

**Daily Analysis Runlog For Sequence/QC Batch ID # LB91775**

|               |             |                   |        |                    |         |        |
|---------------|-------------|-------------------|--------|--------------------|---------|--------|
| Review By     |             | Review On         |        |                    |         |        |
| SubDirectory  |             | LB91775           |        | Test : Bicarbonate |         |        |
| STD. NAME     |             | STD REF.#         |        |                    |         |        |
| ICAL Standard |             | N/A               |        |                    |         |        |
| ICV Standard  |             | N/A               |        |                    |         |        |
| CCV Standard  |             | N/A               |        |                    |         |        |
| ICSA Standard |             | N/A               |        |                    |         |        |
| CRI Standard  |             | N/A               |        |                    |         |        |
| LCS Standard  |             | WP59880           |        |                    |         |        |
| Chk Standard  |             | W2269,W2159,W2270 |        |                    |         |        |
| Sr#           | SampleID    | ClientID          | QcType | Date               | Comment | Status |
| 1             | LB91775BLW  | LB91775BLW        | MB     | 11/27/17 11:10     |         | OK     |
| 2             | LB91775BSW  | LB91775BSW        | LCS    | 11/27/17 11:12     |         | OK     |
| 3             | I6575-01    | MW9-055-1         | SAM    | 11/27/17 11:18     |         | OK     |
| 4             | I6575-02    | MW2S-055-1        | SAM    | 11/27/17 11:22     |         | OK     |
| 5             | I6575-03    | MW10M-055-1       | SAM    | 11/27/17 11:26     |         | OK     |
| 6             | I6575-04    | MW10M-055-2       | SAM    | 11/27/17 11:31     |         | OK     |
| 7             | I6575-05    | MW10D-055-1       | SAM    | 11/27/17 11:36     |         | OK     |
| 8             | I6575-06    | MW11M-055-3       | SAM    | 11/27/17 11:41     |         | OK     |
| 9             | I6575-07    | MW11M-055-1       | SAM    | 11/27/17 11:44     |         | OK     |
| 10            | I6575-08    | MW11D-055-1       | SAM    | 11/27/17 11:48     |         | OK     |
| 11            | I6575-09    | MW4S-055-1        | SAM    | 11/27/17 11:53     |         | OK     |
| 12            | I6575-10    | MW4D-055-1        | SAM    | 11/27/17 11:57     |         | OK     |
| 13            | I6575-10DUP | MW4D-055-1DUP     | DUP    | 11/27/17 12:12     |         | OK     |



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## Report of Analysis

|                   |           |                 |                        |
|-------------------|-----------|-----------------|------------------------|
| Client:           |           | Date Collected: | 11/20/2017 12:00:00 AM |
| Project:          | LB91775   | Date Received:  | 11/21/2017 12:00:00 AM |
| Client Sample ID: | MW9-055-1 | SDG No.:        | LB91775                |
| Lab Sample ID:    | I6575-01  | Matrix:         | WATER                  |
| Level (low/med):  | low       | % Solid:        | 0                      |

| Cas | Parameter   | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|-----|-------------|-------|------|----|-----|-----|------------|-------|-----------|------------|----------|
|     | Bicarbonate | 151   |      | 1  | 0.4 |     | 2          | mg/L  |           | 11/27/2017 | SM2320 B |



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## Report of Analysis

|                   |            |                 |                        |
|-------------------|------------|-----------------|------------------------|
| Client:           |            | Date Collected: | 11/20/2017 12:00:00 AM |
| Project:          | LB91775    | Date Received:  | 11/21/2017 12:00:00 AM |
| Client Sample ID: | MW2S-055-1 | SDG No.:        | LB91775                |
| Lab Sample ID:    | I6575-02   | Matrix:         | WATER                  |
| Level (low/med):  | low        | % Solid:        | 0                      |

| Cas | Parameter   | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|-----|-------------|-------|------|----|-----|-----|------------|-------|-----------|------------|----------|
|     | Bicarbonate | 77    |      | 1  | 0.4 |     | 2          | mg/L  |           | 11/27/2017 | SM2320 B |



