

**Daily Analysis Runlog For Sequence/QC Batch ID # LB94471**

|               |             |                                                                 |        |                 |         |        |
|---------------|-------------|-----------------------------------------------------------------|--------|-----------------|---------|--------|
| Review By     |             | Review On                                                       |        |                 |         |        |
| SubDirectory  |             | LB94471                                                         |        | Test :   Anions |         |        |
| STD. NAME     |             | STD REF.#                                                       |        |                 |         |        |
| ICAL Standard |             | wp62836,wp62837,wp62838,wp62839,wp62840,wp62841,wp62842,wp62843 |        |                 |         |        |
| ICV Standard  |             | wp62844                                                         |        |                 |         |        |
| CCV Standard  |             | WP63377                                                         |        |                 |         |        |
| ICSA Standard |             | N/A                                                             |        |                 |         |        |
| CRI Standard  |             | N/A                                                             |        |                 |         |        |
| LCS Standard  |             | WP63382                                                         |        |                 |         |        |
| Chk Standard  |             | WP63116,WP63117                                                 |        |                 |         |        |
| Sr#           | SampleID    | ClientID                                                        | QcType | Date            | Comment | Status |
| 1             | STD1        | STD1                                                            | CAL1   | 03/19/18 11:39  |         | OK     |
| 2             | STD2        | STD2                                                            | CAL2   | 03/19/18 12:11  |         | OK     |
| 3             | STD3        | STD3                                                            | CAL3   | 03/19/18 12:43  |         | OK     |
| 4             | STD4        | STD4                                                            | CAL4   | 03/19/18 13:15  |         | OK     |
| 5             | STD5        | STD5                                                            | CAL5   | 03/19/18 13:47  |         | OK     |
| 6             | STD6        | STD6                                                            | CAL6   | 03/19/18 14:19  |         | OK     |
| 7             | STD7        | STD7                                                            | CAL7   | 03/19/18 14:51  |         | OK     |
| 8             | ICV1        | ICV1                                                            | ICV    | 03/19/18 16:27  |         | OK     |
| 9             | ICB1        | ICB1                                                            | ICB    | 03/19/18 17:23  |         | OK     |
| 10            | CCV1        | CCV1                                                            | CCV    | 04/06/18 08:23  |         | OK     |
| 11            | CCB1        | CCB1                                                            | CCB    | 04/06/18 08:56  |         | OK     |
| 12            | LB94471BLW  | LB94471BLW                                                      | MB     | 04/06/18 09:27  |         | OK     |
| 13            | LB94471BSW  | LB94471BSW                                                      | LCS    | 04/06/18 09:58  |         | OK     |
| 14            | J2268-01    | MH-92A                                                          | SAM    | 04/06/18 10:30  |         | OK     |
| 15            | J2268-02    | MH-33                                                           | SAM    | 04/06/18 11:01  |         | OK     |
| 16            | J2268-02DUP | MH-33DUP                                                        | DUP    | 04/06/18 11:32  |         | OK     |
| 17            | J2268-02MS  | MH-33MS                                                         | MS     | 04/06/18 12:03  |         | OK     |
| 18            | CCV2        | CCV2                                                            | CCV    | 04/06/18 12:34  |         | OK     |
| 19            | CCB2        | CCB2                                                            | CCB    | 04/06/18 13:05  |         | OK     |



## Report of Analysis

|                   |          |                 |                      |
|-------------------|----------|-----------------|----------------------|
| Client:           |          | Date Collected: | 4/6/2018 12:00:00 AM |
| Project:          | LB94471  | Date Received:  | 4/6/2018 12:00:00 AM |
| Client Sample ID: | MH-92A   | SDG No.:        | LB94471              |
| Lab Sample ID:    | J2268-01 | Matrix:         | WATER                |
| Level (low/med):  | low      | % Solid:        | 0                    |

