



## Onboard Water Test Solutions

Pollution Prevention  
On-board Water Hygiene  
Cooling and Boiler Water Testing

Water Quality Analysis Made Simple.

# Kittiwake Marine Sewage Effluent Test Kit

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.

MARPOL Annex IV, as adopted in resolution MEPC.115(51), which entered into force on 27th September 2008, applies to ships on international voyages which are:

1. 400gt and greater; or
2. Less than 400gt when certified to carry more than 15 persons, which includes passengers and crew

The effluent standards and performance tests, as adopted in resolution MEPC.159(55), which entered into force on 1st January 2010, applies to ships having a sewage effluent plant installed or delivered and ships with a keel laid date on or after 1st January 2010.

Ships with a keel laid date and ships with an existing sewage effluent plant before the 1st January 2010 will require the plant certified to either the 1976 standards contained in MEPC.2(IV) or an applicable national specification.

For vessels visiting countries that have ratified to MARPOL Annex IV, these vessels will need to demonstrate compliance with the regulations, with the relevant certification (ISPPC).

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

## Non-compliance or failed inspections can result in vessel detention

For renewal and random inspections, maintaining the system operating requirements in line with the effluent standards will be required. With this in mind, the Kittiwake Marine Sewage Effluent Test Kit will provide simple and accurate testing for BOD, Chlorine (Free), COD, Coliform Bacteria, pH and Total Suspended Solids. 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 Kittiwake Marine Effluent Kits will aid compliance with MARPOL Annex IV.



## Test Kit Contents

### FG-K27973-KW: Marine Sewage Effluent Test Kit

Supplied in two aluminium cases with base and lid foams where applicable, these test kits come with the necessary equipment and reagents to be able to measure the key elements required for maintaining the correct operational requirements for these systems. The test kit comes complete with:

#### Case 1

- 1 x Chlorine Comparator Test (0 – 1mg/l) – 100 Tests
- 1 x Chlorine (Free) Drop Test (0 – 30mg/l) – 100 Tests
- 1 x Coliform Presence/Absence Test Method – 25 Tests
- 1 x Incubator
- 1 x pH110 Meter & Probe – pH Testing – Unlimited
- 1 x Total Suspended Solids/BOD Tester – Unlimited (TSS (0 – 500 JTU) BOD (7.5 – 255mg/l O2))
- 1 x Instruction Manual & Log Book

#### Case 2

- 1 x COD Digester Unit
- 1 x COD Colorimeter
- 1 x COD Vials (0 – 150mg/l) – 25 Tests

## Test Cabinet Contents

### FG-K28418-KW: Marine Sewage Effluent Test Cabinet

Supplied in a lockable wall mountable steel cabinet, this cabinet option includes the contents of both Sewage Effluent kit cases.

#### Compliance with:

MARPOL Annex IV: Resolutions MEPC.2 (IV), MEPC.115 (51) & MEPC.159 (55)

## Replacements - Annual Consumable Packs

Part Number	Description
AS-K29466-KW	Marine Sewage Effluent Consumables Pack

**\*See Test Kit Contents for information on the number of tests supplied\***

# Kittiwake Marine Hygiene Test Kits

The profile of Legionella bacteria being found and contracted upon high profile offshore installations (i.e. rigs), cruise ships and other vessels has highlighted the health and safety of both the crew and visitors upon them.

Simple regular assessment and testing of these systems for microbiological activity, biocide (disinfection control) and implementing a correct control scheme (i.e. temperature monitoring), will ultimately reduce the risks and save lives.

Current International Health Regulations (2005) and ILO 178 (2009) only apply to the countries/flag states that have ratified to them and they carry no particular weight (ships cannot be held in port). However the ILO MLC (Maritime Labour Convention, 2006) which enters into force from January 2012 will, regardless of whether a country/flag state has ratified or not. Ships can and will be held in port if they fail initial, ongoing and/or renewal inspections for certification (Marine Labour Certificates for 500gt or above) and non-certification (under 500gt). The common grounds of inspection will remain but the tests and testing frequencies will differ between countries/flag states.

## Non-compliance or failed inspections can result in vessel detention

The Kittiwake Marine Hygiene Kits were developed to offer rigs and vessels the complete monitoring solutions for their water systems, with the option of additional extras if required (i.e. Legionella testing, ATP monitoring and bar code readable temperature meters). Suitable control schemes with adequate testing and monitoring will aid with the compliance of the current IHR (2005), ILO 178 (2009) and ILO MLC (2006), which enters into force from January 2012. These test kits provide real time analysis and simple to perform tests which require no specialist training.

