



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

Test	Target/UOM	Range	Result
<b>Packaged Product:</b> 4190			
	HYDROCHLORIC ACID 0.5 NORMAL (MOLAR) NIST TRACEABLE SOLUTION		
<b>Actual Normality</b>	0.5000	0.4995 - 0.5005	0.4996
	EQ/L		
Sample ID			
Tested 02/25/25			
Tester RIRO			
Recorded 02/25/25			
<b>QCSP5: STANDARDIZATION OF AQUEOUS ACIDS</b>	YES		YES
	METHOD		
Sample ID			
Tested 02/25/25			
Tester RIRO			
Recorded 02/25/25			
<b>N.I.S.T. Traceable to SRM 723 THAM</b>	YES		YES
	YES		
Sample ID			
Tested 02/25/25			
Tester RIRO			
Recorded 02/25/25			
<b>PREPARED TO FORMULATION ON FILE</b>	YES		YES
	YES		
Sample ID			
Tested 02/25/25			
Tester RIRO			
Recorded 02/25/25			
<b>SAMPLE COLLECTION &amp; HANDLING PER LAB040</b>	YES		YES
	YES		
Sample ID			
Tested 02/25/25			
Tester RIRO			
Recorded 02/25/25			
<b>DATE OF SAMPLING FOR TEST PURPOSES</b>	MM/DD/YYYY		02/25/2025
	MM/DD/YYYY		
Sample ID			
Tested 02/25/25			
Tester RIRO			
Recorded 02/25/25			
<b>AMBIENT TEMPERATURE DURING SAMPLING DEGC</b>	25.0	10.0 - 35.0	18.0
	DEG C		
Sample ID			
Tested 02/25/25			
Tester RIRO			
Recorded 02/25/25			
<b>DATE OF TESTING OF SAMPLE</b>	MM/DD/YYYY		02/25/2025
	MM/DD/YYYY		
Sample ID			
Tested 02/25/25			
Tester RIRO			
Recorded 02/25/25			



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<b>AMBIENT TEST TEMPERATURE</b>	20.0	15.0 - 30.0	20.0
<b>DEG C</b>	<b>DEG C</b>		
Sample ID			
Tested	02/25/25		
Tester	RIRO		
Recorded	02/25/25		
<b>APPEARANCE AND COLOR</b>	<b>CLEAR LIQUID</b>		<b>PASS</b>
	<b>APPEARANCE</b>		
Sample ID			
Tested	02/25/25		
Tester	RIRO		
Recorded	02/25/25		
<b>INSTRUMENTS USED DURING PREPARATION</b>	<b>INSTRUMENT</b>		<b>T198,T-V,M55</b>
Sample ID			
Tested	02/25/25		
Tester	RIRO		
Recorded	02/25/25		
<b>EXPIRATION DATE</b>	<b>MM/DD/YY</b>		<b>02/28/27</b>
	<b>MM/DD/YYYY</b>		
Sample ID			
Tested	02/25/25		
Tester	RIRO		
Recorded	02/25/25		
<b>Actual Density</b>	<b>1.00721</b>	<b>1.00710 - 1.00732</b>	<b>1.00722</b>
	<b>G/ML</b>		
Sample ID			
Tested	02/25/25		
Tester	RIRO		
Recorded	02/25/25		
<b>SHELF LIFE OF PRODUCT</b>	<b>2 YEARS</b>		<b>2 YEARS</b>
	<b>TIME</b>		
Sample ID			
Tested	02/25/25		
Tester	RIRO		
Recorded	02/25/25		
<b>Lot #</b>	5021237		
<b>Made</b>	02/25/25		

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

**Quality Manager**