

Eden Research Laboratory

To: StyroChem - Melissa Wallum

Date: 5/17/11

# Update

From: Thomas Poth

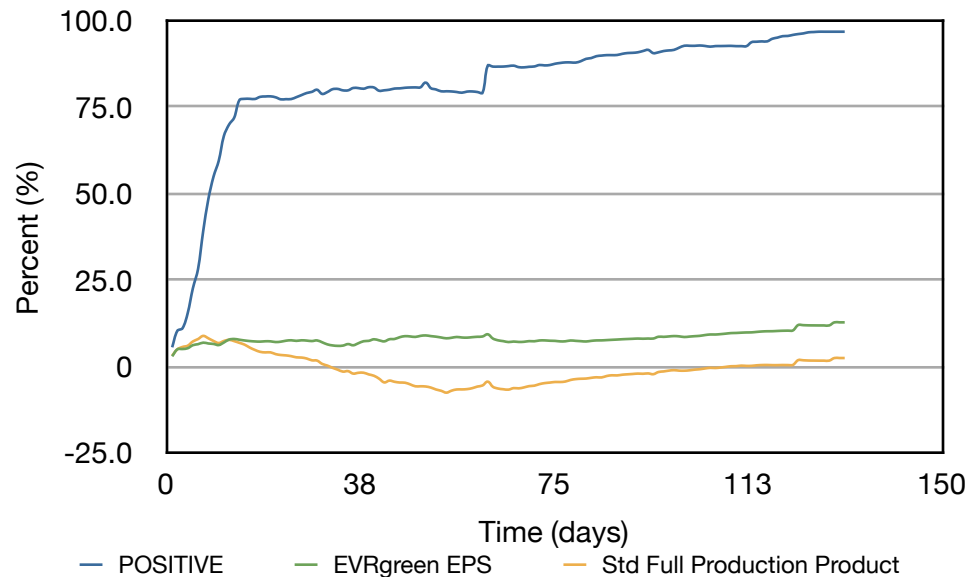
Number of pages including cover: 1

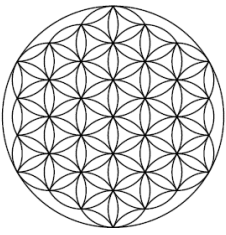
Regarding: StyroChem Cups in 133 days

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	Inculum	Positive	EVRgreen EPS	Std Full Production Product
Cumulative Gas Volume (mL)	7611.9	18805.4	10834.1	8207.3
Percent CH <sub>4</sub> (%)	42.9	48.1	41.9	37.2
Volume CH <sub>4</sub> (mL)	3262.1	9039.3	4537.7	3056.0
Mass CH <sub>4</sub> (g)	2.33	6.46	3.24	2.18
Percent CO <sub>2</sub> (%)	39.7	36.3	38.7	34.2
Volume CO <sub>2</sub> (mL)	3020.5	6827.7	4198.0	2806.8
Mass CO <sub>2</sub> (g)	5.93	13.41	8.25	5.51
Sample Mass (g)	1,000	12	10	10
Theoretical Sample Mass (g)	0.0	5.3	9.2	9.2
Biodegraded Mass (g)	3.37	8.50	4.68	3.14
Percent Biodegraded (%)		96.8	14.2	-2.4
Adjusted Percent Biodegraded (%)		100.0	14.7	-2.5

