



Eden Research Laboratory

To: Biosphere

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Regarding: ASTM D5511 Biosphere Study update (1850 days)

# Update

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|                                    | Inoculum | Negative | Positive | Primo PP Straw with no Additive | Primo PP Straw with 1% Biosphere Additive | Primo PP Straw with 2% Biosphere Additive |
|------------------------------------|----------|----------|----------|---------------------------------|---|---|
| Cumulative Gas Volume (mL)         | 2120.8   | 2194.9   | 10818.6  | 1644.2                          | 24571.0                                   | 24594.1                                   |
| Percent CH <sub>4</sub> (%)        | 47.3     | 47.6     | 41.1     | 35.4                            | 54.3                                      | 53.9                                      |
| Volume CH <sub>4</sub> (mL)        | 1002.9   | 1044.6   | 4451.0   | 581.7                           | 13339.7                                   | 13255.1                                   |
| Mass CH <sub>4</sub> (g)           | 0.72     | 0.75     | 3.18     | 0.42                            | 9.53                                      | 9.47                                      |
| Percent CO <sub>2</sub> (%)        | 38.3     | 37.3     | 41.6     | 39.4                            | 34.9                                      | 35.2                                      |
| Volume CO <sub>2</sub> (mL)        | 813.2    | 818.8    | 4499.2   | 648.1                           | 8586.2                                    | 8652.2                                    |
| Mass CO <sub>2</sub> (g)           | 1.60     | 1.61     | 8.84     | 1.27                            | 16.87                                     | 17.00                                     |
| Sample Mass (g)                    | 10       | 10       | 10       | 20.0                            | 20.0                                      | 20  |
| Theoretical Sample Mass (g)        | 0.0      | 8.6      | 4.2      | 12.5                            | 12.5                                      | 12.5                                      |
| Biodegraded Mass (g)               | 0.97     | 1.00     | 4.79     | 0.66                            | 11.75                                     | 11.74                                     |
| Percent Biodegraded (%)            |          | 0.3      | 90.6     | -2.5                            | 86.0                                      | 86.0                                      |
| * Adjusted Percent Biodegraded (%) |          | 0.3      | 100.0    | -2.8                            | 95.0                                      | 94.9                                      |

\* The adjusted % biodegraded values are for informational purposes. It is not part of the method and will not be reported in the final report.

## Biodegradation

