

# Analytical Summary Report

Analysis Method: 7196A

ANALYST: Indiana

Parameter: Hexavalent Chromium

SUPERVISOR REVIEW BY: apatel

Run Number: LB99600

pH Meter ID: WC pH Meter-1

| Reagent/Standard                      | Lot/Log # |
|---------------------------------------|-----------|
| Calibration Std. hexchrome 0.1 ppm    | WP70038   |
| Calibration Std. hexchrome 0.05 ppm   | WP70037   |
| 5N sulfuric acid                      | WP70044   |
| Calibratation STD HexaChrome 1 PPM    | WP70040   |
| Calibratation STD Hexa Chrome 0.5 PPM | WP70039   |
| calibration std. hexchrome 0.01 ppm   | WP70035   |
| calibration std. hexchrome 0 ppm      | WP70034   |
| Hexavalent Chromium ICV Std.          | WP69896   |
| Hexavalent Chromium CCV Std           | WP70043   |
| hexavalent chromium color reagent     | WP70013   |
| HNO3 Hex-Chrome, 5M                   | WP70045   |
| Calibration std Hexachrome, 0.025ppm  | WP70036   |

Intercept: 0.0005

Slope: 0.7711

Regression: 0.999976

| 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            |         | 2.16     | 0.000          | 0.000 | 0.000                 | 12/05/2018 | 15:50     |
| 2   | CAL2   | 0.01              | 1  | 100                 | 100            |         | 1.87     | 0.000          | 0.008 | 0.008                 | 12/05/2018 | 15:50     |
| 3   | CAL3   | 0.025             | 1  | 100                 | 100            |         | 1.52     | 0.000          | 0.017 | 0.017                 | 12/05/2018 | 15:51     |
| 4   | CAL4   | 0.05              | 1  | 100                 | 100            |         | 2.33     | 0.000          | 0.039 | 0.039                 | 12/05/2018 | 15:51     |
| 5   | CAL5   | 0.1               | 1  | 100                 | 100            |         | 2.47     | 0.000          | 0.080 | 0.080                 | 12/05/2018 | 15:52     |
| 6   | CAL6   | 0.5               | 1  | 100                 | 100            |         | 2.21     | 0.000          | 0.389 | 0.389                 | 12/05/2018 | 15:52     |
| 7   | CAL7   | 1                 | 1  | 100                 | 100            |         | 1.65     | 0.000          | 0.770 | 0.770                 | 12/05/2018 | 15:53     |