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## Report of Analysis

|                   |             |                 |                        |
|-------------------|-------------|-----------------|------------------------|
| Client:           |             | Date Collected: | 11/20/2017 12:00:00 AM |
| Project:          | LB91775     | Date Received:  | 11/21/2017 12:00:00 AM |
| Client Sample ID: | MW10M-055-1 | SDG No.:        | LB91775                |
| Lab Sample ID:    | I6575-03    | Matrix:         | WATER                  |
| Level (low/med):  | low         | % Solid:        | 0                      |

| Cas | Parameter   | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|-----|-------------|-------|------|----|-----|-----|------------|-------|-----------|------------|----------|
|     | Bicarbonate | 150   |      | 1  | 0.4 |     | 2          | mg/L  |           | 11/27/2017 | SM2320 B |



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## Report of Analysis

|                   |             |                 |                        |
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| Client:           |             | Date Collected: | 11/20/2017 12:00:00 AM |
| Project:          | LB91775     | Date Received:  | 11/21/2017 12:00:00 AM |
| Client Sample ID: | MW10M-055-2 | SDG No.:        | LB91775                |
| Lab Sample ID:    | I6575-04    | Matrix:         | WATER                  |
| Level (low/med):  | low         | % Solid:        | 0                      |

| Cas | Parameter   | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|-----|-------------|-------|------|----|-----|-----|------------|-------|-----------|------------|----------|
|     | Bicarbonate | 150   |      | 1  | 0.4 |     | 2          | mg/L  |           | 11/27/2017 | SM2320 B |



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| Client:           |             | Date Collected: | 11/20/2017 12:00:00 AM |
| Project:          | LB91775     | Date Received:  | 11/21/2017 12:00:00 AM |
| Client Sample ID: | MW10D-055-1 | SDG No.:        | LB91775                |
| Lab Sample ID:    | I6575-05    | Matrix:         | WATER                  |
| Level (low/med):  | low         | % Solid:        | 0                      |

| Cas | Parameter   | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|-----|-------------|-------|------|----|-----|-----|------------|-------|-----------|------------|----------|
|     | Bicarbonate | 127   |      | 1  | 0.4 |     | 2          | mg/L  |           | 11/27/2017 | SM2320 B |



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## Report of Analysis

|                   |             |                 |                        |
|-------------------|-------------|-----------------|------------------------|
| Client:           |             | Date Collected: | 11/20/2017 12:00:00 AM |
| Project:          | LB91775     | Date Received:  | 11/21/2017 12:00:00 AM |
| Client Sample ID: | MW11M-055-3 | SDG No.:        | LB91775                |
| Lab Sample ID:    | I6575-06    | Matrix:         | WATER                  |
| Level (low/med):  | low         | % Solid:        | 0                      |

| Cas | Parameter   | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|-----|-------------|-------|------|----|-----|-----|------------|-------|-----------|------------|----------|
|     | Bicarbonate | -0    | U    | 1  | 0.4 |     | 2          | mg/L  |           | 11/27/2017 | SM2320 B |



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## Report of Analysis

|                   |             |                 |                        |
|-------------------|-------------|-----------------|------------------------|
| Client:           |             | Date Collected: | 11/20/2017 12:00:00 AM |
| Project:          | LB91775     | Date Received:  | 11/21/2017 12:00:00 AM |
| Client Sample ID: | MW11M-055-1 | SDG No.:        | LB91775                |
| Lab Sample ID:    | I6575-07    | Matrix:         | WATER                  |
| Level (low/med):  | low         | % Solid:        | 0                      |

| Cas | Parameter   | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|-----|-------------|-------|------|----|-----|-----|------------|-------|-----------|------------|----------|
|     | Bicarbonate | 126   |      | 1  | 0.4 |     | 2          | mg/L  |           | 11/27/2017 | SM2320 B |



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## Report of Analysis

|                   |             |                 |                        |
|-------------------|-------------|-----------------|------------------------|
| Client:           |             | Date Collected: | 11/20/2017 12:00:00 AM |
| Project:          | LB91775     | Date Received:  | 11/21/2017 12:00:00 AM |
| Client Sample ID: | MW11D-055-1 | SDG No.:        | LB91775                |
| Lab Sample ID:    | I6575-08    | Matrix:         | WATER                  |
| Level (low/med):  | low         | % Solid:        | 0                      |

| Cas | Parameter   | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|-----|-------------|-------|------|----|-----|-----|------------|-------|-----------|------------|----------|
|     | Bicarbonate | 130   |      | 1  | 0.4 |     | 2          | mg/L  |           | 11/27/2017 | SM2320 B |



