Rapid Ballast Water Test Kit

The Rapid Ballast Water Validation Test Kit provides a simple rapid method for determining the efficacy of ballast water treatment systems. Our validation kit provides ship operators, Port State Control (PSC), and other compliance officers with a simple, effective tool to assess the risk of discharging ballast water.

Complete Solution for Regulatory Compliance

The 2004 BWM Convention guidelines include recommendations on methodologies for sampling and analysis to test for compliance with the convention. Utilizing three instruments, the Ballast Water Validation Kit satisfies the testing protocol for the D1 standard, allows a user to quickly and easily decide if a system is in gross exceedance of the D2 standard, and provides a simple solution to test total residual oxidant levels in chemical disinfection systems.

D1 Ballast Water Exchange

A salinity refractometer provides a simple test to confirm that an exchange occurred.

D2 Ballast Water Treatment ("Indicative Analysis")

A portable, pocket size digital fluorometer tests for photosynthetically active chlorophyll, like that found in living phytoplankton, in less than 3 minutes. This will provide an indication of whether or not the treatment of the ballast water system was effective (refer to graph below).

Total Residual Oxidant (TRO)

A waterproof colorimeter tests for TRO with a range of 0 - 5ppm free & total chlorine in less than 3 minutes. Further kits for testing other biocidal treatments are available (i.e. chlorine dioxide, per acetic acid, ozone & hydrogen peroxide).

Testing Made Easy

The handheld fluorometer requires no training prior to use - simply place the sample in the cuvette, press "Read" and view the risk of discharge (Fail, High, Low).

Ship operators

Verify the ballast water treatment system has adequately treated water prior to discharge.

Compliance officers

Quickly determine whether a ship grossly exceeds D2 standards and further in-depth laboratory analysis can then be performed.

Ballast water treatment system providers

Rapidly assess treatment system performance during testing.

Ship service providers

Diagnose treatment system failures.

Specifications

Rapid Ballast Water Validation Test Kit Contents	
1	Marine Waterproof & Crushproof Case with Foam Insert
2	1 x Salinity Refractometer (Unlimited Tests)
3	Portable Digital Fluorimeter (Unlimited Tests)
4	Chlorine Colorimeter (100 tests)
5	Instruction Manual

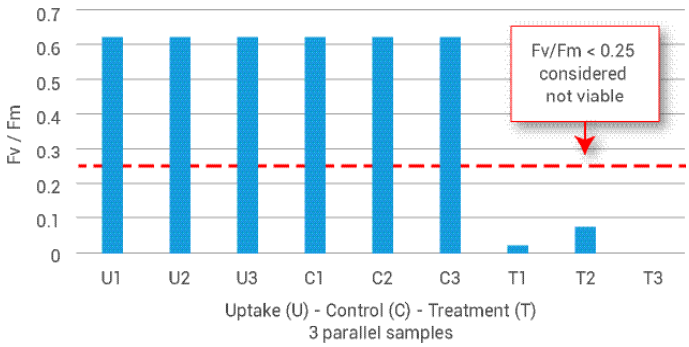
Digital Fluorometer	
Dynamic Range	3 orders of magnitude
Resolution	12 bits
LCD Display	2 x 8 characters
Detector	Photodiode
Curvette Type	4ml square cuvette (additional can be ordered in packs of 10)
Memory Capacity	Up to 4 MB
Internal Data Logging	Up to 100,000 data points
Battery Requirements	4 x AAA batteries
Method of Detection	0.16ug/L Chl-a
Dimensions	140mm x 55mm x 50mm
Weight	300g

Note: The fluorometer provides an indicative method for qualifying the risk of exceeding the IMO D2 standard. This risk assessment is not sufficient to conclude that the IMO D2 standard has been met.

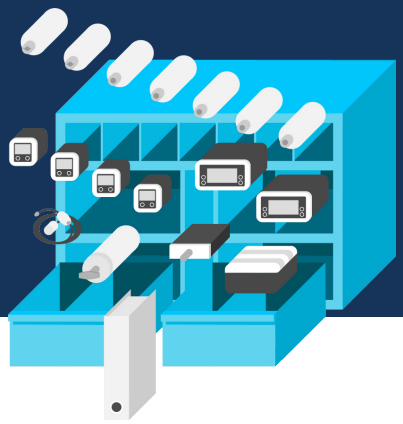
Salinity Refractometer	
Scale Range	0 - 100ppt Accuracy: +/- 1ppt
Dimensions	30mm x 30mm x 200mm
Weight	260g

Chlorine Colorimeter	
Range	0 - 5.00mg/l
Resolution	0.01mg/l
Accuracy	+/- 0.03
Data Memory	Storage/recall up to 150 points
Battery Requirements	4 x AAA batteries
Dimensions	70mm x 135mm x 65mm

PAM Fluorometer Data (Fv/Fm before and after successful treatment)



The Bruusgaard System



BRUUSGAARD

TBS is a unique turnkey portable gas detection solution, giving you increased safety and substantial cost savings through standardised instruments, routines, training and procurement.

Logistic Support

At any given time we know the status of all vessels and sites covered by The Bruusgaard System. We consolidate all shipments and make sure you have everything you need on board until next scheduled delivery. This results in fewer shipments and substantial savings!

- Year round follow up of instruments, spares and consumables
- Handling of all shipments & logistics
- Annual reports per vessel including budgeting

Safety

QA – strict routines and logging

- Crew are able to use instruments and follow routines correctly
- Instruments are in proper working condition at all times
- Instruments are calibrated at correct intervals
- Sensors and other items are replaced at correct intervals
- Usage of instruments is logged, including abnormal observations
- Traceability – instrument history and usage
- Routines and procedures can merge into the overall QA-system

Effective and proven training is an integrated part of The Bruusgaard System.

Instruments

All the equipment used for gas detection and calibration is placed in a custom-made wall cabinet. Including Log & Instruction Manual, which are crucial to maintaining the safety integrity.

- Standardised vessel specific gas detector solutions
- Total solutions including all equipment and routines necessary for efficient and safe use, storage and maintenance

Cost Savings

Some of our customers have been able to go from 8 to 10 suppliers down to 1 – translating into cost savings of up to 40-50%. For one vessel, this could be thousands of dollars annually, and for a whole fleet, the cost savings can be dramatic. This is achieved through:

- One contact for worldwide supply of spares & gases
- All service and calibration can be done on site.
- Reductions of instrument types from 10-12 to 2-3

Reduced maintenance costs through:

- On board calibration
- Fewer instruments on board
- No need for spares on board
- One PO per year
- Increased safety
- Less use of administrative time