

23 November 2020

Work Order: 2011136

Price: \$260.00

Dan Hamel  
EGLE-RRD-JACKSON  
301 E. Louis Glick Highway  
Jackson, MI 49201-1556  
RE: GELMAN SCIENCES, INC

This is the official environmental laboratory report for testing conducted by the Michigan Department of Environment, Great Lakes, and Energy. Analyses performed by the laboratory were conducted using methods published by the U.S. Environmental Protection Agency, Standard Methods for the Examination of Water and Wastewater, ASTM, or other published or approved reference methods.

Kirby Shane  
Laboratory Director

EGLE-RRD-JACKSON  
301 E. Louis Glick Highway  
Jackson MI, 49201-1556

Project: GELMAN SCIENCES, INC  
Site Code: 81000018  
Project Manager: Dan Hamel

**Reported:**  
11/23/2020

**Analytical Report for Samples**

| Sample ID   | Laboratory ID | Matrix | Date Sampled | Date Received | Qualifier |
|-------------|---------------|--------|--------------|---------------|-----------|
| MW-103s     | 2011136-01    | Water  | 11/12/2020   | 11/13/2020    |           |
| MW-103s dup | 2011136-02    | Water  | 11/12/2020   | 11/13/2020    |           |

**Notes and Definitions**

- ND Indicates compound analyzed for but not detected at or above the reporting limit (RL).
- RL Reporting Limit
- NA Not Applicable

Client ID: MW-103s

Lab ID: 2011136-01

| CAS #                   | Analyte     | Result | RL  | Units | Dilution | Analyzed Date | QC Batch | Method        | Qualifier |
|-------------------------|-------------|--------|-----|-------|----------|---------------|----------|---------------|-----------|
| <b>Organics-Dioxane</b> |             |        |     |       |          |               |          |               |           |
| 123-91-1                | 1,4-dioxane | 85     | 5.0 | ug/L  | 5        | 11/17/20      | B0K1712  | 8260 Modified |           |

**Client ID: MW-103s dup**  
**Lab ID: 2011136-02**

| CAS #                   | Analyte            | Result    | RL  | Units | Dilution | Analyzed Date | QC Batch | Method        | Qualifier |
|-------------------------|--------------------|-----------|-----|-------|----------|---------------|----------|---------------|-----------|
| <b>Organics-Dioxane</b> |                    |           |     |       |          |               |          |               |           |
| 123-91-1                | <b>1,4-dioxane</b> | <b>92</b> | 5.0 | ug/L  | 5        | 11/17/20      | B0K1712  | 8260 Modified |           |

**Organics-Dioxane - Quality Control**

| Analyte   | Result | RL  | Units | Spike Level                 | Source Result | %REC | %REC Limits | RPD  | RPD Limit | Analyzed   | Qualifier |
|---|--------|-----|-------|-----------------------------|---------------|------|-------------|------|-----------|------------|-----------|
| <b>Batch B0K1712 - Method: 5030</b>                       |        |     |       | <b>Prepared: 11/17/2020</b> |               |      |             |      |           |            |           |
| <b>Blank (B0K1712-BLK1)</b>                               |        |     |       |                             |               |      |             |      |           |            |           |
| 1,4-dioxane   | ND     | 1.0 | ug/L  |                             |               |      |             |      |           | 11/17/2020 |           |
| <b>LCS (B0K1712-BS1)</b>                                  |        |     |       |                             |               |      |             |      |           |            |           |
| 1,4-dioxane   | 9.92   | 1.0 | ug/L  | 10.00                       |               | 99.2 | 70-130      |      |           | 11/17/2020 |           |
| <b>Matrix Spike (B0K1712-MS1) Source: 2011136-01</b>      |        |     |       |                             |               |      |             |      |           |            |           |
| 1,4-dioxane   | 129    | 5.0 | ug/L  | 50.00                       | 84.6          | 89.5 | 70-130      |      |           | 11/17/2020 |           |
| <b>Matrix Spike Dup (B0K1712-MSD1) Source: 2011136-01</b> |        |     |       |                             |               |      |             |      |           |            |           |
| 1,4-dioxane   | 143    | 5.0 | ug/L  | 50.00                       | 84.6          | 117  | 70-130      | 10.3 | 30        | 11/17/2020 |           |