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## Report of Analysis

|                   |            |                 |                        |
|-------------------|------------|-----------------|------------------------|
| Client:           |            | Date Collected: | 11/20/2017 12:00:00 AM |
| Project:          | LB91775    | Date Received:  | 11/21/2017 12:00:00 AM |
| Client Sample ID: | MW4S-055-1 | SDG No.:        | LB91775                |
| Lab Sample ID:    | I6575-09   | Matrix:         | WATER                  |
| Level (low/med):  | low        | % Solid:        | 0                      |

| Cas | Parameter   | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|-----|-------------|-------|------|----|-----|-----|------------|-------|-----------|------------|----------|
|     | Bicarbonate | 249   |      | 1  | 0.4 |     | 2          | mg/L  |           | 11/27/2017 | SM2320 B |



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## Report of Analysis

|                   |            |                 |                        |
|-------------------|------------|-----------------|------------------------|
| Client:           |            | Date Collected: | 11/20/2017 12:00:00 AM |
| Project:          | LB91775    | Date Received:  | 11/21/2017 12:00:00 AM |
| Client Sample ID: | MW4D-055-1 | SDG No.:        | LB91775                |
| Lab Sample ID:    | I6575-10   | Matrix:         | WATER                  |
| Level (low/med):  | low        | % Solid:        | 0                      |

| Cas | Parameter   | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|-----|-------------|-------|------|----|-----|-----|------------|-------|-----------|------------|----------|
|     | Bicarbonate | 182   |      | 1  | 0.4 |     | 2          | mg/L  |           | 11/27/2017 | SM2320 B |



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## Report of Analysis

|                   |            |                 |                        |
|-------------------|------------|-----------------|------------------------|
| Client:           |            | Date Collected: | 11/20/2017 12:00:00 AM |
| Project:          | LB91775    | Date Received:  | 11/21/2017 12:00:00 AM |
| Client Sample ID: | MW4D-055-1 | SDG No.:        | LB91775                |
| Lab Sample ID:    | I6575-10   | Matrix:         | WATER                  |
| Level (low/med):  | low        | % Solid:        | 0                      |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|-----|-----------|-------|------|----|-----|-----|------------|-------|-----------|-----------|----------|
|-----|-----------|-------|------|----|-----|-----|------------|-------|-----------|-----------|----------|

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N = Spiked sample recovery not within control limits



**GENCHEM**  
**- 3b -**  
**PREPARATION BLANK SUMMARY**

**Client:** LB91775

**SDG No.:** LB91775

**Instrument:** Titroline Alpha Titrator

| Sample ID  | Analyte     | Result<br>(mg/L) | Acceptance<br>Limit | Conc<br>Qual       | LOD<br>mg/L | CRQL<br>mg/L | M | Analysis<br>Date         | Analysis<br>Time | Run     |
|------------|-------------|------------------|---------------------|--------------------|-------------|--------------|---|--------------------------|------------------|---------|
| LB91775BLW | Bicarbonate | WATER<br>0.4     | <2                  | Batch Number:<br>U |             | 2            |   | Prep Date:<br>11/27/2017 | 11:10            | LB91775 |



## GENCHEM

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### DUPLICATE SAMPLE SUMMARY

**Client:** LB91775 **Level:** LOW **SDG No.:** LB91775  
**Contract:**                      **Lab Code:** CHEM **Case No.:** LB91775 **SAS No.:** LB91775  
**Matrix:** WATER **Sample ID:** I6575-10 **Client ID:** MW4D-055-1DUP  
**Percent Solids for Sample:** 0 **Duplicate ID** I6575-10DUP **Percent Solids for Spike Sample:** 0

| Analyte     | Units | Acceptance<br>Limit | Sample<br>Result | C | Duplicate<br>Result | C | RPD | Qual | M |
|-------------|-------|---------------------|------------------|---|---------------------|---|-----|------|---|
| Bicarbonate | mg/L  | 20                  | 182              |   | 180                 |   | 1   |      |   |



GENCHEM

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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB91775

SDG No.: LB91775

Contract:

Lab Code: CHEM

Case No.: LB91775

SAS No.: LB91775

| Analyte                   | Units | True Value | Result | C | % Recovery | Acceptance Limits | M |
|---------------------------|-------|------------|--------|---|------------|-------------------|---|
| LB91775BSW<br>Bicarbonate | mg/L  | 50         | 55.1   |   | 110.2      | 80 - 120          |   |