

Eden Research Laboratory

# Update

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To: Hartalega

Date: 6/1/15

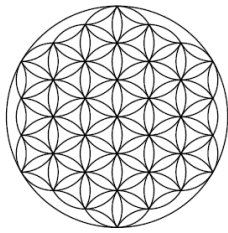
From: Thomas Poth

Number of pages including cover: 2

Regarding: ASTM D5526 Hartalega A, B, C & D Samples (202 days)

	Inoculum			Negative			Positive		
	60%	45%	35%	60%	45%	35%	60%	45%	35%
Percent Solid	60%	45%	35%	60%	45%	35%	60%	45%	35%
Cumulative Atmos	3.62	3.86	4.89	3.35	3.74	4.84	7.80	8.97	9.17
Converted Gas Volume (mL)	5586	5958	7551	5178	5785	7483	12046	13852	14175
Percent CH <sub>4</sub> (%)	50.2	51.1	60.4	48.4	52.5	54.4	51.9	52.2	57.3
Volume CH <sub>4</sub> (mL)	2804	3044	4561	2506	3037	4071	6252	7231	8122
Mass CH <sub>4</sub> (g)	2.00	2.17	3.26	1.79	2.17	2.91	4.47	5.16	5.80
Percent CO <sub>2</sub> (%)	30.7	31.5	39.7	27.8	33.5	39.5	36.7	40.2	45.4
Volume CO <sub>2</sub> (mL)	1715	1877	2998	1439	1938	2956	4421	5568	6435
Mass CO <sub>2</sub> (g)	3.37	3.69	5.89	2.83	3.81	5.81	8.68	10.94	12.64
Sample Mass (g)	1000	1000	1000	20	20	20	10	10	10
Theoretical Sample Mass (g)	0.0	0.0	0.00	17.14	17.14	17.14	4.42	4.42	4.42
Biodegraded Mass (g)	2.42	2.64	4.05	2.11	2.67	3.76	5.72	6.86	7.80
Percent Biodegraded (%)				-1.8	0.2	-1.7	74.6	95.5	84.8

	Inoculum			A - Untreated Nitrile Gloves			B - Treated Nitrile Gloves		
	60%	45%	35%	60%	45%	35%	60%	45%	35%
Percent Solid	60%	45%	35%	60%	45%	35%	60%	45%	35%
Cumulative Atmos	3.62	3.86	4.89	3.35	3.67	3.60	5.44	6.13	6.73
Converted Gas Volume (mL)	5586	5958	7551	5176	5670	5562	8405	9471	10398
Percent CH <sub>4</sub> (%)	50.2	51.1	60.4	35.6	35.8	36.9	38.2	39.1	42.3
Volume CH <sub>4</sub> (mL)	2804	3044	4561	1841	2029	2054	3212	3698	4395
Mass CH <sub>4</sub> (g)	2.00	2.17	3.26	1.32	1.45	1.47	2.29	2.64	3.14
Percent CO <sub>2</sub> (%)	30.7	31.5	39.7	34.0	35.8	35.5	28.8	32.7	34.7
Volume CO <sub>2</sub> (mL)	1715	1877	2998	1762	2028	1974	2424	3098	3606
Mass CO <sub>2</sub> (g)	3.37	3.69	5.89	3.46	3.98	3.88	4.76	6.09	7.08
Sample Mass (g)	1000	1000	1000	10	10	10	10	10	10
Theoretical Sample Mass (g)	0.0	0.0	0.00	6.23	6.23	6.23	6.23	6.23	6.23
Biodegraded Mass (g)	2.42	2.64	4.05	1.93	2.17	2.16	3.02	3.64	4.29
Percent Biodegraded (%)				-7.9	-4.0	-4.2	9.6	19.6	29.9



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	Inoculum			C - Treated Nitrile Gloves			D - Treated Nitrile Gloves		
	60%	45%	35%	60%	45%	35%	60%	45%	35%
Percent Solid	60%	45%	35%	60%	45%	35%	60%	45%	35%
Cumulative Atmos	3.62	3.86	4.89	5.10	5.54	6.50	5.44	5.77	6.29
Converted Gas Volume (mL)	5586	5958	7551	7880	8559	10043	8405	8915	9718
Percent CH <sub>4</sub> (%)	50.2	51.1	60.4	45.9	47.6	47.5	44.8	48.7	48.3
Volume CH <sub>4</sub> (mL)	2804	3044	4561	3619	4078	4766	3767	4341	4695
Mass CH <sub>4</sub> (g)	2.00	2.17	3.26	2.59	2.91	3.40	2.69	3.10	3.35
Percent CO <sub>2</sub> (%)	30.7	31.5	39.7	31.1	35.5	36.9	30.1	34.8	37.8
Volume CO <sub>2</sub> (mL)	1715	1877	2998	2447	3040	3710	2528	3098	3673
Mass CO <sub>2</sub> (g)	3.37	3.69	5.89	4.81	5.97	7.29	4.97	6.09	7.22
Sample Mass (g)	1000	1000	1000	10	10	10	10	10	10
Theoretical Sample Mass (g)	0.0	0.0	0.00	6.23	6.23	6.23	6.23	6.23	6.23
Biodegraded Mass (g)	2.42	2.64	4.05	3.25	3.81	4.54	3.37	3.98	4.48
Percent Biodegraded (%)				13.3	22.3	34.0	15.3	25.1	33.1