Field Disintegration Report

Report Date: July 8, 2024

Compost Technology: In-Vessel (CMA-I)

Test Facility: Cedar Grove Composting- Everett, WA

Test Number: CG126

Project ID: # CO-390

Submitter: RadTech

Tested By:

Compost Manufacturing Alliance

2501 SE Mile Hill Dr., Suite A104

Port Orchard WA 98366

Table of Contents

Operational Test Details

Facility: Cedar Grove Composting

Process: CMA-I

Active Composting Time (days): 49

Placement Date: 4/17/2024

Extraction Date: 6/5/2024

Results Criteria:

Fiber-based products must demonstrate **>80% disintegration**

Non-fiber (plastic) products must demonstrate **>90% disintegration**

Coated paperboard products are considered conditionally accepted if a **passing dye test is performed. A dye test is successful if absorption of a water-based dye into both sides of the substrate is demonstrated.**

About the Test:

Static piles are created with commercial and residential yard waste & food scraps. They are then covered with a breathable membrane laminate cover. Forced air vents are under the piles to allow for oxygen adjustments. Temperature probes record oxygen and temperature levels throughout the process. The compost piles are static for the first four weeks of the process, then moved two additional times in 2-week intervals. The compost cycle is approximately 49-60 days. Temperatures range from approximately 110-175°F; this process is referred to as “hot and fast” because it is a short cycle and temperatures are typically the highest in this technology.

Field Summary:

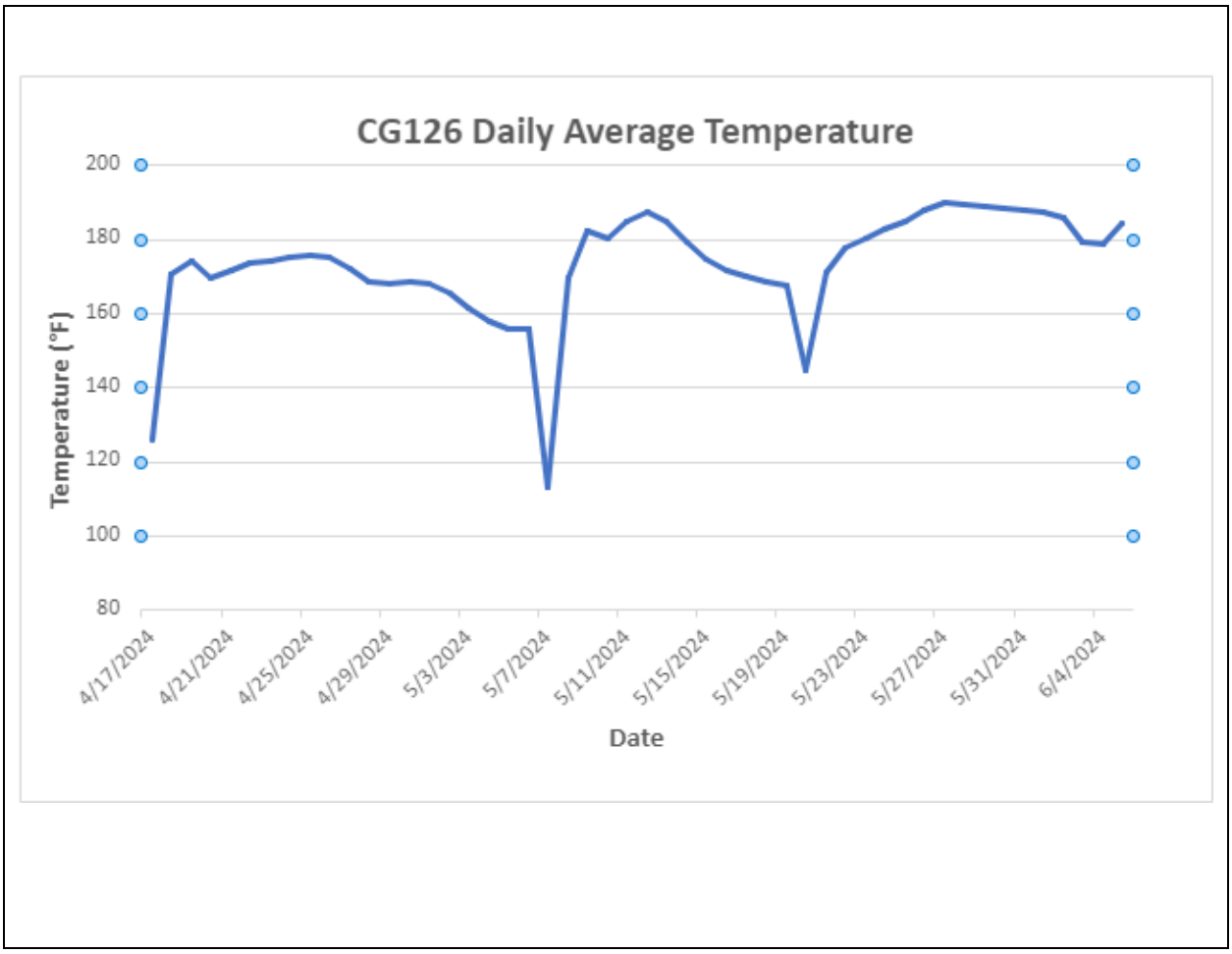
This information is from a sample of raw feedstock at the time products are placed in the test. These samples are selected at various locations throughout the pile. Many operators will hydrate the pile after the samples are placed and the pile is completed. The data below provides some characteristics of the initial feedstock, which may be used to determine the best composting recipe for product quality and disintegration of samples.