## Biodegradation



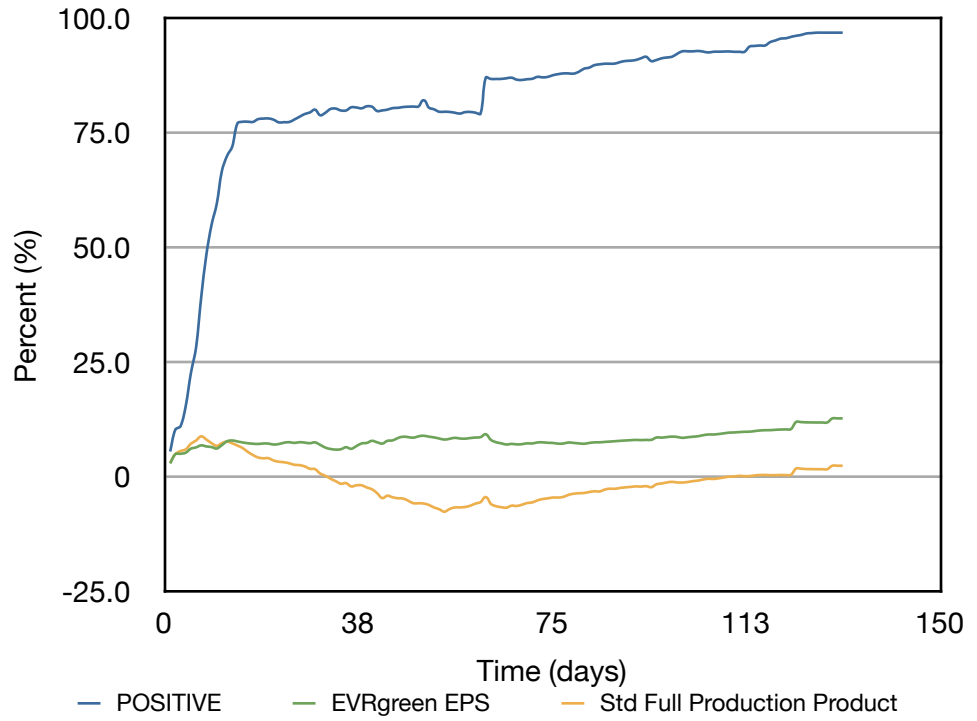


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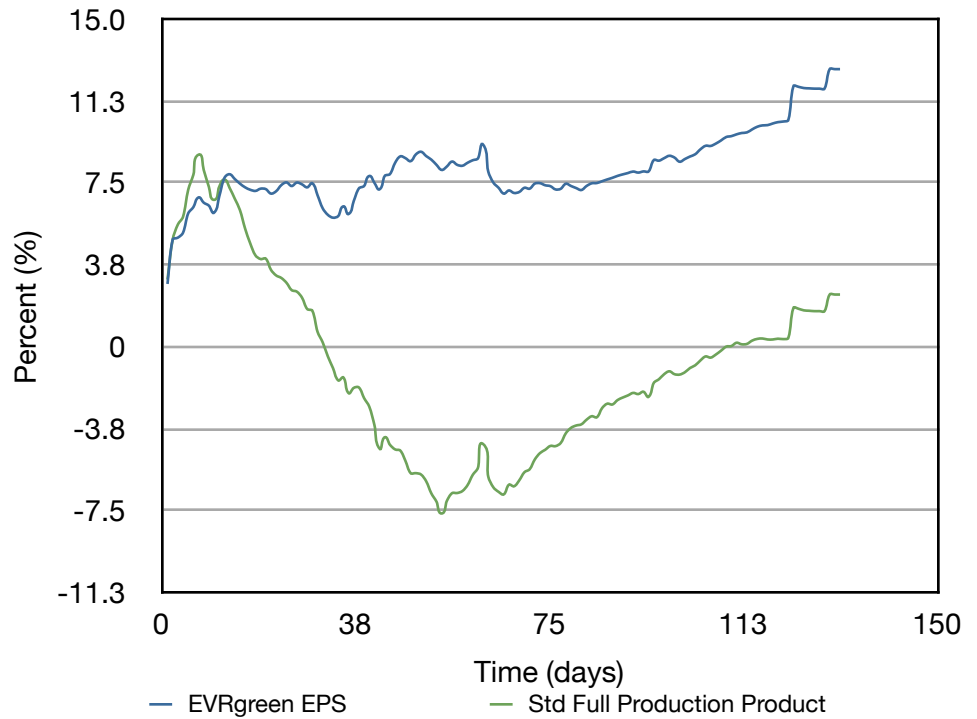
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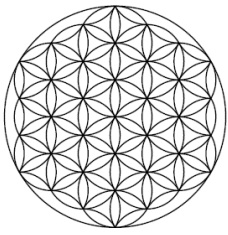
## Biodegradation



## Biodegradation



On day 63, two grams of cellulose were added to the positive control vessel. This is done to validate that the inoculum is still viable. This can be seen in the abrupt



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spike in graph 1 for the positive sample curve around days 63-65. During this period all vessels were also agitated but not opened.

There is argument that might support the concept of adding the absolute value of the blank controls (untreated) to the biodegradation values of the treated samples. This has been validated in other testing using GPC analysis.

This is only an update. The final report has yet to be produced.

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