

CHAPTER 4.2.

GENERAL RECOMMENDATIONS ON DISINFECTION

Article 4.2.1.

Disinfection is employed as a common disease management tool in *aquaculture*. *Disinfection* procedures should be part of a *disinfection* programme designed for a specific purpose. *Disinfection* may be used in biosecurity programmes to eradicate or exclude specific *diseases* from *aquaculture establishments*, as well as a routine *sanitary measure* to reduce *disease incidence* within *aquaculture establishments*.

Disinfection of installations and equipment and transport units should be carried out using procedures that prevent the contamination of other water and other *aquatic animal* populations with infectious material. There is a great variety of products and procedures for washing and disinfecting installations or equipment used in *aquaculture establishments* or for treating effluents, and wastes from *quarantine* and processing plants. The decision on which product to use should take into account their microbiocidal efficacy, their safety for *aquatic animals* and the environment.

Article 4.2.2.

The manufacturer's instructions for effective use of a *disinfectant* under *aquaculture* conditions should be followed. *Disinfectants* to be used in *aquaculture* should be evaluated/tested against relevant aquatic pathogens under relevant conditions. Approved procedures for the use of *disinfectants* in *aquaculture* should be established.

The efficacy of *disinfection* is affected by various factors, including temperature, pH, and the presence of organic matter. At high temperatures, the disinfecting action is faster as long as the decomposition of the *disinfectant* does not occur. At low temperatures, the biocidal efficacy of most *disinfectants* decreases. Many *disinfectants* have an optimum pH range/level, and product choice should depend on the pH of the diluent (water). For example, quaternary ammonia is more efficient at alkaline pH while iodine and iodophores are more efficient at neutral or acid pH. The presence of organic material and greasy substances may significantly reduce the efficacy of a *disinfectant*. Therefore, surfaces should be cleaned thoroughly before applying *disinfectants*.

The use of *disinfectants* may require measures to protect personnel, *aquatic animals* and the environment. The manufacturer's instructions for safe use and disposal should be followed.

Article 4.2.3.

Specific *disinfection* procedures are provided in Chapter 1.1.3. of the *Aquatic Manual*.