



## GENCHEM

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### INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB87218

SDG No.: LB87218

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

Case No.: LB87218

SAS No.: LB87218

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

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

---

| Sample ID | Analyte | Result<br>mg/L | True Value | %<br>Recovery | %<br>RSD | Acceptance<br>Window (%R) | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|---------|----------------|------------|---------------|----------|---------------------------|---|------------------|------------------|---------------|
| ICV1      | Cyanide | 0.094          | 0.099      | 94.9          | 0        | 85 - 115                  |   | 05/03/2017       | 10:40            | LB87218       |

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

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

| Sample ID | Analyte | Result<br>mg/L | True Value | %<br>Recovery | %<br>RSD | Acceptance<br>Window (%R) | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|---------|----------------|------------|---------------|----------|---------------------------|---|------------------|------------------|---------------|
| CCV1      | Cyanide | 0.24           | 0.25       | 96            | 0        | 90 - 110                  |   | 05/03/2017       | 10:40            | LB87218       |
| CCV2      | Cyanide | 0.25           | 0.25       | 100           | 0        | 90 - 110                  |   | 05/03/2017       | 10:46            | LB87218       |
| CCV3      | Cyanide | 0.25           | 0.25       | 100           | 0        | 90 - 110                  |   | 05/03/2017       | 10:46            | LB87218       |



**GENCHEM**

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**INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY**

**Client:** LB87218

**SDG No.:** LB87218

**Contract:**                     

**Lab Code:** CHEM

**Case No.:** LB87218

**SAS No.:** LB87218

| 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      | Cyanide | 0.0013         | +/-0.005            | U            |     | 0.005 |   | 05/03/2017       | 10:40            | LB87218       |



**GENCHEM**

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### INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** LB87218

SDG No.: LB87218

**Contract:**

Lab Code: CHEM

**Case No.:** LB87218

**SAS No.:** LB87218

| 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      | Cyanide | 0.0012         | +/-0.005            | U            |     | 0.005 |   | 05/03/2017       | 10:40            | LB87218       |
| CCB2      | Cyanide | 0.0013         | +/-0.005            | U            |     | 0.005 |   | 05/03/2017       | 10:46            | LB87218       |
| CCB3      | Cyanide | 0.0015         | +/-0.005            | U            |     | 0.005 |   | 05/03/2017       | 10:46            | LB87218       |



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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB87218

SDG No.: LB87218

Contract: Lab Code: CHEM

Case No.: LB87218

SAS No.: LB87218

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



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## Report of Analysis

|                   |             |                 |         |
|-------------------|-------------|-----------------|---------|
| Client:           |             | Date Collected: |         |
| Project:          | LB87218     | Date Received:  |         |
| Client Sample ID: | HIGHPB98637 | SDG No.:        | LB87218 |
| Lab Sample ID:    | HIGHPB98637 | Matrix:         | WATER   |
| Level (low/med):  | low         | % Solid:        | 0       |

| Cas     | Parameter | Conc. | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|---------|-----------|-------|------|----|-------|-----|------------|-------|-----------|------------|----------|
| 57-12-5 | Cyanide   | 0.49  |      | 1  | 0.003 |     | 0.005      | mg/L  |           | 05/03/2017 | 9012B    |



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## Report of Analysis

|                   |                  |                 |                      |
|-------------------|------------------|-----------------|----------------------|
| Client:           |                  | Date Collected: | 5/1/2017 12:00:00 AM |
| Project:          | LB87218          | Date Received:  | 5/1/2017 12:00:00 AM |
| Client Sample ID: | TP2-COMP(1-10FT) | SDG No.:        | LB87218              |
| Lab Sample ID:    | I2936-05         | Matrix:         | Solid                |
| Level (low/med):  | low              | % Solid:        | 88.7                 |

| Cas     | Parameter | Conc. | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|-------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | 0.08  | J    | 1  | 0.036 |     | 0.27       | mg/Kg | 05/02/2017 | 05/03/2017 | 9012B    |