## Analysis Request Sheet

Lab Work Order Number

Project Name

Matrix

2011136

Gelman Sciences

WATER

Location ID  
**8100018/Location 6130**

Program

CC Email 1

Project TAT Days

Sample Collector  
**Dan Hamel**

Dept-Division-District  
**EGLE-RRD-Jackson**

Activity

CC Email 2

Project Due Date

Sample Collector Phone  
**(517) 745-6595**

State Project Manager  
**Dan Hamel**

Funding Source

CC Email 3

Accept Analysis hold time codes

Contract Firm

State Project Manager Email  
hameld@michigan.gov

Location Code  
**6130**

Overflow Lab Choice 1

Contract Firm Primary Contact

State Project Manager Phone  
**(517) 745-6595**

SUD Location Code

Overflow Lab Choice 2

Primary Contact Phone

| Lab Use Only | Field Sample Identification | Collection Date | Collection Time | Bottle Count | Comments                                   |
|--------------|-----------------------------|-----------------|-----------------|--------------|--|
| 1            | 01 MW-103s                  | 11/12/20        | 1416            | 2            | Please include QA/QC with lab Data Reports |
| 2            | 02 MW-103s dup              | 11/12/20        | 1416            | 2            | ↓ ↓  |
| 3            |                             |                 |                 |              |  |
| 4            |                             |                 |                 |              |  |
| 5            |                             |                 |                 |              |  |
| 6            |                             |                 |                 |              |  |
| 7            |                             |                 |                 |              |  |
| 8            |                             |                 |                 |              |  |
| 9            |                             |                 |                 |              |  |
| 10           |                             |                 |                 |              |  |

