

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

<b>Packaged Product:</b> 4190			
HYDROCHLORIC ACID 0.5 NORMAL NIST TRACEABLE SOLUTION			
Test	Target/UOM	Range	Result
<b>Actual Normality</b>	0.5000	0.4995 - 0.5005	0.5001
	EQ/L		
Sample ID			
Tested 06/21/23			
Tester JENC			
Recorded 06/21/23			
<b>Actual Normality</b>	0.5000	0.4995 - 0.5005	0.5001
	EQ/L		
Sample ID			
Tested 06/21/23			
Tester JENC			
Recorded 06/21/23			
<b>QCSP5: STANDARDIZATION OF AQUEOUS ACIDS</b>	YES		YES
	METHOD		
Sample ID			
Tested 06/21/23			
Tester JENC			
Recorded 06/21/23			
<b>N.I.S.T. Traceable to SRM 723 THAM</b>	YES		YES
	YES		
Sample ID			
Tested 06/21/23			
Tester JENC			
Recorded 06/21/23			
<b>PREPARED TO FORMULATION ON FILE</b>	YES		YES
	YES		
Sample ID			
Tested 06/21/23			
Tester JENC			
Recorded 06/21/23			
<b>SAMPLE COLLECTION &amp; HANDLING PER LAB040</b>	YES		YES
	YES		
Sample ID			
Tested 06/21/23			
Tester JENC			
Recorded 06/21/23			
<b>DATE OF SAMPLING FOR TEST PURPOSES</b>	MM/DD/YYYY		06/21/23
	MM/DD/YYYY		
Sample ID			
Tested 06/21/23			
Tester JENC			
Recorded 06/21/23			
<b>AMBIENT TEMPERATURE DURING SAMPLING DEGC</b>	25.0	10.0 - 35.0	21.6
	DEG C		
Sample ID			
Tested 06/21/23			
Tester JENC			
Recorded 06/21/23			

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<b>DATE OF TESTING OF SAMPLE</b>	MM/DD/YYYY		06/21/23
	MM/DD/YYYY		
Sample ID			
Tested	06/21/23		
Tester	JENC		
Recorded	06/21/23		
<b>AMBIENT TEST TEMPERATURE</b>	20.0	15.0 - 30.0	21.6
<b>DEG C</b>	DEG C		
Sample ID			
Tested	06/21/23		
Tester	JENC		
Recorded	06/21/23		
<b>APPEARANCE AND COLOR</b>	CLEAR LIQUID		PASS
	APPEARANCE		
Sample ID			
Tested	06/21/23		
Tester	JENC		
Recorded	06/21/23		
<b>INSTRUMENTS USED DURING PREPARATION</b>	INSTRUMENT		T-32,GC,T-203,BID-02253,PID-M91
Sample ID			
Tested	06/21/23		
Tester	JENC		
Recorded	06/21/23		
<b>EXPIRATION DATE</b>	MM/DD/YY		06/30/25
	MM/DD/YYYY		
Sample ID			
Tested	06/21/23		
Tester	JENC		
Recorded	06/21/23		
<b>SHELF LIFE OF PRODUCT</b>	2 YEARS		2 YEARS
	TIME		
Sample ID			
Tested	06/21/23		
Tester	JENC		
Recorded	06/21/23		
<b>Lot #</b>	3061986		
<b>Made</b>	06/21/23		

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.  
Ph: 281-479-2569  
Fax: 281-479-2790  
P.O. Box 70  
Deer Park, TX 77536  
Website: [www.aquasolutions.org](http://www.aquasolutions.org)

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Date: 06/21/23 at 9:28 AM

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

**Quality Manager**