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## Report of Analysis

|                   |                     |                 |                      |
|-------------------|---------------------|-----------------|----------------------|
| Client:           |                     | Date Collected: | 5/1/2017 12:00:00 AM |
| Project:          | LB87218             | Date Received:  | 5/1/2017 12:00:00 AM |
| Client Sample ID: | TP3-COMP(0.5-4.5FT) | SDG No.:        | LB87218              |
| Lab Sample ID:    | I2936-11            | Matrix:         | Solid                |
| Level (low/med):  | low                 | % Solid:        | 88.6                 |

| Cas     | Parameter | Conc. | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|-------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | 0.067 | J    | 1  | 0.035 |     | 0.27       | mg/Kg | 05/02/2017 | 05/03/2017 | 9012B    |





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## Report of Analysis

|                   |                   |                 |                      |
|-------------------|-------------------|-----------------|----------------------|
| Client:           |                   | Date Collected: | 5/1/2017 12:00:00 AM |
| Project:          | LB87218           | Date Received:  | 5/1/2017 12:00:00 AM |
| Client Sample ID: | TP6-COMP(0.5-5FT) | SDG No.:        | LB87218              |
| Lab Sample ID:    | I2936-17          | Matrix:         | Solid                |
| Level (low/med):  | low               | % Solid:        | 88.6                 |

| Cas     | Parameter | Conc. | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|-------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | 0.074 | J    | 1  | 0.035 |     | 0.27       | mg/Kg | 05/02/2017 | 05/03/2017 | 9012B    |



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## Report of Analysis

|                   |           |                 |                      |
|-------------------|-----------|-----------------|----------------------|
| Client:           |           | Date Collected: | 5/1/2017 12:00:00 AM |
| Project:          | LB87218   | Date Received:  | 5/1/2017 12:00:00 AM |
| Client Sample ID: | 5040-COMP | SDG No.:        | LB87218              |
| Lab Sample ID:    | I2940-01  | Matrix:         | Solid                |
| Level (low/med):  | low       | % Solid:        | 82.5                 |

| Cas     | Parameter | Conc. | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met. |
|---------|-----------|-------|------|----|-------|-----|------------|-------|------------|------------|----------|
| 57-12-5 | Cyanide   | 0.12  | J    | 1  | 0.038 |     | 0.29       | mg/Kg | 05/02/2017 | 05/03/2017 | 9012B    |



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## Report of Analysis

|                   |            |                 |         |
|-------------------|------------|-----------------|---------|
| Client:           |            | Date Collected: |         |
| Project:          | LB87218    | Date Received:  |         |
| Client Sample ID: | LOWPB98637 | SDG No.:        | LB87218 |
| Lab Sample ID:    | LOWPB98637 | Matrix:         | WATER   |
| Level (low/med):  | low        | % Solid:        | 0       |

| Cas     | Parameter | Conc. | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met. |
|---------|-----------|-------|------|----|-------|-----|------------|-------|-----------|------------|----------|
| 57-12-5 | Cyanide   | 0.011 |      | 1  | 0.003 |     | 0.005      | mg/L  |           | 05/03/2017 | 9012B    |



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## Report of Analysis

|                   |            |                 |         |
|-------------------|------------|-----------------|---------|
| Client:           |            | Date Collected: |         |
| Project:          | LB87218    | Date Received:  |         |
| Client Sample ID: | LOWPB98637 | SDG No.:        | LB87218 |
| Lab Sample ID:    | LOWPB98637 | 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



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PREPARATION BLANK SUMMARY

Client: LB87218

SDG No.: LB87218

Instrument: Konelab 20

| Sample ID | Analyte | Result<br>(mg/Kg) | Acceptance<br>Limit | Conc<br>Qual       | LOD<br>mg/Kg | CRQL<br>mg/Kg   | M | Analysis<br>Date         | Analysis<br>Time    | Run     |
|-----------|---------|-------------------|---------------------|--------------------|--------------|-----------------|---|--------------------------|---------------------|---------|
| PB98637BL | Cyanide | SOLID<br>0.068    | <0.25               | Batch Number:<br>J |              | PB98637<br>0.25 |   | Prep Date:<br>05/03/2017 | 05/02/2017<br>10:40 | LB87218 |



