

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

<b>Packaged Product:</b> 4191 HYDROCHLORIC ACID 0.5 NORMAL IN IPA			
Test	Target/UOM	Range	Result
<b>PREPARED TO FORMULATION ON</b>	YES		YES
<b>FILE</b>	YES		
Sample ID			
Tested 06/28/23			
Tester MHUS			
Recorded 06/28/23			
<b>SAMPLE COLLECTION &amp; HANDLING</b>	YES		YES
<b>PER LAB040</b>	YES		
Sample ID			
Tested 06/28/23			
Tester MHUS			
Recorded 06/28/23			
<b>DATE OF SAMPLING FOR TEST</b>	MM/DD/YYYY		06/28/23
<b>PURPOSES</b>	MM/DD/YYYY		
Sample ID			
Tested 06/28/23			
Tester MHUS			
Recorded 06/28/23			
<b>AMBIENT TEMPERATURE DURING</b>	25.0	10.0 - 35.0	29.0
<b>SAMPLING DEGC</b>	DEG C		
Sample ID			
Tested 06/28/23			
Tester MHUS			
Recorded 06/28/23			
<b>DATE OF TESTING OF SAMPLE</b>	MM/DD/YYYY		06/28/23
	MM/DD/YYYY		
Sample ID			
Tested 06/28/23			
Tester MHUS			
Recorded 06/28/23			
<b>AMBIENT TEST TEMPERATURE</b>	20.0	15.0 - 30.0	23.6
<b>DEG C</b>	DEG C		
Sample ID			
Tested 06/28/23			
Tester MHUS			
Recorded 06/28/23			
<b>N.I.S.T. Traceable to SRM 723</b>	YES		YES
	YES		
Sample ID			
Tested 06/28/23			
Tester MHUS			
Recorded 06/28/23			
<b>QCSP5: STANDARDIZATION OF</b>	YES		YES
<b>AQUEOUS ACIDS</b>	METHOD		
Sample ID			
Tested 06/28/23			
Tester MHUS			
Recorded 06/28/23			

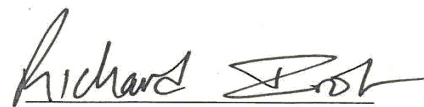
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<b>Actual Normality</b>	0.5000 EQ/L	0.4995 - 0.5005	0.5004
Sample ID			
Tested	06/28/23		
Tester	MHUS		
Recorded	06/28/23		
<b>APPEARANCE AND COLOR</b>	CLEAR LIQUID APPEARANCE		PASS
Sample ID			
Tested	06/28/23		
Tester	MHUS		
Recorded	06/28/23		
<b>INSTRUMENTS USED DURING PREPARATION</b>	INSTRUMENT		M55,M91,BID3902,TID41123
Sample ID			
Tested	06/28/23		
Tester	MHUS		
Recorded	06/28/23		
<b>Actual Density</b>	0.81013 GM/ML	0.80934 - 0.81092	0.81017
Sample ID			
Tested	06/28/23		
Tester	MHUS		
Recorded	06/28/23		
<b>EXPIRATION DATE</b>	MM/DD/YY MM/DD/YYYY		06/30/24
Sample ID			
Tested	06/28/23		
Tester	MHUS		
Recorded	06/28/23		
<b>Lot #</b>	3062135		
<b>Made</b>	06/28/23		

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.



**Quality Manager**