

**Sample**  
XXXX XX, XXXX  
**Lot. BA**

## **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  
TEL : +81-72-810-6551 FAX : +81-72-810-6552

### **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-BA

### **4. Raw Material and Processing Methods**

Pacific Ocean surface seawater  
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)  $\text{NO}_3\text{-N}$  0.02 micro mol/kg (+0.01 micro mol/kg n=30) Indicative value
- Nitrite(as N)  $\text{NO}_2\text{-N}$  0.00 micro mol/kg(+0.00 micro mol/kg n=30) Indicative value
- Phosphate (as P)  $\text{PO}_4\text{-P}$  0.08 micro mol/kg(+0.01 micro mol/kg n=30) Indicative value
- Silicate (as Si)  $\text{SiO}_2\text{-Si}$  1.66 micro mol/kg(+0.12 micro mol/kg n=30) Indicative value
- Salinity 34.617 psu (+0.0005 psu n=10) Indicative value

**9. Reference Materials Used During Analysis.**

- Nitrate(as N) NO<sub>3</sub>-N Potassium nitrate
- Nitrite(as N) NO<sub>2</sub>-N Sodium nitrite
- Phosphate (as P) PO<sub>4</sub>-P Potassium dihydrogen phosphate
- Silicate (as Si) SiO<sub>2</sub>-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**

January 14, 2005 (Analysis re-confirmation date: December 24, 2008)

**12. Production date**

January 6, 2005

**13. Expiration and Guarantee Date**

January 6, 2011

(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**

Please do not reproduce this information sheet without our permission.

**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:

