

# Analytical Summary Report

Analysis Method: 7196A

ANALYST: Indiana

Parameter: Hexavalent Chromium

SUPERVISOR REVIEW BY: apatel

Run Number: LB101849

pH Meter ID: WC pH Meter-1

| Reagent/Standard                      | Lot/Log # |
|---------------------------------------|-----------|
| Calibratation STD HexaChrome 1 PPM    | WP73267   |
| Calibratation STD Hexa Chrome 0.5 PPM | WP73266   |
| Calibration Std. hexchrome 0.1 ppm    | WP73265   |
| Calibration Std. hexchrome 0.05 ppm   | WP73264   |
| calibration std. hexchrome 0.01 ppm   | WP73262   |
| calibration std. hexchrome 0 ppm      | WP73261   |
| Hexavalent Chromium ICV Std.          | WP73268   |
| Hexavalent Chromium CCV Std           | WP73269   |
| hexavalent chromium color reagent     | WP73085   |
| 5N sulfuric acid                      | WP70044   |
| Calibration std Hexachrome, 0.025ppm  | WP73263   |
| HNO3 Hex-Chrome, 5M                   | WP70045   |

Intercept: 0.0005

Slope: 0.7722

Regression: 0.999979

| 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            |         | 2.10     | 0.000          | 0.000 | 0.000                 | 04/03/2019 | 15:30     |
| 2   | CAL2   | 0.01              | 1  | 100                 | 100            |         | 1.77     | 0.000          | 0.007 | 0.007                 | 04/03/2019 | 15:30     |
| 3   | CAL3   | 0.025             | 1  | 100                 | 100            |         | 1.63     | 0.000          | 0.018 | 0.018                 | 04/03/2019 | 15:31     |
| 4   | CAL4   | 0.05              | 1  | 100                 | 100            |         | 2.08     | 0.000          | 0.040 | 0.040                 | 04/03/2019 | 15:31     |
| 5   | CAL5   | 0.1               | 1  | 100                 | 100            |         | 2.34     | 0.000          | 0.079 | 0.079                 | 04/03/2019 | 15:32     |
| 6   | CAL6   | 0.5               | 1  | 100                 | 100            |         | 1.78     | 0.000          | 0.390 | 0.390                 | 04/03/2019 | 15:32     |
| 7   | CAL7   | 1                 | 1  | 100                 | 100            |         | 1.53     | 0.000          | 0.771 | 0.771                 | 04/03/2019 | 15:33     |



