



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

| <b>Packaged Product:</b> 4355                      |            |                 |            |
|--|------------|-----------------|------------|
| HYDROCHLORIC ACID 2.0 NORMAL                       |            |                 |            |
| Test   | Target/UOM | Range           | Result     |
| <b>PREPARED TO FORMULATION ON FILE</b>             | YES        |                 | YES        |
| Sample ID  |            |                 |            |
| Tested 01/15/25                                    |            |                 |            |
| Tester JRIO  |            |                 |            |
| Recorded 01/15/25                                  |            |                 |            |
| <b>SAMPLE COLLECTION &amp; HANDLING PER LAB040</b> | YES        |                 | YES        |
| Sample ID  |            |                 |            |
| Tested 01/15/25                                    |            |                 |            |
| Tester JRIO  |            |                 |            |
| Recorded 01/15/25                                  |            |                 |            |
| <b>DATE OF SAMPLING FOR TEST PURPOSES</b>          | MM/DD/YYYY |                 | 01/15/2025 |
| Sample ID  |            |                 |            |
| Tested 01/15/25                                    |            |                 |            |
| Tester JRIO  |            |                 |            |
| Recorded 01/15/25                                  |            |                 |            |
| <b>AMBIENT TEMPERATURE DURING SAMPLING DEGC</b>    | 25.0       | 10.0 - 35.0     | 20.0       |
| Sample ID  |            |                 |            |
| Tested 01/15/25                                    |            |                 |            |
| Tester JRIO  |            |                 |            |
| Recorded 01/15/25                                  |            |                 |            |
| <b>DATE OF TESTING OF SAMPLE</b>                   | MM/DD/YYYY |                 | 01/15/2025 |
| Sample ID  |            |                 |            |
| Tested 01/15/25                                    |            |                 |            |
| Tester JRIO  |            |                 |            |
| Recorded 01/15/25                                  |            |                 |            |
| <b>AMBIENT TEST TEMPERATURE DEGC</b>               | 20.0       | 15.0 - 30.0     | 20.0       |
| Sample ID  |            |                 |            |
| Tested 01/15/25                                    |            |                 |            |
| Tester JRIO  |            |                 |            |
| Recorded 01/15/25                                  |            |                 |            |
| <b>Actual Normality</b>                            | 2.0000     | 1.9990 - 2.0010 | 1.9994     |
|  | EQ/L       |                 |            |
| Sample ID  |            |                 |            |
| Tested 01/15/25                                    |            |                 |            |
| Tester JRIO  |            |                 |            |
| Recorded 01/15/25                                  |            |                 |            |
| <b>QCSP5: STANDARDIZATION OF AQUEOUS ACIDS</b>     | YES        |                 | YES        |
|  | METHOD     |                 |            |
| Sample ID  |            |                 |            |
| Tested 01/15/25                                    |            |                 |            |
| Tester JRIO  |            |                 |            |
| Recorded 01/15/25                                  |            |                 |            |



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**N.I.S.T. Traceable to SRM 723 THAM**

YES YES  
 YES

Sample ID  
 Tested 01/15/25  
 Tester JRIO  
 Recorded 01/15/25

**CERTIFIED TOTAL ORGANIC CARBON (PPM)**

1.0 0.0 - 4.0 2.2  
 PPM

Sample ID  
 Tested 01/15/25  
 Tester JRIO  
 Recorded 01/15/25

**APPEARANCE AND COLOR**

CLEAR LIQUID APPEARANCE PASS

Sample ID  
 Tested 01/15/25  
 Tester JRIO  
 Recorded 01/15/25

**INSTRUMENTS USED DURING PREPARATION**

INSTRUMENT M113,T166,M55

Sample ID  
 Tested 01/15/25  
 Tester JRIO  
 Recorded 01/15/25

**Actual Color, APHA**

10 0 - 10 4  
 COLOR

Sample ID  
 Tested 01/15/25  
 Tester JRIO  
 Recorded 01/15/25

**Prepared with 36.5-38% ACS HCL**

YES YES  
 YES

Sample ID  
 Tested 01/15/25  
 Tester JRIO  
 Recorded 01/15/25

**IDENTITY**

PASS PASS  
 PASS

Sample ID  
 Tested 01/15/25  
 Tester JRIO  
 Recorded 01/15/25

**EXPIRATION DATE**

MM/DD/YY 01/30/27  
 MM/DD/YYYY

Sample ID  
 Tested 01/15/25  
 Tester JRIO  
 Recorded 01/15/25



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|                              |                    |                              |
|------------------------------|--------------------|------------------------------|
| <b>SHELF LIFE OF PRODUCT</b> | SHELF LIFE<br>TIME | 2 YEARS                      |
| Sample ID                    |                    |                              |
| Tested 01/15/25              |                    |                              |
| Tester JRIO                  |                    |                              |
| Recorded 01/15/25            |                    |                              |
| <b>Actual Density</b>        | 1.03294<br>G/ML    | 1.03243 - 1.03345<br>1.03290 |
| Sample ID                    |                    |                              |
| Tested 01/15/25              |                    |                              |
| Tester JRIO                  |                    |                              |
| Recorded 01/15/25            |                    |                              |
| <b>SPECIFIC GRAVITY</b>      | 1.035<br>SPEC GRAV | 1.030 - 1.040<br>1.035       |
| Sample ID                    |                    |                              |
| Tested 01/15/25              |                    |                              |
| Tester JRIO                  |                    |                              |
| Recorded 01/15/25            |                    |                              |
| <b>Assay w/v HCL</b>         | 7.29<br>W/V%       | 6.12 - 7.48<br>7.29          |
| Sample ID                    |                    |                              |
| Tested 01/15/25              |                    |                              |
| Tester JRIO                  |                    |                              |
| Recorded 01/15/25            |                    |                              |
| <b>Lot #</b> 5010214         |                    |                              |
| <b>Made</b> 01/15/25         |                    |                              |

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**