| Cas | Parameter         | Conc. | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|-----|-------------------|-------|------|----|-------|-----|------------|-------|-----------|------------|----------|
|     | Bromide           | 11    |      | 1  | 0.066 |     | 0.5        | mg/L  |           | 04/06/2018 | 300.0    |
|     | Chloride          | 11300 | OR   | 1  | 0.075 |     | 0.15       | mg/L  |           | 04/06/2018 | 300.0    |
|     | Fluoride          | 0     | U    | 1  | 0.043 |     | 0.1        | mg/L  |           | 04/06/2018 | 300.0    |
|     | Nitrate           | 0.41  |      | 1  | 0.027 |     | 0.13       | mg/L  |           | 04/06/2018 | 300.0    |
|     | Nitrite           | 0     | U    | 1  | 0.022 |     | 0.15       | mg/L  |           | 04/06/2018 | 300.0    |
|     | Phosphorus, Ortho | 0     | U    | 1  | 0.01  |     | 0.25       | mg/L  |           | 04/06/2018 | 300.0    |
|     | Sulfate           | 980   | OR   | 1  | 0.13  |     | 0.75       | mg/L  |           | 04/06/2018 | 300.0    |



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

## Report of Analysis

|                   |          |                 |                      |
|-------------------|----------|-----------------|----------------------|
| Client:           |          | Date Collected: | 4/6/2018 12:00:00 AM |
| Project:          | LB94471  | Date Received:  | 4/6/2018 12:00:00 AM |
| Client Sample ID: | MH-33    | SDG No.:        | LB94471              |
| Lab Sample ID:    | J2268-02 | Matrix:         | WATER                |
| Level (low/med):  | low      | % Solid:        | 0                    |

| Cas | Parameter         | Conc. | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|-----|-------------------|-------|------|----|-------|-----|------------|-------|-----------|------------|----------|
|     | Bromide           | 4.8   |      | 1  | 0.066 |     | 0.5        | mg/L  |           | 04/06/2018 | 300.0    |
|     | Chloride          | 2720  | OR   | 1  | 0.075 |     | 0.15       | mg/L  |           | 04/06/2018 | 300.0    |
|     | Fluoride          | 0     | U    | 1  | 0.043 |     | 0.1        | mg/L  |           | 04/06/2018 | 300.0    |
|     | Nitrate           | 5.7   |      | 1  | 0.027 |     | 0.13       | mg/L  |           | 04/06/2018 | 300.0    |
|     | Nitrite           | 0     | U    | 1  | 0.022 |     | 0.15       | mg/L  |           | 04/06/2018 | 300.0    |
|     | Phosphorus, Ortho | 0     | U    | 1  | 0.01  |     | 0.25       | mg/L  |           | 04/06/2018 | 300.0    |
|     | Sulfate           | 145   | OR   | 1  | 0.13  |     | 0.75       | mg/L  |           | 04/06/2018 | 300.0    |



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## Report of Analysis

|                   |          |                 |                      |
|-------------------|----------|-----------------|----------------------|
| Client:           |          | Date Collected: | 4/6/2018 12:00:00 AM |
| Project:          | LB94471  | Date Received:  | 4/6/2018 12:00:00 AM |
| Client Sample ID: | MH-33    | SDG No.:        | LB94471              |
| Lab Sample ID:    | J2268-02 | Matrix:         | WATER                |
| Level (low/med):  | low      | % Solid:        | 0                    |

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

|               |                 |            |
|---------------|-----------------|------------|
| 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

- 2a -

### INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB94471

SDG No.: LB94471

Contract: \_\_\_\_\_ Lab Code: CHEM

Case No.: LB94471

SAS No.: LB94471

Initial Calibration Source: \_\_\_\_\_

Continuing Calibration Source: \_\_\_\_\_

| Sample ID | Analyte           | Result<br>mg/L | True Value | %<br>Recovery | Qual | Acceptance<br>Window (%R) | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|-------------------|----------------|------------|---------------|------|---------------------------|---|------------------|------------------|---------------|
| ICV1      | Bromide           | 9.7            | 10         | 97            |      | 90 - 110                  |   | 03/19/2018       | 16:27            | LB94471       |
|           | Chloride          | 2.9            | 3          | 96.7          |      | 90 - 110                  |   | 03/19/2018       | 16:27            | LB94471       |
|           | Fluoride          | 2              | 2          | 100           |      | 90 - 110                  |   | 03/19/2018       | 16:27            | LB94471       |
|           | Phosphorus, Ortho | 5.3            | 5          | 106           |      | 90 - 110                  |   | 03/19/2018       | 16:27            | LB94471       |
|           | Nitrite           | 2.9            | 3          | 96.7          |      | 90 - 110                  |   | 03/19/2018       | 16:27            | LB94471       |
|           | Nitrate           | 2.4            | 2.5        | 96            |      | 90 - 110                  |   | 03/19/2018       | 16:27            | LB94471       |
|           | Sulfate           | 15.2           | 15         | 101.3         |      | 90 - 110                  |   | 03/19/2018       | 16:27            | LB94471       |