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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            |         | 1.80     | 0.000          | 0.392 | 0.392                 | 0.508  | 12/05/2018 | 15:53     |
| 2   | ICB             |                   | 1  | 100                 | 100            |         | 2.16     | 0.000          | 0.000 | 0.000                 | -0.001 | 12/05/2018 | 15:54     |
| 3   | CCV1            | 0.5               | 1  | 100                 | 100            |         | 2.22     | 0.000          | 0.392 | 0.392                 | 0.508  | 12/05/2018 | 15:54     |
| 4   | CCB1            |                   | 1  | 100                 | 100            |         | 1.63     | 0.000          | 0.000 | 0.000                 | -0.001 | 12/05/2018 | 15:55     |
| 5   | PB115370BL      |                   | 1  | 2.51                | 100            | 7.22    | 1.57     | 0.000          | 0.000 | 0.000                 | -0.001 | 12/05/2018 | 15:55     |
| 6   | PB115370BS      | 20                | 1  | 2.54                | 100            | 7.45    | 1.68     | 0.000          | 0.380 | 0.380                 | 0.492  | 12/05/2018 | 15:56     |
| 7   | J6206-01        |                   | 1  | 2.51                | 100            | 7.31    | 2.25     | 0.052          | 0.052 | 0.000                 | -0.001 | 12/05/2018 | 15:56     |
| 8   | J6206-03        |                   | 1  | 2.54                | 100            | 7.66    | 2.32     | 0.009          | 0.009 | 0.000                 | -0.001 | 12/05/2018 | 15:57     |
| 9   | J6206-03DUP     |                   | 1  | 2.53                | 100            | 7.90    | 1.74     | 0.008          | 0.008 | 0.000                 | -0.001 | 12/05/2018 | 15:57     |
| 10  | J6206-05        | 40                | 2  | 2.50                | 100            | 7.13    | 2.31     | 0.011          | 0.359 | 0.348                 | 0.451  | 12/05/2018 | 15:58     |
| 11  | J6206-07        | 40                | 2  | 2.50                | 100            | 7.13    | 2.31     | 0.011          | 0.359 | 0.348                 | 0.451  | 12/05/2018 | 15:58     |
| 12  | J6206-09        |                   | 1  | 2.55                | 100            | 7.87    | 1.80     | 0.048          | 0.048 | 0.000                 | -0.001 | 12/05/2018 | 15:59     |
| 13  | J6206-11        |                   | 1  | 2.50                | 100            | 7.90    | 1.73     | 0.027          | 0.027 | 0.000                 | -0.001 | 12/05/2018 | 15:59     |
| 14  | J6206-13        |                   | 1  | 2.53                | 100            | 7.13    | 2.13     | 0.158          | 0.158 | 0.000                 | -0.001 | 12/05/2018 | 16:00     |
| 15  | CCV2            | 0.5               | 1  | 100                 | 100            |         | 1.64     | 0.000          | 0.392 | 0.392                 | 0.508  | 12/05/2018 | 16:00     |
| 16  | CCB2            |                   | 1  | 100                 | 100            |         | 2.20     | 0.000          | 0.000 | 0.000                 | -0.001 | 12/05/2018 | 16:01     |
| 17  | J6206-15        |                   | 1  | 2.55                | 100            | 7.36    | 2.30     | 0.056          | 0.056 | 0.000                 | -0.001 | 12/05/2018 | 16:01     |
| 18  | J6206-17        |                   | 1  | 2.50                | 100            | 7.41    | 1.77     | 0.063          | 0.063 | 0.000                 | -0.001 | 12/05/2018 | 16:01     |
| 19  | J6206-19        |                   | 1  | 2.52                | 100            | 7.54    | 1.65     | 0.044          | 0.044 | 0.000                 | -0.001 | 12/05/2018 | 16:02     |
| 20  | PB115378BL      |                   | 1  | 2.50                | 100            | 7.61    | 2.18     | 0.000          | 0.000 | 0.000                 | -0.001 | 12/05/2018 | 16:02     |
| 21  | PB115378BS      | 20                | 1  | 2.54                | 100            | 7.04    | 2.29     | 0.000          | 0.377 | 0.377                 | 0.488  | 12/05/2018 | 16:03     |
| 22  | J6188-01        |                   | 1  | 2.51                | 100            | 7.68    | 1.63     | 0.025          | 0.025 | 0.000                 | -0.001 | 12/05/2018 | 16:03     |
| 23  | J6194-01        |                   | 1  | 2.54                | 100            | 7.34    | 1.84     | 0.028          | 0.028 | 0.000                 | -0.001 | 12/05/2018 | 16:04     |
| 24  | J6194-03        |                   | 1  | 2.55                | 100            | 7.69    | 2.20     | 0.012          | 0.012 | 0.000                 | -0.001 | 12/05/2018 | 16:04     |
| 25  | J6219-01        |                   | 1  | 2.50                | 100            | 7.50    | 1.53     | 0.010          | 0.010 | 0.000                 | -0.001 | 12/05/2018 | 16:05     |
| 26  | J6233-01        |                   | 1  | 2.51                | 100            | 7.33    | 1.70     | 0.008          | 0.011 | 0.003                 | 0.003  | 12/05/2018 | 16:05     |
| 27  | CCV3            | 0.5               | 1  | 100                 | 100            |         | 2.04     | 0.000          | 0.393 | 0.393                 | 0.509  | 12/05/2018 | 16:06     |
| 28  | CCB3            |                   | 1  | 100                 | 100            |         | 2.11     | 0.000          | 0.000 | 0.000                 | -0.001 | 12/05/2018 | 16:06     |
| 29  | J6233-03        |                   | 1  | 2.53                | 100            | 7.51    | 1.65     | 0.009          | 0.014 | 0.005                 | 0.006  | 12/05/2018 | 16:07     |
| 30  | J6233-03DUP     |                   | 1  | 2.50                | 100            | 7.22    | 1.57     | 0.010          | 0.015 | 0.005                 | 0.006  | 12/05/2018 | 16:07     |
| 31  | J6233-03MSPre   | 40                | 2  | 2.51                | 100            | 7.27    | 2.11     | 0.010          | 0.363 | 0.353                 | 0.457  | 12/05/2018 | 16:08     |
| 32  | J6233-03MS2Ins  | 1284              | 40 | 2.53                | 100            | 7.08    | 2.24     | 0.007          | 0.614 | 0.607                 | 0.787  | 12/05/2018 | 16:08     |
| 33  | J6233-03MS3Post | 40                | 2  | 2.52                | 100            | 7.11    | 2.33     | 0.013          | 0.369 | 0.356                 | 0.461  | 12/05/2018 | 16:09     |
| 34  | CCV4            | 0.5               | 1  | 100                 | 100            |         | 2.45     | 0.000          | 0.393 | 0.393                 | 0.509  | 12/05/2018 | 16:09     |
| 35  | CCB4            |                   | 1  | 100                 | 100            |         | 1.91     | 0.000          | 0.000 | 0.000                 | -0.001 | 12/05/2018 | 16:10     |