## Optional Extras

### FG-K29555-KW: Legionella Testing Kit (Serogroup 1)

Legionella Serogroup 1 has been identified as the killer strain. This test kit enables you to test for the specific strain of Legionella Serogroup 1 bacteria in the storage, distribution and biofilm of potable water and non-potable water systems. Results obtained in only 25 – 35 minutes. The kit comes complete with:

- 1 x Legionella Industrial Kit (Stored & Distribution) (0 – 100 CFU/l) (5)
- 1 x Legionella Biofilm Kit (Biofilm) (0 – 200 CFU/l) (5)
- 1 x Legionella Industrial BSP/NPT Sample Point
- 1 x Instruction Manual

**Add BI-K29549 for additional Legionella Industrial BSP/NPT Sample Points**

### FG-K29281-KW: TME 7000 Temperature Meter

Supplied with PC software to manage outlets and record temperature readings, the TME 7000 meter comes complete with a built in barcode reader, data storage (up to 100 data sets) and bluetooth technologies. The TME 7000 is a sophisticated temperature monitor and auditing tool, which has the capability to scan and record temperature, time and date, then download the information by blue tooth to a computer or mobile device, eliminating the need for costly and time consuming data sheets, which are often lost or made up!

### BI-K28516: Accupoint ATP Meter & Docking Station

### BI-K28517: Accupoint ATP Surface Swabs (100)

### BI-K28518: Accupoint ATP Water Swabs (100)

With the prevention of microbiological contamination being of paramount importance in food preparation areas and water storage, the Accupoint ATP meter and its unique swabs (unique padded end) offers hard evidence of surface cleanliness and highlights weaknesses in a cleaning/disinfection regime. Supplied with PC software (trend analysis & reporting), the Accupoint ATP meter comes complete with a docking station for recharging batteries and downloading data.

## Test Kit Contents

### FG-K27977-KW: Marine Hygiene Test Kit

### FG-K29345-KW: Marine Hygiene Test Kit

(Incubator – European Plug)

\*Add BI-K29354: 110V – 240V Incubator Plug Inverter Option (countries requiring 110V)

Supplied in a medium black aluminium case with foam inserts, this test kit comes complete with the necessary equipment and reagents to measure key microbiological activity, temperature monitoring, biocide control, shower head & hose de-scale/disinfection and a log book/reference guide for risk assessment and logging results.

- 1 x Incubator
- 1 x Coliform & E-Coli Presence/Absence Test Method – 25 Tests
- 1 x Enterococci Presence/Absence Test Method – 20 Tests
- 1 x Pseudomonas Aeruginosa Presence/Absence Test Method – 20 Tests
- 1 x HPC (TVC) Aerobic Bacteria Test Method (0 – 1574 CFU/ml) – 40 Tests
- 1 x TME 2010 Temperature Meter
- 1 x TME 2010 'T' Type Probe (Standard & Surface Contact Probe)
- 1 x Chlorine Comparator Test (0 – 1mg/l) – 100 Tests
- 1 x Chlorine Comparator Test (0 – 3.5mg/l) – 100 Tests
- 1 x Chlorine Comparator Test (0 – 125mg/l) – 100 Tests
- 1 x Chlorine Dioxide Comparator Test (0 – 1.9mg/l) – 100 Tests
- 1 x Chlorine Dioxide Comparator Test (0 – 6.65mg/l) – 100 Tests
- 4 x Chlorine Effervescent Tablets (60)
- 1 x pH Test Strips (4.5 – 10.0) – 100 Strips
- 1 x De-scaling Powder (200g)
- 1 x Instruction Manual & Log Book



## Test Cabinet Contents

### FG-K27978-KW: Marine Hygiene Test Cabinet

Supplied in a lockable wall mountable steel cabinet, this cabinet option includes the contents of the Marine Hygiene Test Kit.

## Compliance with:

IHR (2005), ILO 178 (2009) & ILO MLC (2006)

## Guidance/Referral Notes:

WHO 'Guide to Ship Sanitation' (2009) 3rd Edition  
MSA MGN 61 Food Hygiene on Merchant & Fishing Vessels  
UK HSE Approved Code of Practice – Legionnaires' Disease

## Replacements - Annual Consumable Packs

Part Number	Description
AS-K29535-KW	Marine Hygiene Consumables Pack

\*See Test Kit Contents for information on the number of tests supplied\*



# Kittiwake Complete Marine Water Test Cabinet

Regardless of whether you require optimum performance from the systems on board an offshore installation or vessel, or need to adhere to current or forthcoming legislation requirements to minimise the risks to the crew or visitor's Health and Safety on board, the Kittiwake Marine Water Test Cabinet offers the best solution.