## GENCHEM

- 2a -

### INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB94471

SDG No.: LB94471

Contract: \_\_\_\_\_ Lab Code: CHEM

Case No.: LB94471

SAS No.: LB94471

Initial Calibration Source: \_\_\_\_\_

Continuing Calibration Source: \_\_\_\_\_

| Sample ID | Analyte           | Result<br>mg/L | True Value | %<br>Recovery | Qual | Acceptance<br>Window (%R) | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|-------------------|----------------|------------|---------------|------|---------------------------|---|------------------|------------------|---------------|
| CCV1      | Bromide           | 9.7            | 10         | 97            |      | 90 - 110                  |   | 04/06/2018       | 08:23            | LB94471       |
|           | Chloride          | 3              | 3          | 100           |      | 90 - 110                  |   | 04/06/2018       | 08:23            | LB94471       |
|           | Fluoride          | 1.9            | 2          | 95            |      | 90 - 110                  |   | 04/06/2018       | 08:23            | LB94471       |
|           | Phosphorus, Ortho | 4.9            | 5          | 98            |      | 90 - 110                  |   | 04/06/2018       | 08:23            | LB94471       |
|           | Nitrite           | 2.9            | 3          | 96.7          |      | 90 - 110                  |   | 04/06/2018       | 08:23            | LB94471       |
|           | Nitrate           | 2.3            | 2.5        | 92            |      | 90 - 110                  |   | 04/06/2018       | 08:23            | LB94471       |
|           | Sulfate           | 14.4           | 15         | 96            |      | 90 - 110                  |   | 04/06/2018       | 08:23            | LB94471       |
| CCV2      | Bromide           | 9.5            | 10         | 95            |      | 90 - 110                  |   | 04/06/2018       | 12:34            | LB94471       |
|           | Chloride          | 3              | 3          | 100           |      | 90 - 110                  |   | 04/06/2018       | 12:34            | LB94471       |
|           | Fluoride          | 1.8            | 2          | 90            |      | 90 - 110                  |   | 04/06/2018       | 12:34            | LB94471       |
|           | Phosphorus, Ortho | 6.1            | 5          | 122           | *    | 90 - 110                  |   | 04/06/2018       | 12:34            | LB94471       |
|           | Nitrite           | 2.9            | 3          | 96.7          |      | 90 - 110                  |   | 04/06/2018       | 12:34            | LB94471       |
|           | Nitrate           | 2.4            | 2.5        | 96            |      | 90 - 110                  |   | 04/06/2018       | 12:34            | LB94471       |
|           | Sulfate           | 14.4           | 15         | 96            |      | 90 - 110                  |   | 04/06/2018       | 12:34            | LB94471       |



**GENCHEM**

- 3a -

### INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** LB94471

SDG No.: LB94471

Contract: Lab Code: CHEM

**Case No.:** LB94471

**SAS No.:** LB94471

| Sample ID | Analyte           | Result<br>mg/L | Acceptance<br>Limit | Conc<br>Qual | LOD | CRQL | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|-------------------|----------------|---------------------|--------------|-----|------|---|------------------|------------------|---------------|
| ICB1      | Bromide           | 0.066          | +/-0.5              | U            |     | 0.5  |   | 03/19/2018       | 17:23            | LB94471       |
|           | Chloride          | 0.075          | +/-0.15             | U            |     | 0.15 |   | 03/19/2018       | 17:23            | LB94471       |
|           | Fluoride          | 0.043          | +/-0.1              | U            |     | 0.1  |   | 03/19/2018       | 17:23            | LB94471       |
|           | Phosphorus, Ortho | 0.01           | +/-0.25             | U            |     | 0.25 |   | 03/19/2018       | 17:23            | LB94471       |
|           | Nitrite           | 0.022          | +/-0.15             | U            |     | 0.15 |   | 03/19/2018       | 17:23            | LB94471       |
|           | Nitrate           | 0.027          | +/-0.13             | U            |     | 0.13 |   | 03/19/2018       | 17:23            | LB94471       |
|           | Sulfate           | 0.13           | +/-0.75             | U            |     | 0.75 |   | 03/19/2018       | 17:23            | LB94471       |



