

## TECHNICAL DATA SHEET

# SYNTHETIC SEA SALT

### SPECIAL DILUENT

## 1 INTENDED USE

Synthetic sea salt is used as a diluent for the detection and the enumeration of *Escherichia coli* and enterococci in bathing water and surface water in microplates (MPN method) following the ISO 9308-3 and ISO 7899-1 standards.

## 2 PRINCIPLES

For fresh and brackish water (waste water), with a salinity less than 30 g/kg, the sea salt is used for all dilutions, including the 1:2 dilution.

For sea water (salinity more than 30 g/kg), sterile water is used to perform the 1:2 dilution. Sea salt is used for all subsequent dilutions.

To avoid confusion with sterile water, bromophenol blue at 4 mg/L can be added to synthetic sea water.

## 3 TYPICAL COMPOSITION

The composition can be adjusted in order to obtain optimal performance.

	For 1 liter of media, the major ion composition	Percentage of total mass of the synthetic sea salt
Chlorides (Cl)	10,68 g	47,470 %
Sodium (Na <sup>+</sup> )	5,91 g	26,28 %
Sulfate (SO <sub>4</sub> )	1,49 g	6,602 %
Magnesium (Mg <sup>++</sup> )	0,73 g	3,23 %
Calcium (Ca <sup>++</sup> )	0,23 g	1,013 %
Potassium (K <sup>+</sup> )	0,23 g	1,015 %
Bicarbonate (HCO <sub>3</sub> )	0,11 g	0,491 %
Borate (B)	3,4 mg	0,015 %
Strontium (Sr <sup>++</sup> )	0,22 mg	0,001 %

The media can be supplemented with :

Bromophenol blue ; 4 mg

## 4 RECONSTITUTION

- Dissolve 22,5 g of synthetic sea salt in 1 liter of distilled or demineralized water.
- Add optionally 4 mg/L of bromophenol blue.
- Mix slowly until complete dissolution.
- Distribute 9 mL or 18 mL per tube, according to the specific need.
- Sterilize in an autoclave at 121°C for 15 minutes.
- Cool to room temperature.

## 5 INSTRUCTIONS FOR USE

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- Perform the 1:2 dilution of the water sample in a tube of prepared solution or ready-to-use (BM088) for water with salinity less than 30 g/kg.
- For all other types of water, perform subsequent dilutions in the prepared or ready-to-use diluent.
- Inoculate the microplate according to the category of water.

## 6 QUALITY CONTROL

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**Dehydrated media** : white powder, free-flowing and homogeneous.

**Ready-to-use media** : blue-violet, may have a slight precipitate.

**Prepared media** (without bromophenol blue) : colorless solution, may have a slight precipitate.

Typical culture response after 45-60 minutes of incubation at 20-25 °C (NF EN ISO 11133) :

Microorganisms		Theoretical growth
<i>Escherichia coli</i>	WDCM 00179	+/- 30 % colonies / T <sub>0</sub>
<i>Escherichia coli</i>	WDCM 00012	+/- 30 % colonies / T <sub>0</sub>
<i>Enterococcus faecium</i>	WDCM 00178	+/- 30 % colonies / T <sub>0</sub>
<i>Enterococcus faecalis</i>	WDCM 00176	+/- 30 % colonies / T <sub>0</sub>
<i>Enterococcus hirae</i>	WDCM 00089	+/- 30 % colonies / T <sub>0</sub>

## 7 STORAGE / SHELF LIFE

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**Dehydrated media** : 2-30 °C.

**Ready-to-use media, with bromophenol blue** : 2-25 °C.

The expiry dates are indicated on the labels.

**Prepared media (\*)** : 180 days at 2-25 °C.

**Prepared media, with bromophenol blue (\*)** : 180 days at 2-25 °C.

(\*) Benchmark value determined under standard preparation conditions, following manufacturer's instructions.

## 8 PACKAGING

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**Dehydrated media** :

100 g bottle ..... BR00308

**Ready-to-use media, with bromophenol blue** :

50 x 18 mL tubes ..... BM08808

## 9 BIBLIOGRAPHY

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NF EN ISO 9308-3. Mars 1999. Qualité de l'eau. Recherche et dénombrement des *Escherichia coli* et des bactéries coliformes dans les eaux de surface et résiduaires. Partie 3 : Méthode miniaturisée (nombre le plus probable) pour ensemencement en milieu liquide.

NF EN ISO 7899-1. Mars 1999. Qualité de l'eau. Recherche et dénombrement des entérocoques intestinaux dans les eaux de surface et résiduaires - Partie 1 : méthode miniaturisée (nombre le plus probable) par ensemencement en milieu liquide.

## 10 ADDITIONAL INFORMATION

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The information provided on the labels take precedence over the formulations or instructions described in this document and are susceptible to modification at any time, without warning.

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