

TOC, TIC Standards

TN<sub>b</sub> Standards

KHP, NH<sub>4</sub>Cl



Certificate No 458231  
Date issued: 12<sup>th</sup> Feb 2009  
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## CALIBRATION CERTIFICATE

Description	TOC Standard, 500mg/l Carbon Total Organic Carbon Standard Solution
Category and Code	Thermalox Calibrant, part number C104/5
Specification	500 mg/l as Carbon Solvent: KHP (Potassium Hydrogen Phthalate) Matrix: Ultrapure Water (H <sub>2</sub> O)
Batch Number	C27952
Date of Calibration	February 2009
Storage	Refrigerate at $\leq 8^{\circ}\text{C}$ ; Use by 30 <sup>th</sup> June 2009
Calibration Result	500.4 mg/l C
Expanded Uncertainty	$\pm 0.5 \text{ mg/l C}$
Impurity Information	See following page

Approved Signatory  
Dr. Harold Cadman  
OChem MRSC

*Harold Cadman*

Printed from a master copy which  
has been authorised by the signatory.

The expanded uncertainty is  
based upon a standard uncertainty  
multiplied by a coverage factor of  $k=2$ ,  
providing a level of confidence of  
approximately 95%. The uncertainty  
evaluation has been carried out in  
accordance with ISO 91:2008.

This certificate is issued in accordance with the laboratory accreditation requirements of ISO 17025 of the United Kingdom Accreditation Service (UKAS). It provides the traceability of measurement to recognised national standards and to units of measurement realised in the National Physical Laboratory or other recognised national metrology laboratories. UKAS is one of the signatories to the Multilateral Agreement of the European Cooperation for Accreditation (ECA) as well



## Thermalox™

### Calibration Standards



## ***Certified standards for testing and calibrating TOC and TN<sub>b</sub> analysis instrumentation.***

***Other standards other than those listed below are available upon request.***

### **Features and benefits:**

- **Traceable**
- **Labelled with use by date and batch number**
- **TOC Calibrants are degassed to ensure that dissolved CO<sub>2</sub> is reduced to a minimum**
- **Vessels (HDPE) are fitted with tamper evident screw caps**
- **Easy pour neck**

### **Traceability and accreditation**

Calibration Standards are prepared with the laboratory accreditation requirements of ISO 17025 of the United Kingdom Accreditation Service (UKAS). It provides SI Traceability of measurement to recognised national standards and to units of measurement realised at the National Physical Laboratory or other recognised national standards laboratories. UKAS is one of the signatories to the Multilateral Agreement of the European co-operation for Accreditation (EA) as well as the International laboratory Accreditation Cooperation (ILAC) arrangement for mutual recognition of calibration certificates issued by accredited laboratories.

### **TOC Calibrant (Total Organic Carbon Standard Solution)**

Concentration: 500mg/l Carbon  
Volume: 500ml  
Solute: KHP (Potassium Hydrogen Phthalate)  
Matrix: Ultrapure Water (H<sub>2</sub>O)  
Part number: C104/5

### **TIC Calibrant (Total Inorganic Carbon Standard Solution)**

Concentration: 500mg/l Carbon  
Volume: 500ml  
Solute: NaHCO<sub>3</sub> (Sodium Bicarbonate)  
Matrix: Ultrapure Water (H<sub>2</sub>O)  
Part number: C106/5

### **TN<sub>b</sub> Calibrant (Total Nitrogen Standard Solution)**

Concentration: 500mg/l Nitrogen  
Volume: 500ml  
Solute: NH<sub>4</sub>Cl (Ammonium Chloride)  
Matrix: Ultrapure Water (H<sub>2</sub>O)  
Part number: C105/5



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## **Calibration Standards**