**GENCHEM**

- 3a -

### INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** LB94471

SDG No.: LB94471

Contract: Lab Code: CHEM

**Case No.:** LB94471

**SAS No.:** LB94471

| Sample ID | Analyte           | Result<br>mg/L | Acceptance<br>Limit | Conc<br>Qual | LOD | CRQL | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|-------------------|----------------|---------------------|--------------|-----|------|---|------------------|------------------|---------------|
| CCB1      | Bromide           | 0.066          | +/-0.5              | U            |     | 0.5  |   | 04/06/2018       | 08:56            | LB94471       |
|           | Chloride          | 0.075          | +/-0.15             | U            |     | 0.15 |   | 04/06/2018       | 08:56            | LB94471       |
|           | Fluoride          | 0.043          | +/-0.1              | U            |     | 0.1  |   | 04/06/2018       | 08:56            | LB94471       |
|           | Phosphorus, Ortho | 0.01           | +/-0.25             | U            |     | 0.25 |   | 04/06/2018       | 08:56            | LB94471       |
|           | Nitrite           | 0.022          | +/-0.15             | U            |     | 0.15 |   | 04/06/2018       | 08:56            | LB94471       |
|           | Nitrate           | 0.027          | +/-0.13             | U            |     | 0.13 |   | 04/06/2018       | 08:56            | LB94471       |
|           | Sulfate           | 0.13           | +/-0.75             | U            |     | 0.75 |   | 04/06/2018       | 08:56            | LB94471       |
| CCB2      | Bromide           | 0.066          | +/-0.5              | U            |     | 0.5  |   | 04/06/2018       | 13:05            | LB94471       |
|           | Chloride          | 0.075          | +/-0.15             | U            |     | 0.15 |   | 04/06/2018       | 13:05            | LB94471       |
|           | Fluoride          | 0.043          | +/-0.1              | U            |     | 0.1  |   | 04/06/2018       | 13:05            | LB94471       |
|           | Phosphorus, Ortho | 0.01           | +/-0.25             | U            |     | 0.25 |   | 04/06/2018       | 13:05            | LB94471       |
|           | Nitrite           | 0.022          | +/-0.15             | U            |     | 0.15 |   | 04/06/2018       | 13:05            | LB94471       |
|           | Nitrate           | 0.027          | +/-0.13             | U            |     | 0.13 |   | 04/06/2018       | 13:05            | LB94471       |
|           | Sulfate           | 0.13           | +/-0.75             | U            |     | 0.75 |   | 04/06/2018       | 13:05            | LB94471       |





GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB94471

SDG No.: LB94471

Contract: Lab Code: CHEM

Case No.: LB94471

SAS No.: LB94471

| Sample ID | Analyte | Result<br>mg/L | Acceptance<br>Limit | Conc<br>Qual | LOD | CRQL | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|---------|----------------|---------------------|--------------|-----|------|---|------------------|------------------|---------------|
|-----------|---------|----------------|---------------------|--------------|-----|------|---|------------------|------------------|---------------|



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

**Client:** LB94471

**SDG No.:** LB94471

**Instrument:** IC-1

| 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     |
|-------------------|-------------------|------------------|---------------------|----------------------|-------------|--------------|---|-------------------|------------------|---------|
| <b>LB94471BLW</b> |                   | <b>WATER</b>     |                     | <b>Batch Number:</b> |             |              |   | <b>Prep Date:</b> |                  |         |
|                   | Bromide           | 0.066            | <0.5                | U                    |             | 0.5          |   | 04/06/2018        | 09:27            | LB94471 |
|                   | Chloride          | 0.075            | <0.15               | U                    |             | 0.15         |   | 04/06/2018        | 09:27            | LB94471 |
|                   | Fluoride          | 0.043            | <0.1                | U                    |             | 0.1          |   | 04/06/2018        | 09:27            | LB94471 |
|                   | Phosphorus, Ortho | 0.01             | <0.25               | U                    |             | 0.25         |   | 04/06/2018        | 09:27            | LB94471 |
|                   | Nitrite           | 0.022            | <0.15               | U                    |             | 0.15         |   | 04/06/2018        | 09:27            | LB94471 |
|                   | Nitrate           | 0.027            | <0.13               | U                    |             | 0.13         |   | 04/06/2018        | 09:27            | LB94471 |
|                   | Sulfate           | 0.13             | <0.75               | U                    |             | 0.75         |   | 04/06/2018        | 09:27            | LB94471 |



