

2. Marine Sewage Water Test Kits

MARPOL Annex IV contains a set of regulations regarding the discharge of sewage into the sea from ships, including regulations regarding the ships' equipment and systems for the control of sewage discharge, the provision of port reception facilities for sewage, and requirements for survey and certification (ISPPC – International Sewage Pollution Prevention Certificate).

The discharge of raw sewage into the sea can create a health hazard, while in coastal areas sewage can also lead to oxygen depletion and an obvious visual pollution.

Environmental issues are still a hot topic these days. The shipping community expresses its concern about the ecosystem and the pollution of the seas. In this market where low freight rates, new rules and regulations and a higher customer demand are pressuring our business-results, we still desire to comply with new rules and regulations but preferably in a cost-effective and efficient way

To test the discharge of Sewage treatment plants CMT offers a quick and easy drop test for testing the free chlorine content.



As set out in Annex 22 Resolution MEPC.227(64) adopted on the 5th October 2012, sewage treatment plants installed prior to 1st January 2010, on ships other than passenger ships operating in MARPOL Annex IV special areas and intending to discharge treated effluent into the sea, should comply with resolution MEPC.2(VI) adopted on 3rd December 1976.

ISPPC (International Sewage Pollution Prevention Certificate) are issued upon successful inspection and are valid for 5 years.

For renewal and random inspections, maintaining the system operating requirements in line with the effluent standards will be required. With this in mind, the CMT Marine Sewage Effluent Test Kit will provide simple and accurate testing.

Requirements from MARPOL Annex IV Resolution MEPC.159(55) – Effluent & Performance Standards are defined as follows:

- BOD up to 25 ppm
- COD up to 125 ppm
- Total Suspended Solids max. 35 ppm
- Coliforms up to 100 CFU / 100 ml
- pH 6.0 – 8.5
- Chlorine (Free) up to 0.5 ppm

Nowadays tests in the market are complicated and comprehensively. The Chief-Engineers almost need to have a chemist-degree in order to understand and execute the time consuming tests. The CMT Sewage Effluent Test Kits are simple and very user-friendly.

The **Budget Sewage Effluent Kit** provides an indication for the key parameters set out in MARPOL Annex IV. The coliform dip slides provided will require an incubator to ensure accuracy, which can be purchased separately. For complete accuracy you will need to purchase the standard range of sewage effluent kits. These come complete with a coliform plate method and incubator. The coliform plate method provides a MPN count, which will provide more accuracy than the coliform dip slides.

Regular testing will allow rapid corrective action to take place if required, helping to maintain optimum operating conditions, minimum downtime and reducing costs. Ultimately the CMT Marine Effluent Cabinet will aid compliance with MARPOL Annex IV.

The CMT Marine Water Test Solutions comply with:

- MARPOL Annex IV: Resolution
 - MEPC.2 (IV)
 - MEPC.115 (51)
 - MEPC.159 (55)

Ordering Information

WTK-CT-80041

Sewage Effluent Test Kit 1 Complies with MEPC 2(VI) Commission before 2010

Coliform Bact. (12): 0 – 2424 CFU/100ml
TSS (unlimited): 5 – 500 mg/l
BOD (unlimited): 7.5 – 255 mg/l O₂
Thermometer: -50 to 150°C
Digital Incubator 25 - 45°C

WTK-CT-80042

Sewage Effluent Test Kit 2 Complies with MEPC 159(55) Commission 2010 and later

Additionally to WTK-CT-80041:
COD Test (25): 0 – 300 mg/l
pH Test Strips (50): 4 – 10 pH
Free Chlorine (100): 0 – 1.0 ppm
Free Chlorine (100): 0 – 30 ppm

WTK-CT-80043

Sewage Effluent Test Kit 3 Complies with MEPC 159(55) & 227(64) All Passenger Ships

Additionally to WTK-CT-80041:
COD Test (25): 0 – 1500 ppm
pH Test Strips (50): 5 – 11 pH
Free Chlorine (100): 0 – 1.0 ppm
Free Chlorine (100): 0 – 30 ppm
Total Nitrogen (25): 0.5 - 25 ppm
Total Phosphorus(25): 2 - 2.6 ppm

WTK-CT-80044

Budget Sewage Effluent Test Kit

Dip Slides (10) 0 - 100,000 CFU / ml
TSS (unlimited): 5 – 500 mg/l
BOD (unlimited): 7.5 – 255 mg/l O₂
COD (100): 0 - 300 mg/l
pH Test Strips (50): 5 – 11 pH
Free Chlorine (100): 0 – 1.0 ppm
Free Chlorine (100): 0 – 30 ppm
Thermometer: -50 to 150°C

Reagents (Full refill of respective Test Kit)

WTK-CT-85041

Sewage Effluent Consumables Pack 1

WTK-CT-85042

Sewage Effluent Consumables Pack 2

WTK-CT-85043

Sewage Effluent Consumables Pack 3

WTK-CT-85044

Sewage Effluent Consumables Pack Budget