



Aqua Solutions, Inc.
 Ph: 281-479-2569
 Fax: 281-479-2790
 P.O. Box 70
 Deer Park, TX 77536
 Website: www.aquasolutions.org

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

Customer PO # :

Packaged Product: 4190-20L
 HYDROCHLORIC ACID 0.5 NORMAL (20LC)

Lot # 1033134

Chemical Product: 4190
 HYDROCHLORIC ACID 0.5 NORMAL NIST TRACEABLE SOLUTION

Test	Target/UOM	Range	Result
N.I.S.T. Traceable to SRM 919	Yes YES		YES
Sample ID			
Tested 04/05/21			
Tester DHOL			
Recorded 04/05/21			
QCSP5: STANDARDIZATION OF AQUEOUS ACIDS	YES METHOD		YES
Sample ID			
Tested 04/05/21			
Tester DHOL			
Recorded 04/05/21			
Actual Normality	0.5000 EQ/L	0.4995 - 0.5005	0.4998
Sample ID			
Tested 04/05/21			
Tester DHOL			
Recorded 04/05/21			
PREPARED TO FORMULATION ON FILE	YES YES		YES
Sample ID			
Tested 04/05/21			
Tester DHOL			
Recorded 04/05/21			
SAMPLE COLLECTION & HANDLING PER LAB040	YES YES		YES
Sample ID			
Tested 04/05/21			
Tester DHOL			
Recorded 04/05/21			
DATE OF SAMPLING FOR TEST PURPOSES	MM/DD/YYYY MM/DD/YYYY		04/05/21
Sample ID			
Tested 04/05/21			
Tester DHOL			
Recorded 04/05/21			
AMBIENT TEMPERATURE DURING SAMPLING DEGC	25.0 DEG C	10.0 - 35.0	20.0
Sample ID			
Tested 04/05/21			
Tester DHOL			
Recorded 04/05/21			



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DATE OF TESTING OF SAMPLE	MM/DD/YYYY		04/05/21
Sample ID	MM/DD/YYYY		
Tested	04/05/21		
Tester	DHOL		
Recorded	04/05/21		
AMBIENT TEST TEMPERATURE	20.0	15.0 - 30.0	17.0
DEG C	DEG C		
Sample ID			
Tested	04/05/21		
Tester	DHOL		
Recorded	04/05/21		
APPEARANCE AND COLOR	CLEAR LIQUID		PASS
	APPEARANCE		
Sample ID			
Tested	04/05/21		
Tester	DHOL		
Recorded	04/05/21		
INSTRUMENTS USED DURING PREPARATION	INSTRUMENT		VF1-72,GC,T12,M55,BID02185
Sample ID			
Tested	04/05/21		
Tester	DHOL		
Recorded	04/05/21		
EXPIRATION DATE	MM/DD/YY		04/30/23
	MM/DD/YYYY		
Sample ID			
Tested	04/05/21		
Tester	DHOL		
Recorded	04/05/21		
Actual Density	1.00720	1.00710 - 1.00732	1.00731
	GM/ML		
Sample ID			
Tested	04/05/21		
Tester	DHOL		
Recorded	04/05/21		
SHELF LIFE OF PRODUCT	2 YEARS		2 YEARS
	TIME		
Sample ID			
Tested	04/05/21		
Tester	DHOL		
Recorded	04/05/21		
Made	04/05/21		



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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