



RECOMMENDED PRACTICES FOR CLEANING AND DECONTAMINATION OF AVIAN INFLUENZA

INTRODUCTION

Bird Flu, more notably, Avian Influenza (AI) is a highly contagious viral infection of poultry, first reported to cross infect humans in Hong Kong in 1997. Avian Influenza is a virus from the Orthomyxoviridae family and classified as a type A Influenza [1a].

During the 1997 bird outbreak 1.5 million birds were killed and 6 of the 18 infected humans died. Seventeen of the 18 human infections were related to handling of infected birds. Within 2 months during the winter of 2003-2004, AI bird outbreaks have been reported in Vietnam, Thailand, Korea, Japan and Cambodia. Millions of poultry have died or were killed and 23 human cases were reported as of February 9, 2004. Eighteen of the 23 human infections proved to be fatal [1b].

AI infections are typically limited to transmission within bird species, however. The virus is excreted from infected birds via feces, nasal or ocular discharge which then infects new birds via conjunctival, nares or the trachea. AI has been transmitted to humans via direct handling of an infected bird or in contact with an infected farm. Additionally, the virus has been isolated from feed, water and soil as a result of cross contamination. Airborne transmission is also a possibility [2]. "The virus can survive for extended periods in the tissues and feces of infected birds. In water, the virus can survive for up to 4 days at 22 deg C and more than 30 days at 0 deg C" [1c]. Therefore it is recommended that the destroyed birds be burned or buried and potentially exposed feed destroyed [3].

The following document describes procedures and products suitable for routine and specific decontamination of surfaces, objects and hands, as well as general housekeeping measures. The recommendations set forth herein should be viewed as additional to those issued by local health ministries/departments. In case of discrepancies or doubt, reference should be made to the existing local official health care guidelines/recommendations.

The information contained herein is based on published information, guidelines and procedures from the World Health Organization (WHO), Food and Agricultural Organization (FAO) and World Health Organization for Animal Health (OIE) available at the time of this writing. OIE is leading a task force consisting of these three organizations.

Finally, it is noted that AI primarily needs to be controlled at the farm. This includes "stringent sanitary measures on the farm, including disinfection of contaminated farm equipment, transport vehicles, and cages," and "quarantining infected farms and destruction of infected or potentially exposed flocks and feed" [1a]. However, good hygiene practices during handling of poultry products, including hand washing and prevention of cross contamination is critical to reduce the risk of spreading the virus [1b]. There is no evidence to confirm that the disease is transmitted through contaminated food, however proper handling of poultry products including eggs is advised. Cooking will kill the AI virus, therefore WHO recommends "foods are cooked to reach an internal temperature of 70 deg C" [1b].

Several of the JohnsonDiversey Inc. hard surface disinfectant products described here are registered with the U.S. Environmental Protection Agency and have been

determined to be effective against Avian Influenza. The hand care products and food contact sanitizer products are not labeled with specific antiviral claims because there is not an approved test protocol for antiviral claims.

RECOMMENDED DECONTAMINATION PROCEDURES FOR FOOD SERVICE AND FOOD RETAIL ESTABLISHMENTS

Data on bird flu prevalent in Asia has confirmed that the strain H5N1 is of the Avian Influenza type A. All JohnsonDiversey products referenced here have been tested and proven effective against Avian Influenza type A, though they have not yet been tested specifically against the strain H5N1. Infections caused by this virus usually spread from one bird to another bird, although AI infections in humans have been reported. There is no evidence to confirm that the disease is transmitted from human to human nor through contaminated food. However, proper handling of poultry products including eggs is advised. Cooking will kill the AI virus, therefore, WHO recommends that foods be "cooked to reach an internal temperature of 70 deg C" [1b]. In addition, good hygiene practices during handling of poultry products, including hand washing and prevention of cross contamination are critical to reduce the risk of spreading the virus.

Some general recommendations for decontamination of surfaces, objects, hands and the environment are included below. These recommendations have been compiled from guidelines issued by major international and national disease control agencies and should be viewed as complementary to those issued by local health authorities.

The following measures should be observed as a minimum:

FOOD SERVICE:

- Usual hygiene measures related to preparation, handling and serving of foods should continue to be observed, with particular care on hand hygiene and disinfection of surfaces especially where raw poultry products have been exposed. It is very important that handling staff are fully trained and practice good food safety hygiene procedures. If your staff require further training please refer to your local **JohnsonDiversey representative**. Hands should be washed with an appropriate **JohnsonDiversey antimicrobial soap** after touching contaminated surfaces, or if in contact with secretions from the mouth, nose or eyes (e.g. after covering mouth/nose to sneeze or cough, for example).
- All surfaces exposed to raw products, especially poultry products should be disinfected. **Virex™ II 128/256**, **Virex™ Tb**, **Expose™ II 256**, and **Forward DC™** are effective against Avian Influenza and can be used on food contact surfaces (excluding utensils, glassware and dishes) followed by a potable water rinse per label directions.
- Precautions should be taken with shell eggs. Do not use if the shell is cracked and clean & sanitize egg shells especially if visibly soiled. **JP Optimum CRS** is approved for use on shell eggs as a sanitizer. Refer to label directions for use procedures.

- Poultry should be cooked to internal temperatures of 70 deg C [1b]. Thermometers must be sanitized between uses.
- Customers purchasing raw poultry should be encouraged to ensure proper cooking temperatures.
- All waste products from poultry/egg preparation should be disposed of immediately. Plastic bags should be used for trash bin lining. Plastic bag should be securely sealed before emptying the trash bin, or if transferring to outdoor receptacle, ensure lid is securely placed on bin. Disinfection of the trash cans with **Virex Tb** or **Virex II 128/256** at the label-recommended dilution is advised.
- Additionally, standard sanitation procedures should be followed to reduce the risk of cross contamination. "The avian influenza virus is simpler to destroy than many viruses since it is very sensitive to detergents which destroy the fat containing outer layer of the virus. This layer is needed to enter cells of animals and therefore destroys the infectivity [3]."
- Care must be exercised in changing table covers (standard food contact surface sanitation procedures should be followed; for example, wiping tables with a product such as **J-80™** or **J-512™** sanitizer diluted according to the label instructions if not excessively soiled) in between customers.
- For Low Temperature Machine Ware Washing a **JohnsonDiversey chlorine-based sanitizer** such as **Optimum™ 182**, **Suma™ T30** or equivalent is recommended as a sanitizing rinse. For high temperature machines, it is expected that the combination of heat and detergent will be sufficient for decontamination [4].
- For manual ware-washing it is recommended to use an appropriate **JohnsonDiversey manual dishwashing detergent** followed by **J-80** or **J-512** as the sanitizing rinse.

GENERAL HOUSEKEEPING MEASURES:

Although human-to-human transmission of the virus has not been proven to occur, the following general guidelines should be observed for minimizing the spread of disease:

- Premises should be thoroughly cleaned on a daily basis. Cleaning schedules should exist, including the name of the person responsible for housekeeping.
- Household utility gloves should be worn during cleaning/disinfection procedures.
- Proper hand washing is perhaps the most important factor in preventing transmission of disease. Hands can be washed with water and an appropriate **JohnsonDiversey antimicrobial hand soap**.