| ORGANIC CHEMISTRY   | MAD - DISSOLVED METALS   | MA - TOTAL METALS  | GENERAL CHEMISTRY   |
|---|--|--|---|
| VOA - Volatile Organic Acidic<br>Volatiles - Full List 1 2 3 4 5 6 7 8 9 10<br>BTEX/MTBE/TMB only 1 2 3 4 5 6 7 8 9 10<br>Chlorinated only 1 2 3 4 5 6 7 8 9 10<br>GRO 1 2 3 4 5 6 7 8 9 10<br>1,4 Dioxane 1 2 3 4 5 6 7 8 9 10 | Diss - Silver - Ag 1 2 3 4 5 6 7 8 9 10<br>Diss - Aluminum - Al 1 2 3 4 5 6 7 8 9 10<br>Diss - Arsenic - As 1 2 3 4 5 6 7 8 9 10<br>Diss - Boron - B 1 2 3 4 5 6 7 8 9 10<br>Diss - Barium - Ba 1 2 3 4 5 6 7 8 9 10<br>Diss - Beryllium - Be 1 2 3 4 5 6 7 8 9 10<br>Diss - Cadmium - Cd 1 2 3 4 5 6 7 8 9 10<br>Diss - Cobalt - Co 1 2 3 4 5 6 7 8 9 10<br>Diss - Chromium - Cr 1 2 3 4 5 6 7 8 9 10<br>Diss - Copper - Cu 1 2 3 4 5 6 7 8 9 10<br>Diss - Iron - Fe 1 2 3 4 5 6 7 8 9 10<br>Diss - Mercury - Hg 1 2 3 4 5 6 7 8 9 10<br>Diss - Lithium - Li 1 2 3 4 5 6 7 8 9 10<br>Diss - Manganese - Mn 1 2 3 4 5 6 7 8 9 10<br>Diss - Molybdenum - Mo 1 2 3 4 5 6 7 8 9 10<br>Diss - Nickel - Ni 1 2 3 4 5 6 7 8 9 10<br>Diss - Lead - Pb 1 2 3 4 5 6 7 8 9 10<br>Diss - Antimony - Sb 1 2 3 4 5 6 7 8 9 10<br>Diss - Selenium - Se 1 2 3 4 5 6 7 8 9 10<br>Diss - Strontium - Sr 1 2 3 4 5 6 7 8 9 10<br>Diss - Titanium - Ti 1 2 3 4 5 6 7 8 9 10<br>Diss - Thallium - Tl 1 2 3 4 5 6 7 8 9 10<br>Diss - Uranium - U 1 2 3 4 5 6 7 8 9 10<br>Diss - Vanadium - V 1 2 3 4 5 6 7 8 9 10<br>Diss - Zinc - Zn 1 2 3 4 5 6 7 8 9 10<br>Diss - Calcium - Ca 1 2 3 4 5 6 7 8 9 10<br>Diss - Potassium - K 1 2 3 4 5 6 7 8 9 10<br>Diss - Magnesium - Mg 1 2 3 4 5 6 7 8 9 10<br>Diss - Sodium - Na 1 2 3 4 5 6 7 8 9 10<br>Diss - Hardness - Ca, Mg 1 2 3 4 5 6 7 8 9 10 | Silver - Ag 1 2 3 4 5 6 7 8 9 10<br>Aluminum - Al 1 2 3 4 5 6 7 8 9 10<br>Arsenic - As 1 2 3 4 5 6 7 8 9 10<br>Boron - B 1 2 3 4 5 6 7 8 9 10<br>Barium - Ba 1 2 3 4 5 6 7 8 9 10<br>Beryllium - Be 1 2 3 4 5 6 7 8 9 10<br>Cadmium - Cd 1 2 3 4 5 6 7 8 9 10<br>Cobalt - Co 1 2 3 4 5 6 7 8 9 10<br>Chromium - Cr 1 2 3 4 5 6 7 8 9 10<br>Copper - Cu 1 2 3 4 5 6 7 8 9 10<br>Iron - Fe 1 2 3 4 5 6 7 8 9 10<br>Mercury - Hg 1 2 3 4 5 6 7 8 9 10<br>Lithium - Li 1 2 3 4 5 6 7 8 9 10<br>Manganese - Mn 1 2 3 4 5 6 7 8 9 10<br>Molybdenum - Mo 1 2 3 4 5 6 7 8 9 10<br>Nickel - Ni 1 2 3 4 5 6 7 8 9 10<br>Lead - Pb 1 2 3 4 5 6 7 8 9 10<br>Antimony - Sb 1 2 3 4 5 6 7 8 9 10<br>Selenium - Se 1 2 3 4 5 6 7 8 9 10<br>Strontium - Sr 1 2 3 4 5 6 7 8 9 10<br>Titanium - Ti 1 2 3 4 5 6 7 8 9 10<br>Thallium - Tl 1 2 3 4 5 6 7 8 9 10<br>Uranium - U 1 2 3 4 5 6 7 8 9 10<br>Vanadium - V 1 2 3 4 5 6 7 8 9 10<br>Zinc - Zn 1 2 3 4 5 6 7 8 9 10<br>Calcium - Ca 1 2 3 4 5 6 7 8 9 10<br>Potassium - K 1 2 3 4 5 6 7 8 9 10<br>Magnesium - Mg 1 2 3 4 5 6 7 8 9 10<br>Sodium - Na 1 2 3 4 5 6 7 8 9 10<br>Hardness - Ca, Mg 1 2 3 4 5 6 7 8 9 10 | GB Total Cyanide - CN 1 2 3 4 5 6 7 8 9 10<br>GCN Available Cyanide - CN 1 2 3 4 5 6 7 8 9 10<br>(Amenable / Weak Acid Dissociable)<br>CA Chlorophyll 1 2 3 4 5 6 7 8 9 10<br>GN Ortho Phosphate - OP 1 2 3 4 5 6 7 8 9 10<br>GN Diss Ortho Phosphate - *FF 1 2 3 4 5 6 7 8 9 10<br>GN Nitrite - NO <sub>2</sub> 1 2 3 4 5 6 7 8 9 10<br>GN Nitrate - NO <sub>3</sub> (Calc.) 1 2 3 4 5 6 7 8 9 10<br>GN Suspended Solids - SS 1 2 3 4 5 6 7 8 9 10<br>GN Dissolved Solids - TDS 1 2 3 4 5 6 7 8 9 10<br>MN Diss Solids - TDS (Calc.) 1 2 3 4 5 6 7 8 9 10<br>GN Turbidity 1 2 3 4 5 6 7 8 9 10<br>MN Total Alkalinity 1 2 3 4 5 6 7 8 9 10<br>MN Bicarb/Carb Alkalinity 1 2 3 4 5 6 7 8 9 10<br>(includes Total Alkalinity)<br>MN Chloride - Cl 1 2 3 4 5 6 7 8 9 10<br>MN Fluoride - F 1 2 3 4 5 6 7 8 9 10<br>MN Sulfate - SO <sub>4</sub> 1 2 3 4 5 6 7 8 9 10<br>MN Diss Chromium 6 - *FF 1 2 3 4 5 6 7 8 9 10<br>MN Conductivity 1 2 3 4 5 6 7 8 9 10<br>MN pH 1 2 3 4 5 6 7 8 9 10<br>GA Chem Oxyg Dem - COD 1 2 3 4 5 6 7 8 9 10<br>GA Diss Org Carbon - DOC - *FF 1 2 3 4 5 6 7 8 9 10<br>GN Diss Org Carbon - DOC (LF) 1 2 3 4 5 6 7 8 9 10<br>(Lab - Filtered & Preserved)<br>GA Total Org Carbon - TOC 1 2 3 4 5 6 7 8 9 10<br>GA Ammonia - NH <sub>3</sub> 1 2 3 4 5 6 7 8 9 10<br>GA Nitrate+Nitrite - NO <sub>3</sub> +NO <sub>2</sub> 1 2 3 4 5 6 7 8 9 10<br>GA Kjeldahl Nitrogen - KN 1 2 3 4 5 6 7 8 9 10<br>GA Total Phosphorus - TP 1 2 3 4 5 6 7 8 9 10 |

| Chain of Custody                   | Relinquished by                                | Received By   | Date / Time  |
|------------------------------------|--|---------------|--------------|
|                                    | Print Name & Org.<br><b>DAN HAMEL EGLE-RRD</b> | Lobby         |              |
|                                    | Signature:<br><i>Dan Hamel</i>                 |               |              |
|                                    | Print Name & Org.<br><b>Lobby</b>              | Melissa Smith | 11/13/201508 |
| Signature:<br><i>Melissa Smith</i> |  |               |              |
| Print Name & Org.                  |  |               |              |
| Signature:                         |  |               |              |