The Kittiwake Complete Marine Water Test Cabinet complies with:

- ✔ MARPOL Annex IV: Resolution MEPC.2 (IV)
- ✔ MARPOL Annex IV: Resolution MEPC.115 (51)
- ✔ MARPOL Annex IV: Resolution MEPC.159 (55)
- ✔ International Health Regulations (2005)
- ✔ ILO 178 (2009)
- ✔ ILO MLC (2006), which enters into force from January 2012

## Non-compliance or failed inspections can result in vessel detention

Kittiwake's Complete Marine Water Test Cabinet offers an off the shelf solution, without the need to purchase numerous testing kits with manuals. It is supplied in a wall mountable, steel storage cabinet with foam inserts, which will hold all equipment and reagents supplied. The cabinet can be locked for added security. The Kittiwake Complete Marine Water Test Cabinet will prove a valuable tool for system monitoring and control, ensure safe and correct operation and will also provide a key platform for demonstration of current inspectional requirements under the current and forthcoming legislation.



## Replacements - Annual Consumable Packs

Part Number	Description
AS-K29539-KW	Marine Complete Water Consumables Pack

\*See Test Kit Options for information on the number of tests supplied\*



## Test Kit Contents

### FG-K28419-KW: Complete Water Test Cabinet

**\*Add BI-K29354: 110V – 240V Incubator Plug Inverter Option (countries requiring 110V)**

Supplied in a lockable wall mountable steel cabinet, this cabinet option includes the testing provided with:

1. Marine Boiler & Cooling Water Kits
2. Marine Potable Chlorine, Bacteria & Chemistry Kits
3. Sewage Effluent Kits
4. Marine Hygiene Kit

## Optional Extras

### Boiler & Cooling Water

AS-K28071-KW: DEHA Comparator Reagents (0 – 500ppb / 0 – 0.5mg/l) – 100 Tests

AS-K29071: DEHA Comparator Disc (0 – 500ppb / 0 – 0.5mg/l)

AS-K28077-KW: Hydrazine Comparator Reagents (0 – 5mg/l) – 100 Tests

AS-K29077: Hydrazine Comparator Disc (0 – 5mg/l)

AS-K22358-KW: Tannin Drop Test (50 – 300mg/l) – 100 Tests

### Potable & Hygiene

FG-K29555-KW: Legionella Testing Kit (Serogroup 1)

Legionella Serogroup 1 has been identified as the killer strain. This test kit enables you to test for the specific strain of Legionella Serogroup 1 bacteria in the storage, distribution and biofilm of potable water and non-potable water systems. Results obtained in only 25 – 35 minutes. The kit comes complete with:

- 1 x Legionella Industrial Kit (Stored & Distribution) (0 – 100 CFU/l) (5)
- 1 x Legionella Biofilm Kit (Biofilm) (0 – 200 CFU/l) (5)
- 1 x Legionella Industrial BSP/NPT Sample Point
- 1 x Instruction Manual

**Add BI-K29549 for additional Legionella Industrial BSP/NPT Sample Points**

### FG-K29341-KW: TME 7000 Temperature Meter

Supplied with PC software to manage outlets and record temperature readings, the TME 7000 meter comes complete with a built in barcode reader, data storage (up to 1000 data sets) and blue tooth technologies. The TME 7000 is a sophisticated temperature monitor and auditing tool, which has the capability to scan and record temperature, time and date, then download the information by blue tooth to a computer or mobile device, eliminating the need for costly and time consuming data sheets, which are often lost or made up!

### BI-K28516: Accupoint ATP Meter & Docking Station

**BI-K28517: Accupoint ATP Surface Swabs (100)**

**BI-K28518: Accupoint ATP Water Swabs (100)**

With the prevention of microbiological contamination being of paramount importance in food preparation areas and water storage, the Accupoint ATP meter and its unique swabs (unique padded end) offers hard evidence of surface cleanliness and highlights weaknesses in a cleaning/disinfection regime. Supplied with PC software (trend analysis & reporting), the Accupoint ATP meter comes complete with a docking station for recharging batteries and downloading data.

### Compliance with:

MARPOL Annex IV: Resolutions MEPC.2 (IV), MEPC.115 (51) & MEPC.159 (55), IHR (2005), ILO 178 (2009) & ILO MLC (2006)

### Guidance/Referral Notes:

WHO 'Guide to Ship Sanitation' (2009) 3rd Edition  
MSA MGN 61 Food Hygiene on Merchant & Fishing Vessels  
UK HSE Approved Code of Practice – Legionnaires' Disease



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