

# HybriScan® Waste Water

## Module 1 Total Bacterial Count

**Rapid test system for the detection of bacteria in  
waste water - Total Bacterial Count**

**Product-No.: 78436**



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## Product Specifications

**Cat. No.:** 78436  
**Number of tests:** 96 tests, incl. standard series  
**Storage:** 4 – 8°C, 12 month  
**Test duration:** approx. 1-1.5 hours  
**Specificity:** Eubacteria

# HybriScan®D Waste Water–Test Protocol

## Working Principle

HybriScan®D Waste Water is a new rapid molecular test system for the detection of bacteria in waste water. It consists of two modules; module 1- Waste Water Total Bacterial Count and module 2 Waste Water *Microthrix parvicella*.

The HybriScan® technology is based on the detection of target molecules from the microorganism of interest by means of specific capture and detection probes in a so-called sandwich hybridization. The target molecules of the microorganisms contained in the sample are captured in a specific microwell binding plate with the help of the capture probe. In addition to the capture probe, a detection probe is coupled to the target molecule. An enzyme is attached afterwards in a subsequent incubation step. After several washing steps, reaction with a colour substrate gives a blue colouration, which changes to yellow after the addition of a stop solution. The yellow colour enables highly sensitive photometric measurement at 450 nm. Comparison is made with the standard solutions contained in the test kit.

HybriScan®D Waste Water Total Bacterial Count is recommended to use only in combination with other Waste Water modules, like HybriScan®D Waste Water Module 2 *Microthrix parvicella*. This is necessary for determination of the ratio of total bacterial amount and specific ascertained concentration of *Microthrix parvicella*. Furthermore environmental factors, like rain or variable influx can be considered via parallel using of both Waste Water modules.

A detailed test protocol of HybriScan®D Waste Water is given in manual FS W 04: HybriScan®D Waste Water Module II *Microthrix parvicella*.

## Technical Notes

After starting the test procedure, perform the following steps without interruptions and within the given time limit.

For each sample use single-use pipette tip to avoid cross-contamination.

Close bottles immediately after use and store them at the temperatures specified on the label. Do not interchange caps and bottles.

Samples and standards should be tested together for more accurate results.

Do not mix or replace components from test kits of different charges.

Incubation at room temperature refers to a laboratory temperature of 20 to 25°C.

Do not use the test kit after the expiration date listed on the package.

## Safety

All reagents contained in the test kit are for *in vitro* use only.

Test solution D contains formamide. Avoid contact with eyes, skin and the respiratory system. In event of contact with eyes or skin, rinse immediately with plenty of water. If the reagent is inhaled, immediately remove the individual to fresh air and seek medical attention. Stop solution H contains 1 N sulfuric acid. Avoid contact with eyes and skin. In the event of contact with eyes and skin rinse immediately with plenty of water.

Handling of the kit components and disposal of waste should be performed according to standard laboratory safety guidelines.

The handling of the kit components and the waste disposal should be performed according to the national safety guide lines.

## Reagents and Storage Conditions

The reagents contained in the test kit are sufficient for at least 96 tests, including 6 standard series. The kit components should be stored between +2 to +8°C as indicated on the labels. Do not freeze the test kit components!

### Kit components:

<b>1. Binding plate</b> , ready to use, 96 wells	1
<b>2. Standards</b> <sup>a)</sup> (white screw caps); <b>S1-TBC, S2-TBC</b>	0.2 mL each
<b>3. Test Solution D-TBC</b> (yellow cap), ready to use	5.0 mL
<b>4. Washing Solution E</b> <sup>b)</sup> (blue cap), ready to use	90 mL
<b>5. Enzyme Solution F</b> (green screw cap), dilute a suitable amount 1:100 with Washing Solution E before use	0.120 mL
<b>6. Substrate Solution G</b> <sup>b)</sup> (green cap), ready to use	10 mL
<b>7. Stop Solution H</b> (green cap) 1 N sulfuric acid, ready to use	5 mL

<sup>a)</sup> Components contain SDS, which precipitates at lower temperatures. Equilibrate to room temperature before use.

<sup>b)</sup> Equilibrate to room temperature before use.

## Additional equipment and materials (required, not supplied with kit)

- Centrifuge for microreaction tubes (1.5 and 2 mL)
- Thermoshaker for microreaction tubes and microwell plates
- Vacuum filtration unit
- 3 Pipettes (2–20 µL, 20–200 µL, 200–1000 µL) with corresponding tips; optional 8-channel pipette (20–200 µL)
- Microwell plate-photometer
- Microreaction tubes (2 mL), cultivation tubes (12 mL), reagent-reservoirs, membrane filter discs (0.45 µm)

## Advantages

- Rapid, sensitive, reliable
- Specific for living cells
- Time saving of 2 to 4 days in comparison to cultivation based assays
- Easy to handle
- Minimal sample preparation
- High sample throughput using 96-well microplates