown in the table below with the actual number of OUT of compliance observations relative to the total number of observations (IN and OUT).

Foodborne Illness Risk Factor Risk Factor OUT of compliance:	Seafood		
	% OUT	# OUT observations	Total Observations
Food from Unsafe Source	8%	8	96
Inadequate Cooking	NA	0	0
<b>Improper Holding/Time-Temperature</b>	<b>34%</b>	<b>33</b>	<b>98</b>
Contaminated Equipment/Contamination	11%	15	136
<b>Poor Personal Hygiene</b>	<b>23%</b>	<b>32</b>	<b>137</b>
Other/Chemical	10%	3	29
Totals	18%	91	496

The foodborne illness risk factors needing priority attention are:

- Improper Holding/Time and Temperature (34% OUT of compliance)
- Poor Personal Hygiene (23% OUT of compliance)

Tables Seafood-2 and Seafood-3 show the breakdown of these risk factors into the specific individual data items on the survey instrument that need priority attention.

**Table Seafood-2: Holding/Time-Temperature (34% OUT)**

Data Item	# OUT	Total Obs.	% OUT
<b>Commercially prepared RTE, PHF date marked 10c</b>	<b>11</b>	<b>23</b>	<b>48%</b>
<b>RTE, PHF discarded after 7 days 10b</b>	<b>11</b>	<b>27</b>	<b>41%</b>
<b>Cold Hold 8a</b>	<b>10</b>	<b>29</b>	<b>34%</b>

*\*Items with  $\geq 25\%$ , with significant sample size, are shown in **bold**.*

Date marking (Individual Data Items 10b and 10c): Date marking of refrigerated ready-to-eat, PHF foods is an important food safety system component designed to promote proper food rotation and limit the growth of *Listeria monocytogenes* during cold storage. Discarding ready-to-eat, PHF that has remained in cold storage beyond the parameters described in the FDA Food Code prevents foods with a harmful level of *Listeria monocytogenes* from being served. North Carolina's current rules do not require date marking.

Cold Holding at 41°F (Individual Data Item 8a): Maintaining potentially hazardous food (PHF) foods under the cold temperature control of 41°F limits the growth of pathogens that may be present in or on the food and may help prevent foodborne illness. Temperature has significant impact on both the generation time of an organism and its lag period. Control of the growth of

*Listeria monocytogenes* (Lm) is the basis for the cold holding temperature of 41°F. North Carolina's cold holding temperature requirement is 45°F.

**Table Seafood-3: Poor Personal Hygiene (23% OUT)**

Data Item	# OUT	Total Obs.	% OUT
<b>Employee Health Policy 17a</b>	<b>23</b>	<b>29</b>	<b>79%</b>
Handwash facilities (accessible) 16a	4	29	14%
Proper Handwashing 13a	2	15	13%
Handwash facilities (soap and towels) 16b	2	29	7%
Good Hygienic Practices 14a	1	22	5%

*\*Items with  $\geq 25\%$ , with significant sample size, are shown in **bold**.*

Employee Health Policy (Item 17a): The development and effective implementation of an employee health policy based on the provisions in the Food Code may help to prevent foodborne illness associated with contamination of food by ill or infected food employees. Current North Carolina rules do not require an employee health policy.

Handwash facilities (Item 16a and 16b): Hands are a common vehicle for the transmission of pathogens to foods in an establishment. Hands can become soiled with a variety of contaminants during routine operations. The transfer of contaminants can be limited by providing food employees with handwashing sinks that are properly equipped and conveniently located. Handwashing sinks that are blocked by portable equipment or stacked full of soiled utensils and other items, are rendered unavailable for employee use. In addition to accessibility, hand sinks should be supplied with soap and towels.

Proper Handwashing (13a): Handwashing is a critical factor in reducing fecal-oral pathogens that can be transmitted from hands to RTE food as well as other pathogens that can be transmitted from environmental sources. Many employees fail to wash their hands as often as necessary and even those who do may use flawed techniques.

Good Hygienic Practices (Item 14a): Proper hygienic practices by food employees minimize the possibility of transmitting disease through food. Employee practices such as eating, drinking and smoking in food preparation areas and working while experiencing persistent coughing and sneezing must be prohibited. Elimination of these practices will help prevent the transfer of microorganisms to foods and food contact surfaces.

## Summary

**Table Seafood-4: foodborne illness risk factor categories and individual data items in need of priority attention**

Foodborne Illness Risk Factor in need of priority attention	Individual data items in need of priority attention with % OUT
<b>Improper Holding/Time-Temperature (34% OUT)</b>	<b>Commercially prepared RTE, PHF date marked 10c (48% OUT)</b>
	<b>RTE, PHF discarded after seven days 10b (41% OUT)</b>
	<b>Cold Hold 8a (34% OUT)</b>
<b>Poor Personal Hygiene (23% OUT)</b>	<b>Employee Health Policy 17a (79% OUT)</b>
	Handwash facilities (accessible) 16a (14% OUT)
	Proper Handwashing 13a (13% OUT)
	Handwash facilities (soap and towels) 16a (7% OUT)
	Good Hygienic Practices 14a (5% OUT)

*\*Items with  $\geq 25\%$ , with significant sample size, are shown in **bold**.*