



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

Packaged Product: 4190			
HYDROCHLORIC ACID 0.5 NORMAL (MOLAR) NIST TRACEABLE SOLUTION			
Test	Target/UOM	Range	Result
Actual Normality	0.5000 EQ/L	0.4995 - 0.5005	0.5004
Sample ID			
Tested 12/13/24			
Tester JENC			
Recorded 12/13/24			
QCSP5: STANDARDIZATION OF AQUEOUS ACIDS	YES METHOD		YES
Sample ID			
Tested 12/13/24			
Tester JENC			
Recorded 12/13/24			
N.I.S.T. Traceable to SRM 723 THAM	YES YES		YES
Sample ID			
Tested 12/13/24			
Tester JENC			
Recorded 12/13/24			
PREPARED TO FORMULATION ON FILE	YES YES		YES
Sample ID			
Tested 12/13/24			
Tester JENC			
Recorded 12/13/24			
SAMPLE COLLECTION & HANDLING PER LAB040	YES YES		YES
Sample ID			
Tested 12/13/24			
Tester JENC			
Recorded 12/13/24			
DATE OF SAMPLING FOR TEST PURPOSES	MM/DD/YYYY MM/DD/YYYY		12/13/2024
Sample ID			
Tested 12/13/24			
Tester JENC			
Recorded 12/13/24			
AMBIENT TEMPERATURE DURING SAMPLING DEGC	25.0 DEG C	10.0 - 35.0	20.2
Sample ID			
Tested 12/13/24			
Tester JENC			
Recorded 12/13/24			
DATE OF TESTING OF SAMPLE	MM/DD/YYYY MM/DD/YYYY		12/13/2024
Sample ID			
Tested 12/13/24			
Tester JENC			
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AMBIENT TEST TEMPERATURE	20.0	15.0 - 30.0	20.2
DEG C	DEG C		
Sample ID			
Tested	12/13/24		
Tester	JENC		
Recorded	12/13/24		
APPEARANCE AND COLOR	CLEAR LIQUID		PASS
	APPEARANCE		
Sample ID			
Tested	12/13/24		
Tester	JENC		
Recorded	12/13/24		
INSTRUMENTS USED DURING PREPARATION	INSTRUMENT		T-22,VF4-N16,GC,T-211,M55
Sample ID			
Tested	12/13/24		
Tester	JENC		
Recorded	12/13/24		
EXPIRATION DATE	MM/DD/YY		12/30/26
	MM/DD/YYYY		
Sample ID			
Tested	12/13/24		
Tester	JENC		
Recorded	12/13/24		
Actual Density	1.00721	1.00710 - 1.00732	1.00723
	G/ML		
Sample ID			
Tested	12/13/24		
Tester	JENC		
Recorded	12/13/24		
SHELF LIFE OF PRODUCT	2 YEARS		2 YEARS
	TIME		
Sample ID			
Tested	12/13/24		
Tester	JENC		
Recorded	12/13/24		
Lot #	4112704		
Made	12/13/24		

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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P.O. Box 70
Deer Park, TX 77536
Website: www.aquasolutions.org

Page: 3

Date: 12/13/24 at 10:50 AM

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

Quality Manager