GENCHEM  
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MATRIX SPIKE SUMMARY

client: LB87218 level: low sdg no.: LB87218  
contract: lab code: CHEM case no.: LB87218 sas no.: LB87218  
matrix: Solid sample id: I2936-05 client id: TP2-COMP(1-10FT)MS  
Percent Solids for Sample: 88.7 Spiked ID: I2936-05MS Percent Solids for Spike Sample: 88.7

| Analyte | Units | Acceptance<br>Limit %R | Spiked<br>Result | C | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M |
|---------|-------|------------------------|------------------|---|------------------|---|----------------|---------------|------|---|
| Cyanide | mg/Kg | 75 - 125               | 2.1              |   | 0.08             | J | 2.2            | 92            |      |   |



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MATRIX SPIKE DUPLICATE SUMMARY

client: LB87218 level: low sdg no.: LB87218  
contract: lab code: CHEM case no.: LB87218 sas no.: LB87218  
matrix: Solid sample id: I2936-05 client id: TP2-COMP(1-10FT)MSD  
Percent Solids for Sample: 88.7 Spiked ID: I2936-05MSD Percent Solids for Spike Sample: 88.7

| Analyte | Units | Acceptance<br>Limit %R | MSD<br>Result | C | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M |
|---------|-------|------------------------|---------------|---|------------------|---|----------------|---------------|------|---|
| Cyanide | mg/Kg | 75 - 125               |               | 2 | 0.08             | J | 2.2            | 87            |      |   |

# GENCHEM

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## DUPLICATE SAMPLE SUMMARY

**Client:** LB87218      **Level:** LOW      **SDG No.:** LB87218  
**Contract:**                           **Lab Code:** CHEM      **Case No.:** LB87218      **SAS No.:** LB87218  
**Matrix:** Solid      **Sample ID:** I2936-05      **Client ID:** TP2-COMP(1-10FT)DUP  
**Percent Solids for Sample:** 88.7      **Duplicate ID** I2936-05DUP      **Percent Solids for Spike Sample:** 88.7

| Analyte | Units | Acceptance<br>Limit | Sample<br>Result | C | Duplicate<br>Result | C | RPD | Qual | M |
|---------|-------|---------------------|------------------|---|---------------------|---|-----|------|---|
| Cyanide | mg/Kg | 20                  | 0.08             | J | 0.065               | J | 21  | *    |   |



# GENCHEM

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## DUPLICATE SAMPLE SUMMARY

**Client:** LB87218      **Level:** LOW      **SDG No.:** LB87218  
**Contract:**                           **Lab Code:** CHEM      **Case No.:** LB87218      **SAS No.:** LB87218  
**Matrix:** Solid      **Sample ID:** I2936-05MS      **Client ID:** TP2-COMP(1-10FT)MSD  
**Percent Solids for Sample:** 88.7      **Duplicate ID** I2936-05MSD      **Percent Solids for Spike Sample:** 88.7

| Analyte | Units | Acceptance<br>Limit | Sample<br>Result | C | Duplicate<br>Result | C | RPD | Qual | M |
|---------|-------|---------------------|------------------|---|---------------------|---|-----|------|---|
| Cyanide | mg/Kg | 20                  | 2.1              |   |                     | 2 | 5   |      |   |



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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB87218

SDG No.: LB87218

Contract:

Lab Code: CHEM

Case No.: LB87218

SAS No.: LB87218

| Analyte              | Units | True Value | Result | C | %<br>Recovery | Acceptance<br>Limits | M |
|----------------------|-------|------------|--------|---|---------------|----------------------|---|
| PB98637BS<br>Cyanide | mg/Kg | 4.9        | 4.8    |   | 98            | 85 - 115             |   |