

## **Disinfection (WHO)**

The procedure whereby measures are taken to control or kill infectious agents on a human or animal body, on a surface or in or on baggage, cargo, containers, conveyances, goods and postal parcels by direct exposure to chemical or physical agents.

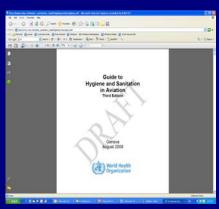
## Sodium hypochlorite (bleach)

- Strong oxidising agent
- Good disinfectant
- ✤ Inexpensive

BUT

- Dissolves aluminium
- \* Reduces fire retardant properties
- \* Not suitable for use on aircraft

# WHO Guide to Hygiene and Sanitation



- ◆ 2<sup>nd</sup> edition published1977
- 3<sup>rd</sup> edition in draft: Chapter 3:
   Cleaning and Disinfection

# What did second edition recommend as suitable disinfectant for aircraft?

# Recommended attributes for aircraft disinfectant

- \* Safety of active ingredients for humans
- Environmental safety
- \* Spectrum of microbiocidal activity
- ✤ Materials compatibility
- \* Transport, storage and inventory control
- Directions for use
- Speed of activity
- Freedom from off-gassing and volatile organic chemicals (VOCs)

### **Recommended products**

- 'Accelerated' hydrogen peroxide (AHP)
- Contains surfactants and chelators + other ingredients
- Produced by Virox technologies (Canada)
- [Alcohol 70-75%: difficult to handle/store]

## Public health authority Aircraft operators

- Both need to consider aircraft disinfection requirements prior to an event
- Aircraft manufacturer may need to be involved



### **Disinsection – definition (WHO)**

The procedure whereby measures are taken to control or kill the insect vectors of human diseases present in or baggage, cargo, containers, conveyances, goods and postal parcels

#### International Health Regulations (2005)

"Conveyance operators should permanently keep conveyances for which they are responsible free of sources of infection or contamination, including vectors and reservoirs. Every conveyance leaving an area where vector control is recommended by WHO should be disinsected and kept free of vectors".

Passenger terminals and the area within 400 m of airports should be kept free of vectors

## **Diseases of concern**

- ✤ Malaria
- Dengue
- Yellow Fever
- Chikungunya fever (similar to dengue)
  - Txed by Aedes mosquito

## **Current WHO approved chemicals**

- Pyrethroids synthetic chemicals based on natural extract of chrysanthemums
  - Permethrin (longer lasting)
  - D-phenothrin (short-lived)
- Both rapidly broken down and human effects are is minimal
- Anecdotal reports of passengers feeling unwell after spraying

# WHO approved methods

- Residual
- \* Pre-flight & top of descent
- Blocks away

# **Aircraft General Declaration**

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# IATA airline survey

\*Of 17 airlines that disinsected

- 12% used residual method
- 24% residual + cabin spraying
- ■68% cabin spraying alone

# Air curtain: non-chemical disinsection



Courtesy WHO





