

Sample
XXXX XX, XXXX
Lot. BF

The Identification of Reference Material for Nutrients in Seawater (RMNS)

1. Name and Location of the Manufacturer/Analysis Facility

The General Environmental Technos Co, Ltd.
3-1-1 Higashikuraji, Katano-shi, Osaka, 576-0061 Japan
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2. Product Name and Package Size

Name: Reference Material for Nutrients in Seawater. (RMNS)
Container: 100mL polypropylene bottle (packaged in a vacuum-sealed bag).

3. RMNS ID and Lot ID Number

Reference material for nutrients in sea water RMNS Lot-BF

4. Raw Material and Processing Methods

Seawater from Pacific Ocean at 1800 meters depth.
Bottled in a clean room after high temperature-pressure treatment (no additives).

5. Intended Use

Seawater nutrient reference material solution for nutrients analysis
(Please do not use for other purposes)

6. Health and Safety

Do not eat or drink.
Because this product is seawater, it can usually be disposed of by dilution. However, please follow local jurisdiction guidelines when disposing of the product.

7. Storage and Usage Specification

Do not freeze; the composition of the product could change.
Store at room temperature (5°C to 35°C).
Because this product contains no stabilizers or preservatives, the quality is not maintained for later reuse after the outer seal is broken.
Do not dilute or concentrate this product. Please shake well and open the seal immediately before use.

8. Measured Concentrations (standard deviations during analysis)

- Nitrate(as N) $\text{NO}_3\text{-N}$ 40.39 micro mol/kg (+0.05 micro mol/kg n=30) Indicative value
- Nitrite(as N) $\text{NO}_2\text{-N}$ 0.02 micro mol/kg(+0.00 micro mol/kg n=30) Indicative value
- Phosphate (as P) $\text{PO}_4\text{-P}$ 3.04 micro mol/kg(+0.01 micro mol/kg n=30) Indicative value
- Silicate (as Si) $\text{SiO}_2\text{-Si}$ 154.2 micro mol/kg(+0.40 micro mol/kg n=30) Indicative value
- Salinity 34.614 psu (+0.0002 psu n=10) Indicative value

9. Reference Materials Used During Analysis.

- Nitrate(as N) NO₃-N Potassium nitrate
- Nitrite(as N) NO₂-N Sodium nitrite
- Phosphate (as P) PO₄-P Potassium dihydrogen phosphate
- Silicate (as Si) SiO₂-Si Sodium hexafluorosilicate
- Salinity Ocean Scientific International Ltd. IAPSO Standard seawater

10. Analysis Method

Based on Manual on Oceanographic Observation (1999), Japan Meteorological Agency
Nitrate: colorimetric analysis (Cu-Cd reduction – Naphthylethylenediamine photometric method)
Nitrite: colorimetric analysis (Naphthylethylenediamine photometric method)
Phosphate: colorimetric analysis (The molybdenum blue method)
Silicate: colorimetric analysis (The molybdenum blue method)
Salinity: electric conductivity measurement method

11. Analysis date

April 19, 2007

12. Production date

April 11, 2007

13. Expiration and Guarantee Date

April 11, 2013

(We will contact you when product quality could not be maintained by this date)

If the sealing of the product was damaged upon arrival, the product can be exchanged with the same lot or another lot. A request for return of un-sealed product must be made to us within 30 days of shipment receipt.

14. Duplication

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15. Additional information

- 1) We are planning to arrange a system that is traceable to Japan Calibration Service System (JCSS).
- 2) Information related to this product is also available online at:
<http://www.mri-jma.go.jp/Dep/ge/RMNScomp.html>

16. Name of Signature Person

The General Environmental Technos Co., Ltd.
Laboratory for Instrumentation and Analysis

Director:

