

# Analytical Summary Report

Analysis Method: 7196A

ANALYST: Indiana

Parameter: Hexavalent Chromium

SUPERVISOR REVIEW BY: apatel

Run Number: LB89224

pH Meter ID: WC pH Meter-1

| Reagent/Standard                      | Lot/Log # |
|---------------------------------------|-----------|
| Calibration Std. hexchrome 0.1 ppm    | WP56896   |
| Calibration Std. hexchrome 0.05 ppm   | WP56895   |
| 5N sulfuric acid                      | WP56414   |
| Calibratation STD HexaChrome 1 PPM    | WP56898   |
| Calibratation STD Hexa Chrome 0.5 PPM | WP56897   |
| calibration std. hexchrome 0.01 ppm   | WP56893   |
| calibration std. hexchrome 0 ppm      | WP56892   |
| Hexavalent Chromium ICV Std.          | WP56900   |
| Hexavalent Chromium CCV Std           | WP56901   |
| hexavalent chromium color reagent     | WP56891   |
| HNO3 Hex-Chrome, 5M                   | WP56413   |
| Calibration std Hexachrome, 0.025ppm  | WP56894   |

Intercept: 0.0002

Slope: 0.7798

Regression: 0.999915

| Seq | Lab ID | True Value (mg/l) | DF | Initial Vol (ml/gm) | Final Vol (ml) | pH HN03 | pH H2SO4 | Absorb. at 540 |       | Absorbance Difference | Anal Date  | Anal Time |
|-----|--------|-------------------|----|---------------------|----------------|---------|----------|----------------|-------|-----------------------|------------|-----------|
|     |        |                   |    |                     |                |         |          | Backgrnd       | Color |                       |            |           |
| 1   | CAL1   | 0                 | 1  | 100                 | 100            |         | 2.30     | 0.000          | 0.000 | 0.000                 | 08/03/2017 | 12:00     |
| 2   | CAL2   | 0.01              | 1  | 100                 | 100            |         | 1.60     | 0.000          | 0.007 | 0.007                 | 08/03/2017 | 12:00     |
| 3   | CAL3   | 0.025             | 1  | 100                 | 100            |         | 2.44     | 0.000          | 0.017 | 0.017                 | 08/03/2017 | 12:01     |
| 4   | CAL4   | 0.05              | 1  | 100                 | 100            |         | 2.13     | 0.000          | 0.038 | 0.038                 | 08/03/2017 | 12:01     |
| 5   | CAL5   | 0.1               | 1  | 100                 | 100            |         | 1.90     | 0.000          | 0.079 | 0.079                 | 08/03/2017 | 12:02     |
| 6   | CAL6   | 0.5               | 1  | 100                 | 100            |         | 1.54     | 0.000          | 0.398 | 0.398                 | 08/03/2017 | 12:02     |
| 7   | CAL7   | 1                 | 1  | 100                 | 100            |         | 2.38     | 0.000          | 0.776 | 0.776                 | 08/03/2017 | 12:03     |



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| Seq | Lab ID          | True Value (mg/l) | DF | Initial Vol (ml/gm) | Final Vol (ml) | pH HN03 | pH H2SO4 | Absorb. at 540 |       | Absorbance Difference | Result | Anal Date  | Anal Time |
|-----|-----------------|-------------------|----|---------------------|----------------|---------|----------|----------------|-------|-----------------------|--------|------------|-----------|
|     |                 |                   |    |                     |                |         |          | Backgrnd       | Color |                       |        |            |           |
| 1   | ICV             | 0.5               | 1  | 100                 | 100            |         | 2.10     | 0.000          | 0.389 | 0.389                 | 0.499  | 08/03/2017 | 12:03     |
| 2   | ICB             |                   | 1  | 100                 | 100            |         | 1.93     | 0.000          | 0.000 | 0.000                 | 0.000  | 08/03/2017 | 12:04     |
| 3   | CCV1            | 0.5               | 1  | 100                 | 100            |         | 1.70     | 0.000          | 0.391 | 0.391                 | 0.501  | 08/03/2017 | 12:04     |
| 4   | CCB1            |                   | 1  | 100                 | 100            |         | 2.40     | 0.000          | 0.000 | 0.000                 | 0.000  | 08/03/2017 | 12:05     |
| 5   | PB101190BL      |                   | 1  | 2.52                | 100            | 7.80    | 2.20     | 0.000          | 0.000 | 0.000                 | 0.000  | 08/03/2017 | 12:05     |
| 6   | PB101190BS      | 20                | 1  | 2.50                | 100            | 7.45    | 2.35     | 0.000          | 0.380 | 0.380                 | 0.487  | 08/03/2017 | 12:06     |
| 7   | I4546-01        |                   | 1  | 2.51                | 100            | 7.92    | 1.74     | 0.010          | 0.010 | 0.000                 | 0.000  | 08/03/2017 | 12:06     |
| 8   | I4558-02        |                   | 1  | 2.50                | 100            | 7.32    | 1.82     | 0.018          | 0.018 | 0.000                 | 0.000  | 08/03/2017 | 12:07     |
| 9   | I4558-04        |                   | 1  | 2.55                | 100            | 7.12    | 2.18     | 0.027          | 0.027 | 0.000                 | 0.000  | 08/03/2017 | 12:07     |
| 10  | I4559-01        |                   | 1  | 2.50                | 100            | 7.55    | 2.31     | 0.014          | 0.015 | 0.001                 | 0.001  | 08/03/2017 | 12:08     |
| 11  | I4559-03        |                   | 1  | 2.50                | 100            | 7.32    | 1.64     | 0.012          | 0.012 | 0.000                 | 0.000  | 08/03/2017 | 12:08     |
| 12  | I4559-03DUP     |                   | 1  | 2.53                | 100            | 7.15    | 1.81     | 0.011          | 0.011 | 0.000                 | 0.000  | 08/03/2017 | 12:09     |
| 13  | I4559-03MSPre   | 40                | 2  | 2.51                | 100            | 7.88    | 2.27     | 0.013          | 0.369 | 0.356                 | 0.456  | 08/03/2017 | 12:09     |
| 14  | I4559-03MS2Ins  | 1284              | 40 | 2.51                | 100            | 7.33    | 2.30     | 0.010          | 0.630 | 0.620                 | 0.795  | 08/03/2017 | 12:10     |
| 15  | CCV2            | 0.5               | 1  | 100                 | 100            |         | 1.72     | 0.000          | 0.391 | 0.391                 | 0.501  | 08/03/2017 | 12:10     |
| 16  | CCB2            |                   | 1  | 100                 | 100            |         | 2.22     | 0.000          | 0.000 | 0.000                 | 0.000  | 08/03/2017 | 12:11     |
| 17  | I4559-03MS3Post | 40                | 2  | 2.53                | 100            | 7.10    | 1.55     | 0.015          | 0.378 | 0.363                 | 0.465  | 08/03/2017 | 12:11     |
| 18  | I4560-02        |                   | 1  | 2.54                | 100            | 7.08    | 2.34     | 0.023          | 0.024 | 0.001                 | 0.001  | 08/03/2017 | 12:12     |
| 19  | I4560-04        |                   | 1  | 2.53                | 100            | 7.66    | 2.21     | 0.011          | 0.011 | 0.000                 | 0.000  | 08/03/2017 | 12:12     |
| 20  | I4562-01        |                   | 1  | 2.50                | 100            | 7.74    | 2.48     | 0.013          | 0.013 | 0.000                 | 0.000  | 08/03/2017 | 12:13     |
| 21  | I4562-04        |                   | 1  | 2.54                | 100            | 7.13    | 1.60     | 0.008          | 0.008 | 0.000                 | 0.000  | 08/03/2017 | 12:13     |
| 22  | I4562-07        |                   | 1  | 2.55                | 100            | 7.25    | 1.82     | 0.007          | 0.007 | 0.000                 | 0.000  | 08/03/2017 | 12:14     |
| 23  | I4562-10        |                   | 1  | 2.51                | 100            | 7.44    | 2.47     | 0.010          | 0.011 | 0.001                 | 0.001  | 08/03/2017 | 12:14     |
| 24  | I4562-13        |                   | 1  | 2.52                | 100            | 7.39    | 2.28     | 0.005          | 0.005 | 0.000                 | 0.000  | 08/03/2017 | 12:15     |
| 25  | I4562-16        |                   | 1  | 2.55                | 100            | 7.51    | 2.14     | 0.009          | 0.009 | 0.000                 | 0.000  | 08/03/2017 | 12:15     |
| 26  | I4562-19        |                   | 1  | 2.51                | 100            | 7.91    | 1.66     | 0.016          | 0.016 | 0.000                 | 0.000  | 08/03/2017 | 12:16     |
| 27  | CCV3            | 0.5               | 1  | 100                 | 100            |         | 2.04     | 0.000          | 0.391 | 0.391                 | 0.501  | 08/03/2017 | 12:16     |
| 28  | CCB3            |                   | 1  | 100                 | 100            |         | 1.92     | 0.000          | 0.000 | 0.000                 | 0.000  | 08/03/2017 | 12:17     |
| 29  | I4562-22        |                   | 1  | 2.52                | 100            | 7.60    | 1.83     | 0.008          | 0.008 | 0.000                 | 0.000  | 08/03/2017 | 12:17     |
| 30  | CCV4            | 0.5               | 1  | 100                 | 100            |         | 2.40     | 0.000          | 0.392 | 0.392                 | 0.502  | 08/03/2017 | 12:18     |
| 31  | CCB4            |                   | 1  | 100                 | 100            |         | 2.27     | 0.000          | 0.000 | 0.000                 | 0.000  | 08/03/2017 | 12:18     |