

### 3. Ballast Water Test Kit

As everyone in the industry knows, ballast water exchange is an important process, but it's one which involves several complex processes. There are guidelines which need to be followed in order to ensure the water is as safe and hygienic as it can possibly be.

The presence of any harmful bacteria, viruses and invasive species on a ship can have catastrophic effects, so our highly developed ballast water test kits are vital. Easy to use and reliably accurate, the kit enables user companies to remain compliant with current and future legislation and guidelines.

Exchanging ballast water in a timely, efficient and safe manner is an important aspect of modern marine life, but it should always be monitored effectively. With CMT on your side, you can be sure that your vessels and offshore installations are operating properly.

A successful inspection will valid a 5 year certificate for the system. For a renewal or random inspections the ballast water system should be in line with the IMO Ballast Water Convention (2004).

The IMO Ballast Water Convention (2004) specifies three different standards:

1) The **Ballast Water Exchange Standard** specifies the exchange of ballast water at sea. Ships performing ballast-water exchange shall do so with an efficiency of 95% volumetric exchange of ballast water.

The exchange procedure shall be carried out in an 'open ocean condition' at least 200 nautical miles from the nearest land and in waters at least 200 meters in depth. This can be monitored with each of the CMT Ballast Water Test Kit.

2) The **Ballast Water Performance Standard** cares about the performance of the system and specifies the maximum number of viable organism in the ballast water.

50 µm or above – less than 10 living organisms per cubic metre (1000 litres).

10 µm – 50 µm – less than 10 living organisms per millilitre.

3) The **Ballast Water Health Standard** defines limits for indicators which could cause health problems. It specifies the maximum number of Cholerae, E.coli and Enterococci bacteria as well as the total viable count of any bacteria in the ballast water.

Total Bacteria less than 1000 CFU/100ml  
E.coli less than 250 CFU/100ml  
Enterococci less than 100 CFU/100ml  
Vibrio Cholera (O1 & O139) Zero/100ml

Ships are required to have an **Ballast Water Management Plan** and a **Ballast Water Record Book**. The Ballast Water Record Book is essential to prove compliance with the three Ballast Water Standards.

#### Ordering Information

WTK-CT-80033:

##### Ballast Water Test Kit I

Total Bacteria (10):	0 – 1400 CFU
E-Coli Test (10):	0 – 2424 CFU
Enterococci Test (10):	0 – 115 CFU
Vibrio Cholera :	yes/no (O1 & O139)
Incubator:	110 / 240 V
UV Lamp	

WTK-CT-80034:

##### Ballast Water Test Kit II

additionally to WTK-CT-80033:

Salinity Refractometer (salt in seawater)	
Zooplankton Filter Test (50) (10 µm)	
Zooplankton Filter Test (50) (50 µm)	

WTK-CT-80035:

##### Ballast Water Test Kit III

additionally to WTK-CT-80033:

Salinity Refractometer (salt in seawater)	
Digital handheld Fluorometer for Zooplankton	

WTK-CT-80032:

##### Ballast Water Consumables Pack

E-Coli Test (12)	
Enterococci Test (12)	
Vibrio Cholerae Test (12)	
Viability of organism Filter Test (50)	

#### Options for residual Biocide Monitoring

WTK-CT-80005:

##### Chlorine Dioxide Comparator (20)

Range: 0 - 6.65 ppm

WTK-CT-80004:

##### Chlorine Comparator Test (20)

Range: 0 - 1.0 ppm

WTK-CT-80036:

##### Ozone Comparator Test (20)

Range: 0 - 3.4 ppm

WTK-CT-80037:

##### Peracetic Acid Drop Test (20)

Range: 0 - 20 ppm

WTK-CT-80038:

##### Hydrogen Peroxide Comp. Test (20)

Range: 0 - 50 ppm

