

According to the WHO Guide to Ship Sanitation

extract part 2 - Water

www.who.int/



“It is the responsibility of each ship operator to establish all practicable measures to ensure that no sources of infection or contamination are present on board, including in the water system.”

Fresh Water Safety Plans :

“Water safety plans are an effective overarching management approach for ensuring the safety of a drinking-water supply .”

“FWSP 3 key components :

- *system assessments*
- *operational monitoring*
- *management & communication*

Disinfection :

“A disinfectant residual should be detectable in water samples at the port, on the water barge and on the ship. Presence of a measurable disinfectant residual contributes to ensuring that water is microbiologically safe.”

“Facilites for disinfection, when & where necessary onboard, need to be available. Regular cleaning & disinfection of hoses & fittings should be performed.”

Octo Marine

FRESH WATER SAFETY PLAN

Bunkering, Water Makers, Systems, Distribution, Analysis and log book usage

Benefits of a Safety Plan :

- to aid conformity with current regulations
- preventative maintenance
- an audit ensuring every attempt made to ensure the quality of water on board
- an easy reminder for current and new crew of dates of analysis & results, servicing, winterisation, filter changes



Source of Potable Water :

“Ships using ports where water treatment is unreliable, must carry calibrated equipment for basic testing (turbidity, pH & disinfectant residual) and ensure capacity to dose disinfectant or filter to appropriate levels to provide a minimum level of safety.”



Bunkering Stations :

“To mitigate risks during bunkering of potable water... the use of appropriate hoses & fixtures should be made of material suitable for being disinfected & should not support the growth of biofilm.”

“The filling hoses should be stowed, with the ends capped, in special lockers... closed, self-draining & fixed above the deck.”





Water Distribution System :

“Crew must be trained to take hygienic precautions when laying new pipes or repairing existing pipes. It is important in designing the ship to minimise the points where water could collect & become warm (>25°C) & stagnant. E.g. temperature-control valves that prevent scalding must be fitted as close to the point of use as possible to minimise the formation of warm-water pockets. The number of distribution system dead ends should be minimized.”

“Seldom-used taps or showers have a risk of high microbial growth due to water stagnation. This can lead to contamination of the whole distribution system & should be avoided.

The potable hot-water system, including shower heads shall be maintained to minimise the growth of pathogenic Mycobacterium or Legionella bacteria.

In extended distribution systems maintaining residual disinfection will contribute to the control of Legionella.”





Prevention of back flow :

“Potable water piping must not pass under or through sewage tanks, or pipes or tanks holding non-potable liquids. The distribution lines, including suction lines of the potable water pump, should not be cross-connected with the piping or storage tanks of any non-potable water system.”



Investigative and corrective action :

“In the event of contamination of water on the ship, the ship’s operator must take immediate mitigation measures or arrange for an alternative water supply.

Appropriate action may include additional treatment, or flushing & disinfection of transfer equipment or ship water tanks. The actions may include repair of defective filters, repair or replacement of pipes or tanks or breaking of cross-connections.”

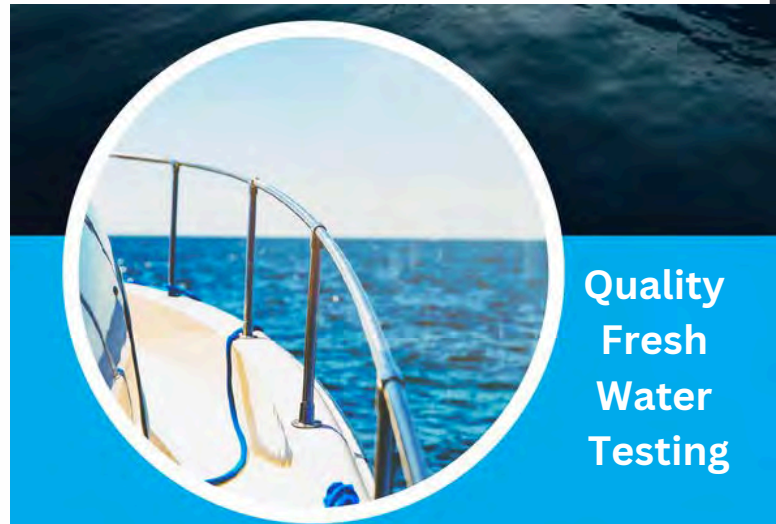


Verification Monitoring :

“While simple on-site tests can be performed by appropriately trained ship staff, sampling for complex chemical & or microbiological analysis should always be performed by well-trained professional persons who are authorized by a certified laboratory.”

“Testing for Legionella bacteria should be undertaken monthly, quarterly or annually depending on the type of ship environment & the climate of the shipping passage.

The tests are relatively specialised and need to be undertaken by properly equipped laboratories with experienced staff.”



Quality Fresh Water Testing

Hydrus Laboratory, part of the Octo Marine Group, is a specialised water analysis laboratory for the marine industry offering:

- Bacterial analysis
- Legionella analysis
- Physiochemical analysis
- High fog & misting systems analysis
- Comprehensive reports and advice
- MLC2006 sanitation certificate compliance

It is recommended to carry out analysis every 6 months.





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