

Proposal Subject Hand Washing Facilities

Specific NSSP Guide Reference Model Ordinance Chapter XI,XII,XIII,XIV Section .03 B. Plumbing

Text of Proposal/ Requested Action B. Plumbing and Related Facilities.

- (1) Hand washing facilities shall be provided which are:
 - ~~(a)~~ **(a)** Located in each facility in which shellstock is processed [K];
 - ~~(a)~~ **(b)** Convenient, **and readily accessible** to work-areas **so that employees are able to return to their work areas without recontaminating their hands after washing them [O]**
 - ~~(b)~~ **(c)** Separate from the three compartment sinks used for cleaning equipment and utensils [K]; and
 - ~~(e)~~ **(e)** Directly plumbed to an approved sewage disposal system.[S^{O/K}]

Public Health Significance

A wide range of communicable diseases and infections may be transmitted by infected employees to consumers through food. The fecal oral route pathogens often transmitted by food contaminated by infected persons are Norovirus (NoV), hepatitis A virus, Salmonella Typhii, and Shigella species. These pathogens are listed by the Centers for Disease Prevention and Control (CDC) in List 1, “Pathogens Often Transmitted by Food contaminated by Infected Persons”, as published on a yearly basis in the Federal Register. These pathogens are all extremely infectious through the fecal oral route and difficult to control in an infected person. They all have an extremely low infectious dose (as low as 10-100 virus particles with NoV) and are shed in the stool in high numbers (as high as 1,000,000 viral particles per gram of feces with NoV) during peak infectivity^{3,4,5,6}.

When discussing hand decontamination, it is important to have an understanding of the factors that influence microbial contamination levels on the hands. The skin itself has inherent properties that provide protection from microbial contamination. Factors such as skin acidity, skin lipids (acid mantle), moisture, salt concentration, microbial antagonism, climate, and exposure to contaminants all play a role in determining the microbes on the hands at any time.

There are two types of microorganisms on the skin, known as “transients” and “residents”. The resident bacteria live in deeper layers of the skin and are not removed during a basic hand washing. The transient microorganisms are found on the outer most layer of the skin and consist of viruses, protozoa, and bacteria accumulated from touching contaminated environmental surfaces. When the hands are exposed to heavy continuous environmental exposure, transient bacteria can become residents. The transient microorganisms are reduced or removed with a proper hand washing procedure.

The greatest concentration of microbes on the hands, exist around and under the fingernails. The area under the fingernails, known as the “subungal space”, has by far the largest concentration of microbes on the hand and this is also the most difficult area of the hand to decontaminate¹.

Prevention of transmission of viruses and oocysts depends on preventing fecal contamination, and subsequent ingestion of fecal contamination. Infected employees who handle food for others, or who casually contact food that is later consumed by others, may spread bacterial, viral and protozoan disease².

Hand washing was accurately described by Reybrouck, in 1986, as “removing superficial desquamated skin scales, sweat and sebaceous secretions by the action of a detergent (e.g. soap) and water, and with them a variable proportion of the transient bacteria are also removed”. Hand washing consists of three independent procedures, which are all important

in removing transient microorganisms. These procedures consist of: lathering and scrubbing the hands under running warm water; rinsing the hands under warm running water; and finally drying the hands with an approved drying method. Every stage in hand washing is important and has an additive effect in transient microbial reduction⁷.

Friction and water have been found to play the most important role in removing transient microbes during hand washing. This is why the amount of time spent scrubbing the hands is critical in proper hand washing. It takes more than just the use of soap and running water to remove the transient pathogens that may be present. It is the abrasive action obtained by vigorously rubbing the surfaces being cleaned that loosens the transient microorganisms on the hands.

Hands are probably the most common vehicle for the transmission of pathogens to foods in an establishment. Hands can become soiled with a variety of contaminants during routine operations. Some employees are unlikely to wash their hands unless properly equipped hand washing facilities are accessible in the immediate work area. Facilities which are improperly located may be blocked by portable equipment or stacked full of soiled utensils and other items, rendering the facility unavailable for regular employee use. Nothing must block the approach to a hand washing facility thereby discouraging its use, and the facility must be kept clean and well stocked with soap and sanitary towels to encourage frequent use.

The Model Ordinance plant requirements are based on Title 21 of the Code of Federal Regulations (CFR) Part 110 Food Good Manufacturing Practices and Part 123 Seafood HACCP Regulation. States interpret this portion of the model ordinance differently. Some states use a distance rule, some states allow restroom sinks in other buildings on the same property of a facility where employees would recontaminate their hands going through doors to get from the hand sink to work the product, some states do not require hand washing sinks in the processing area at all.; This proposal would increase uniformity, and provide public health in encouraging employees to wash their hands when soiled as a sink would be provided which in is in the area in which they work.

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**Cost Information
(if available)**

None

**Action by 2005
Task Force II**

Recommended referral of Proposal 05-212-C to appropriate Committee as determined by the Conference Chairman.

**Action by 2005
General Assembly**

Adopted recommendation of 2005 Task Force II.

**Action by
USFDA**

FDA concurs with referral of Proposal 05-212-C to an appropriate committee. However, the Summary of Actions does not accurately reflect the Proposal language as submitted. To ensure that the Conference deliberates the Proposal as originally submitted the words “*Land based*” need to be inserted in front of the word “*facility*” in B.(1)(a).

**Action by 2007
Plant Sanitation
Committee**

Recommended no action on Proposal 05-212-C. Rationale – the proposal is adequately addressed in the Model Ordinance.

**Action by 2007
Task Force II**

Recommended adoption of Plant Sanitation Committee recommendation of no action on Proposal 05-212-C.

**Action by 2007
General Assembly**

Adopted recommendation of 2007 Task Force II.

**Action by
USFDA**

December 20, 2007
Concurred with Conference action.

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