



**Aqua Solutions, Inc.**  
**6913 Highway 225**  
**Deer Park, TX, 77536**  
**281/479-2569**  
**Certificate of Analysis / QC Results**  
**Customer PO # :**

<b>Packaged Product:</b> 4131			
HYDROCHLORIC ACID 0.1 NORMAL IN IPA NIST TRACEABLE SOLUTION			
Test	Target/UOM	Range	Result
<b>PREPARED TO FORMULATION ON FILE</b>	YES		YES
Sample ID	YES		
Tested 12/23/24			
Tester JENC			
Recorded 12/23/24			
<b>SAMPLE COLLECTION &amp; HANDLING PER LAB040</b>	YES		YES
Sample ID	YES		
Tested 12/23/24			
Tester JENC			
Recorded 12/23/24			
<b>DATE OF SAMPLING FOR TEST PURPOSES</b>	MM/DD/YYYY		12/23/2024
Sample ID	MM/DD/YYYY		
Tested 12/23/24			
Tester JENC			
Recorded 12/23/24			
<b>AMBIENT TEMPERATURE DURING SAMPLING DEGC</b>	25.0	10.0 - 35.0	20.2
Sample ID	DEG C		
Tested 12/23/24			
Tester JENC			
Recorded 12/23/24			
<b>DATE OF TESTING OF SAMPLE</b>	MM/DD/YYYY		12/23/2024
Sample ID	MM/DD/YYYY		
Tested 12/23/24			
Tester JENC			
Recorded 12/23/24			
<b>AMBIENT TEST TEMPERATURE DEG C</b>	20.0	15.0 - 30.0	20.2
Sample ID	DEG C		
Tested 12/23/24			
Tester JENC			
Recorded 12/23/24			
<b>Actual Normality</b>	0.1000	0.0995 - 0.1005	0.0999
Sample ID	EQ/L		
Tested 12/23/24			
Tester JENC			
Recorded 12/23/24			
<b>QCSP5: STANDARDIZATION OF AQUEOUS ACIDS</b>	YES		YES
Sample ID	METHOD		
Tested 12/23/24			
Tester JENC			
Recorded 12/23/24			



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<b>Actual Density</b>	0.79100 G/ML	0.79012 - 0.79188	0.79089
Sample ID			
Tested	12/23/24		
Tester	JENC		
Recorded	12/23/24		
<b>N.I.S.T. Traceable to SRM 723</b>	YES		YES
	YES		
Sample ID			
Tested	12/23/24		
Tester	JENC		
Recorded	12/23/24		
<b>APPEARANCE AND COLOR</b>	CLEAR LIQUID APPEARANCE		PASS
Sample ID			
Tested	12/23/24		
Tester	JENC		
Recorded	12/23/24		
<b>INSTRUMENTS USED DURING PREPARATION</b>	INSTRUMENT		GC,T146,M55,M91
Sample ID			
Tested	12/23/24		
Tester	JENC		
Recorded	12/23/24		
<b>EXPIRATION DATE</b>	MM/DD/YY MM/DD/YYYY		06/30/25
Sample ID			
Tested	12/23/24		
Tester	JENC		
Recorded	12/23/24		
<b>SHELF LIFE OF PRODUCT</b>	6 MONTHS TIME		6 MONTHS
Sample ID			
Tested	12/23/24		
Tester	JENC		
Recorded	12/23/24		
<b>Lot #</b>	4120542		
<b>Made</b>	12/23/24		

This is to certify that the product listed above has been prepared according to the agreed upon formulation. The solutions producer has a Quality Management System which governs each step of the manufacturing process to insure the production of a consistent product. Traceability from the producer's lot numbers to the original manufacturer's lot number is maintained. Certificates of Analysis for the raw materials used to prepare this product are available upon request.

The weights and/or volumes used to prepare this product are N.I.S.T. Traceable. All balances used in the preparation of product are calibrated daily against N.I.S.T. Traceable weights. The balances are maintained and serviced on a regular basis by an outside certified company. All volumetric glassware used is N.I.S.T. Traceable and certified as meeting Class A specifications.



Aqua Solutions, Inc.  
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Deer Park, TX 77536  
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Page: 3

Date: 12/23/24 at 10:19 AM

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Unless otherwise agreed to, all chemicals used in the preparation of this product are Reagent ACS grade.

**Quality Manager**