



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

<b>Packaged Product:</b> 4145			
HYDROCHLORIC ACID 0.178 NORMAL			
Test	Target/UOM	Range	Result
<b>PREPARED TO FORMULATION ON FILE</b>	YES		YES
Sample ID			
Tested 07/24/23			
Tester JENC			
Recorded 07/24/23			
<b>SAMPLE COLLECTION &amp; HANDLING PER LAB040</b>	YES		YES
Sample ID			
Tested 07/24/23			
Tester JENC			
Recorded 07/24/23			
<b>DATE OF SAMPLING FOR TEST PURPOSES</b>	MM/DD/YYYY		07/24/23
Sample ID			
Tested 07/24/23			
Tester JENC			
Recorded 07/24/23			
<b>AMBIENT TEMPERATURE DURING SAMPLING DEGC</b>	25.0	10.0 - 35.0	22.8
Sample ID			
Tested 07/24/23			
Tester JENC			
Recorded 07/24/23			
<b>DATE OF TESTING OF SAMPLE</b>	MM/DD/YYYY		07/24/23
Sample ID			
Tested 07/24/23			
Tester JENC			
Recorded 07/24/23			
<b>AMBIENT TEST TEMPERATURE DEGC</b>	20.0	15.0 - 30.0	22.8
Sample ID			
Tested 07/24/23			
Tester JENC			
Recorded 07/24/23			
<b>Actual Normality</b>	0.1780	0.1775 - 0.1785	0.1778
	EQ/L		
Sample ID			
Tested 07/24/23			
Tester JENC			
Recorded 07/24/23			
<b>QCSP5: STANDARDIZATION OF AQUEOUS ACIDS</b>	YES		YES
	METHOD		
Sample ID			
Tested 07/24/23			
Tester JENC			
Recorded 07/24/23			



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<b>N.I.S.T. Traceable to SRM 723 THAM</b>	YES YES	YES
Sample ID		
Tested	07/24/23	
Tester	JENC	
Recorded	07/24/23	
<b>APPEARANCE AND COLOR</b>	CLEAR LIQUID APPEARANCE	PASS
Sample ID		
Tested	07/24/23	
Tester	JENC	
Recorded	07/24/23	
<b>INSTRUMENTS USED DURING PREPARATION</b>	INSTRUMENT	GC,VF5-E4,M55,BURET:02253
Sample ID		
Tested	07/24/23	
Tester	JENC	
Recorded	07/24/23	
<b>Actual Density</b>	1.00148 GM/ML	1.00128 - 1.00168 1.00163
Sample ID		
Tested	07/24/23	
Tester	JENC	
Recorded	07/24/23	
<b>EXPIRATION DATE</b>	MM/DD/YYYY MM/DD/YYYY	01/30/25
Sample ID		
Tested	07/24/23	
Tester	JENC	
Recorded	07/24/23	
<b>Lot #</b>	3072127	
<b>Made</b>	07/24/23	

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.

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

Richard J. J. J.

**Quality Manager**