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**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (Amtivo Certificate Number 274357).



## 2.0 PRODUCT DESCRIPTION

Product Code: Eluent Concentrate Solution  
 Catalog Number: BICARB  
 Lot Number: X2-ICS761376  
 Matrix: H2O  
 Value / Analyte(s): 0.5 M Bicarbonate  
 Starting Material: Sodium Bicarbonate  
 Starting Material Lot#: 2479  
 Starting Material Purity: 100%

## 3.0 PROPERTY VALUES

ANALYTE	CALCULATED VALUE
Bicarbonate, HCO <sub>3</sub>	0.4998 ± 0.0011 M

**Density:** 1.028 g/mL (measured at 20 ± 5 °C)

### Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Bicarbonate	Potentiometric	84L	See Sec. 4.2

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

#### **4.1 Thermometer Calibration**

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

#### **4.2 Balance Calibration**

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

#### **4.3 Glassware Calibration**

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

### **5.0 TRACE METALLIC IMPURITIES (TMI ) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)**

N/A

### **6.0 INTENDED USE**

- This solution is a reagent and is not intended to be used as a certified reference material.

### **7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL**

#### **7.1 Storage and Handling Recommendations**

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 5° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

#### **7.2 Preparation**

- Dilute this eluent concentrate 1 to 100 using distilled or deionized water that is free of anions of interest. Water should contain no particles greater than 0.2 microns.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

### **8.0 HAZARDOUS INFORMATION**

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

### **9.0 HOMOGENEITY**

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

### **10.0 QUALITY STANDARD DOCUMENTATION**

#### **10.1 ISO 9001 Quality Management System Registration**

- Amtivo Certificate Number 274357

#### **10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"**

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

**10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"**

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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**11.0 ISSUE DATE, LOT EXPIRATION AND PERIOD OF VALIDITY**

**11.1 Issue Date**

June 2, 2026

- The information is valid provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This property value is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **June 2, 2031**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- This CRM/RM should not be used after the date given in Sec. 11.2. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Prepared By:**

Justin DiRico  
Stock Processing Supervisor



**Certificate Approved By:**

Shalin Presgraves  
SVS Coordinator



**Certifying Officer:**

Paul Gaines  
Chairman, Senior Technical Director