GENCHEM  
- 5a -  
MATRIX SPIKE SUMMARY

client: LB94471 level: low sdg no.: LB94471  
contract: \_\_\_\_\_ lab code: CHEM case no.: LB94471 sas no.: LB94471  
matrix: WATER sample id: J2268-02 client id: MH-33MS  
Percent Solids for Sample: 0 Spiked ID: J2268-02MS Percent Solids for Spike Sample: 0

| Analyte           | Units | Acceptance<br>Limit %R | Spiked<br>Result | C  | Sample<br>Result | C  | Spike<br>Added | %<br>Recovery | Qual | M |
|-------------------|-------|------------------------|------------------|----|------------------|----|----------------|---------------|------|---|
| Bromide           | mg/L  | 80 - 120               | 14.5             |    | 4.8              |    | 10             | 97            |      |   |
| Chloride          | mg/L  | 80 - 120               | 2560             | OR | 2720             | OR | 3              | -5333         | *    |   |
| Fluoride          | mg/L  | 80 - 120               | 2.5              |    | 0.043            | U  | 2              | 125           | *    |   |
| Phosphorus, Ortho | mg/L  | 80 - 120               | 7.6              |    | 0.01             | U  | 5              | 152           | *    |   |
| Nitrite           | mg/L  | 80 - 120               | 1.4              |    | 0.022            | U  | 3              | 46.7          | *    |   |
| Nitrate           | mg/L  | 80 - 120               | 7.9              | OR | 5.7              |    | 2.5            | 88            |      |   |
| Sulfate           | mg/L  | 80 - 120               | 151              | OR | 145              | OR | 15             | 40            | *    |   |

# GENCHEM

- 6 -

## DUPLICATE SAMPLE SUMMARY

**Client:** LB94471      **Level:** LOW      **SDG No.:** LB94471  
**Contract:** \_\_\_\_\_ **Lab Code:** CHEM      **Case No.:** LB94471      **SAS No.:** LB94471  
**Matrix:** WATER      **Sample ID:** J2268-02      **Client ID:** MH-33DUP  
**Percent Solids for Sample:** 0      **Duplicate ID** J2268-02DUP      **Percent Solids for Spike Sample:** 0

| Analyte           | Units | Acceptance Limit | Sample Result | C  | Duplicate Result | C  | RPD | Qual | M |
|-------------------|-------|------------------|---------------|----|------------------|----|-----|------|---|
| Bromide           | mg/L  | 20               | 4.8           |    | 4.7              |    | 2   |      |   |
| Chloride          | mg/L  | 20               | 2720          | OR | 2710             | OR | 0   |      |   |
| Fluoride          | mg/L  | 20               | 0.043         | U  | 0                | U  |     |      |   |
| Phosphorus, Ortho | mg/L  | 20               | 0.01          | U  | 0                | U  |     |      |   |
| Nitrite           | mg/L  | 20               | 0.022         | U  | 0                | U  |     |      |   |
| Nitrate           | mg/L  | 20               | 5.7           |    | 5.5              |    | 4   |      |   |
| Sulfate           | mg/L  | 20               | 145           | OR | 145              | OR | 0   |      |   |



GENCHEM

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB94471

SDG No.: LB94471

Contract:                     

Lab Code: CHEM

Case No.: LB94471

SAS No.: LB94471

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| Analyte           | Units | True Value | Result | C | %<br>Recovery | Acceptance<br>Limits | M |
|-------------------|-------|------------|--------|---|---------------|----------------------|---|
| LB94471BSW        |       |            |        |   |               |                      |   |
| Bromide           | mg/L  | 10         | 9.2    |   | 92            | 90 - 110             |   |
| Chloride          | mg/L  | 3          | 2.8    |   | 93.3          | 90 - 110             |   |
| Fluoride          | mg/L  | 2          | 2      |   | 100           | 90 - 110             |   |
| Phosphorus, Ortho | mg/L  | 5          | 5      |   | 100           | 90 - 110             |   |
| Nitrite           | mg/L  | 3          | 2.8    |   | 93.3          | 90 - 110             |   |
| Nitrate           | mg/L  | 2.5        | 2.3    |   | 92            | 90 - 110             |   |
| Sulfate           | mg/L  | 15         | 15     |   | 100           | 90 - 110             |   |

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