



Eden Research Laboratory

To: Biosphere

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Regarding: ASTM D 5511-18 update for Biosphere Study - 1572 days

Update

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	Inoculum	Negative	Positive	APEX LDPE FILM CONTROL	APEX LDPE FILM W/ BIOS-PHERE
Cumulative Gas Volume (mL)	6876.2	6365.6	15307.1	6573.9	36234.9
Percent CH ₄ (%)	52.7	52.3	45.6	48.1	53.5
Volume CH ₄ (mL)	3623.5	3328.5	6986.7	3163.4	19385.4
Mass CH ₄ (g)	2.59	2.38	4.99	2.26	13.85
Percent CO ₂ (%)	35.9	36.0	40.3	36.0	34.9
Volume CO ₂ (mL)	2470.0	2292.3	6171.3	2363.9	12652.6
Mass CO ₂ (g)	4.85	4.50	12.12	4.64	24.85
Sample Mass (g)	10	10	10	20.0	20.0
Theoretical Sample Mass (g)	0.0	8.6	4.2	17.1	17.1
Biodegraded Mass (g)	3.26	3.01	7.05	2.96	17.16
Percent Biodegraded (%)		-3.0	89.7	-1.8	81.1
* Adjusted Percent Biodegraded (%)		-3.3	100.0	-2.0	90.4

* Outside of the ASTM D5511 method and on the assumption that the positive control (Cellulose) will fully biodegrade, all value have been proportionally adjusted.

Biodegradation