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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            |         | 1.64     | 0.000          | 0.392 | 0.392                 | 0.507  | 04/03/2019 | 15:33     |
| 2   | ICB             |                   | 1  | 100                 | 100            |         | 1.71     | 0.000          | 0.000 | 0.000                 | -0.001 | 04/03/2019 | 15:34     |
| 3   | CCV1            | 0.5               | 1  | 100                 | 100            |         | 2.06     | 0.000          | 0.393 | 0.393                 | 0.508  | 04/03/2019 | 15:34     |
| 4   | CCB1            |                   | 1  | 100                 | 100            |         | 2.24     | 0.000          | 0.000 | 0.000                 | -0.001 | 04/03/2019 | 15:35     |
| 5   | PB118581BL      |                   | 1  | 2.52                | 100            | 7.23    | 2.33     | 0.000          | 0.000 | 0.000                 | -0.001 | 04/03/2019 | 15:35     |
| 6   | PB118581BS      | 20                | 1  | 2.51                | 100            | 7.55    | 1.90     | 0.000          | 0.380 | 0.380                 | 0.491  | 04/03/2019 | 15:36     |
| 7   | K2197-01        |                   | 1  | 2.51                | 100            | 7.46    | 1.75     | 0.026          | 0.026 | 0.000                 | -0.001 | 04/03/2019 | 15:36     |
| 8   | K2197-03        |                   | 1  | 2.50                | 100            | 7.21    | 2.03     | 0.021          | 0.021 | 0.000                 | -0.001 | 04/03/2019 | 15:37     |
| 9   | K2199-01        |                   | 1  | 2.53                | 100            | 7.33    | 2.28     | 0.023          | 0.023 | 0.000                 | -0.001 | 04/03/2019 | 15:37     |
| 10  | K2199-03        |                   | 1  | 2.55                | 100            | 7.42    | 2.31     | 0.029          | 0.029 | 0.000                 | -0.001 | 04/03/2019 | 15:38     |
| 11  | K2203-01        |                   | 1  | 2.54                | 100            | 7.63    | 1.70     | 0.040          | 0.040 | 0.000                 | -0.001 | 04/03/2019 | 15:38     |
| 12  | K2203-03        |                   | 1  | 2.50                | 100            | 7.66    | 1.91     | 0.030          | 0.030 | 0.000                 | -0.001 | 04/03/2019 | 15:39     |
| 13  | K2214-03        |                   | 1  | 2.51                | 100            | 7.29    | 2.25     | 0.027          | 0.027 | 0.000                 | -0.001 | 04/03/2019 | 15:39     |
| 14  | K2214-07        |                   | 1  | 2.50                | 100            | 7.10    | 2.33     | 0.010          | 0.014 | 0.004                 | 0.005  | 04/03/2019 | 15:40     |
| 15  | CCV2            | 0.5               | 1  | 100                 | 100            |         | 2.09     | 0.000          | 0.393 | 0.393                 | 0.508  | 04/03/2019 | 15:40     |
| 16  | CCB2            |                   | 1  | 100                 | 100            |         | 1.63     | 0.000          | 0.000 | 0.000                 | -0.001 | 04/03/2019 | 15:41     |
| 17  | K2214-07DUP     |                   | 1  | 2.53                | 100            | 7.84    | 1.77     | 0.009          | 0.012 | 0.003                 | 0.003  | 04/03/2019 | 15:41     |
| 18  | K2214-07MSPre   | 40                | 2  | 2.52                | 100            | 7.16    | 1.80     | 0.015          | 0.359 | 0.344                 | 0.445  | 04/03/2019 | 15:42     |
| 19  | K2214-07MS2Ins  | 1284              | 40 | 2.51                | 100            | 7.14    | 2.21     | 0.013          | 0.607 | 0.594                 | 0.769  | 04/03/2019 | 15:42     |
| 20  | K2214-07MS3Post | 40                | 2  | 2.52                | 100            | 7.61    | 2.30     | 0.016          | 0.366 | 0.350                 | 0.453  | 04/03/2019 | 15:43     |
| 21  | K2230-01        |                   | 1  | 2.55                | 100            | 7.30    | 1.85     | 0.018          | 0.071 | 0.053                 | 0.068  | 04/03/2019 | 15:43     |
| 22  | K2231-01        |                   | 1  | 2.53                | 100            | 7.16    | 1.70     | 0.004          | 0.004 | 0.000                 | -0.001 | 04/03/2019 | 15:44     |
| 23  | K2232-01        |                   | 1  | 2.51                | 100            | 7.30    | 1.81     | 0.007          | 0.007 | 0.000                 | -0.001 | 04/03/2019 | 15:44     |
| 24  | PB118591BL      |                   | 1  | 2.50                | 100            | 7.69    | 2.10     | 0.000          | 0.000 | 0.000                 | -0.001 | 04/03/2019 | 15:45     |
| 25  | PB118591BS      | 20                | 1  | 2.51                | 100            | 7.21    | 2.35     | 0.000          | 0.376 | 0.376                 | 0.486  | 04/03/2019 | 15:45     |
| 26  | K2056-01        |                   | 1  | 2.54                | 100            | 7.16    | 1.73     | 0.015          | 0.017 | 0.002                 | 0.002  | 04/03/2019 | 15:46     |
| 27  | CCV3            | 0.5               | 1  | 100                 | 100            |         | 1.66     | 0.000          | 0.393 | 0.393                 | 0.508  | 04/03/2019 | 15:46     |
| 28  | CCB3            |                   | 1  | 100                 | 100            |         | 2.04     | 0.000          | 0.000 | 0.000                 | -0.001 | 04/03/2019 | 15:47     |
| 29  | K2056-02        |                   | 1  | 2.55                | 100            | 7.19    | 2.36     | 0.028          | 0.028 | 0.000                 | -0.001 | 04/03/2019 | 15:47     |
| 30  | K2056-03        |                   | 1  | 2.51                | 100            | 7.10    | 1.79     | 0.020          | 0.020 | 0.000                 | -0.001 | 04/03/2019 | 15:48     |
| 31  | K2056-04        |                   | 1  | 2.53                | 100            | 7.63    | 1.81     | 0.018          | 0.018 | 0.000                 | -0.001 | 04/03/2019 | 15:48     |
| 32  | K2186-01        |                   | 1  | 2.51                | 100            | 7.44    | 2.11     | 0.035          | 0.035 | 0.000                 | -0.001 | 04/03/2019 | 15:49     |
| 33  | K2186-05        |                   | 1  | 2.54                | 100            | 7.61    | 2.40     | 0.012          | 0.012 | 0.000                 | -0.001 | 04/03/2019 | 15:49     |
| 34  | K2186-09        |                   | 1  | 2.50                | 100            | 7.55    | 1.56     | 0.033          | 0.033 | 0.000                 | -0.001 | 04/03/2019 | 15:50     |
| 35  | K2186-13        |                   | 1  | 2.51                | 100            | 7.30    | 1.60     | 0.016          | 0.016 | 0.000                 | -0.001 | 04/03/2019 | 15:50     |
| 36  | K2186-13DUP     |                   | 1  | 2.52                | 100            | 7.75    | 2.35     | 0.015          | 0.015 | 0.000                 | -0.001 | 04/03/2019 | 15:51     |
| 37  | K2186-13MSPre   | 40                | 2  | 2.50                | 100            | 7.89    | 2.24     | 0.017          | 0.360 | 0.343                 | 0.444  | 04/03/2019 | 15:51     |
| 38  | K2186-13MS2Ins  | 1284              | 40 | 2.55                | 100            | 7.93    | 2.18     | 0.015          | 0.620 | 0.605                 | 0.783  | 04/03/2019 | 15:52     |
| 39  | CCV4            | 0.5               | 1  | 100                 | 100            |         | 1.80     | 0.000          | 0.394 | 0.394                 | 0.510  | 04/03/2019 | 15:52     |
| 40  | CCB4            |                   | 1  | 100                 | 100            |         | 2.04     | 0.000          | 0.000 | 0.000                 | -0.001 | 04/03/2019 | 15:53     |
| 41  | K2186-13MS3Post | 40                | 2  | 2.52                | 100            | 7.12    | 2.17     | 0.017          | 0.365 | 0.348                 | 0.450  | 04/03/2019 | 15:53     |
| 42  | K2186-17        |                   | 1  | 2.53                | 100            | 7.22    | 1.59     | 0.018          | 0.018 | 0.000                 | -0.001 | 04/03/2019 | 15:54     |

|    |          |     |   |      |     |      |      |       |       |       |        |            |       |
|----|----------|-----|---|------|-----|------|------|-------|-------|-------|--------|------------|-------|
| 43 | K2186-21 |     | 1 | 2.52 | 100 | 7.30 | 1.62 | 0.014 | 0.014 | 0.000 | -0.001 | 04/03/2019 | 15:54 |
| 44 | K2221-01 |     | 1 | 2.51 | 100 | 7.66 | 2.37 | 0.011 | 0.011 | 0.000 | -0.001 | 04/03/2019 | 15:55 |
| 45 | K2221-03 |     | 1 | 2.50 | 100 | 7.52 | 2.21 | 0.013 | 0.013 | 0.000 | -0.001 | 04/03/2019 | 15:55 |
| 46 | K2244-01 |     | 1 | 2.53 | 100 | 7.64 | 1.76 | 0.040 | 0.040 | 0.000 | -0.001 | 04/03/2019 | 15:56 |
| 47 | CCV5     | 0.5 | 1 | 100  | 100 |      | 1.92 | 0.000 | 0.394 | 0.394 | 0.510  | 04/03/2019 | 15:56 |
| 48 | CCB5     |     | 1 | 100  | 100 |      | 1.67 | 0.000 | 0.000 | 0.000 | -0.001 | 04/03/2019 | 15:57 |