Acceptable Range for Sample Disintegration	
pH 4.5-8.2 ± 0.5 **C:N ratio** 20-35:1 ±5 **Moisture** 45-60% ±5% (Moisture at placement is not representative of moisture throughout processing. Facility may hydrate the pile only after sample bags are covered.)	**pH:** Acidity/Alkalinity **EC:** Electrical Conductivity **BD:** Bulk Density **N:** Nitrogen **TOC:** Total Organic Carbon **C:N:** Carbon/Nitrogen ratio **Moisture:** Moisture

				Dry Weight Basis			
Bag	**pH**	**Moisture (%)**	**BD (lb/yard)**	**EC (mmhos/cm)**	**N (%)**	**TOC (%)**	**C:N ratio**
A	5.3	56.9	854	5.27	1.6	36.8	23
B	4.9	56.1	765	6.08	1.4	33.5	24
C	6.6	55.5	694	3.55	1.2	36.5	30
D	5.6	58.4	767	4.64	1.4	37.3	27
E	4.6	61.2	772	7.19	1.5	30.2	20
F	5.0	58.2	720	7.01	1.4	37.1	27
Average	5.3	57.7	762	5.62	1.4	35.2	25

Temperature Report:

Temperature is assessed throughout the compost cycle, or field test. Each facility expects a unique temperature profile, but the minimum requirement is that temperature reaches 131°F for 15 consecutive days. Generally, dips in temperature indicate a turning event, where the compost pile is moved or turned.



Positive Controls Summary:

Positive control results for this field test. Controls are added to each sample bag to ensure the compost test is sufficient for accurate test results.

Sample ID	Result
CA1	PASS
CB1	PASS
CC1	PASS
CD1	LOST
CE1	LOST
CF1	PASS

Operational Results Summary:

Sample results summary, based on criteria for a passing field test (pg. 3 of this report).

PASS	**FAIL**
EBB-01	EBA-1 (Lost)
	UV-1C (Lost)
	UV-1L (Lost)

Sample Results

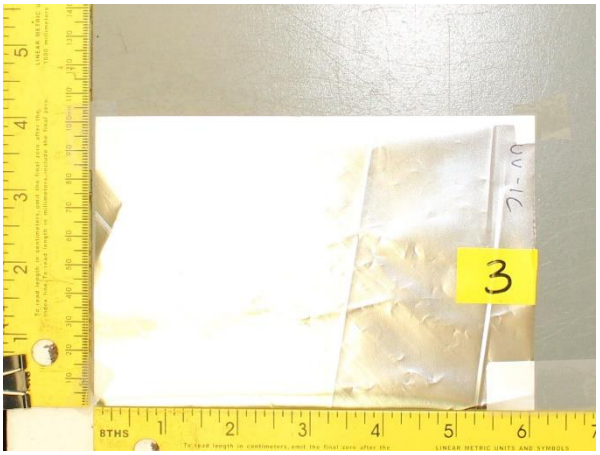
Sample ID	EBA-1	
Result	LOST	
CMA Sample #	1	
Bag Placement	D	
Comments	Will retest in CG128	

Pre-test Sample	Post-test Sample
	LOST

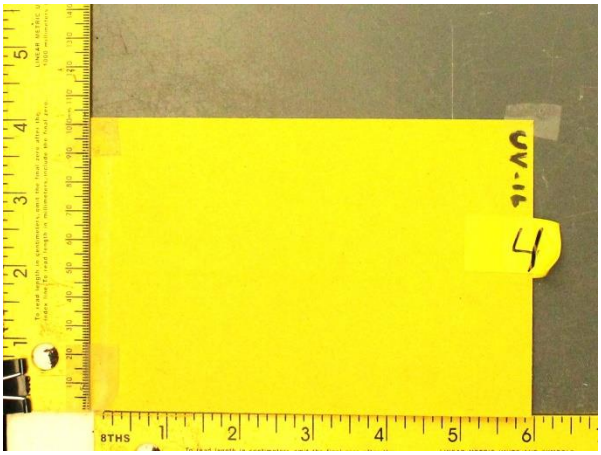
Sample ID	EBB-01	
Result	PASS	<5% Recovered
CMA Sample #	2	
Bag Placement	C	
Comments		

Pre-test Sample	Post-test Sample
	

Sample ID	UV-1C	
Result	LOST	
CMA Sample #	3	
Bag Placement	E	
Comments	Will retest in CG127.5	

Pre-test Sample	Post-test Sample
	LOST

Sample ID	UV-1L	
Result	LOST	
CMA Sample #	4	
Bag Placement	E	
Comments	Will retest in CG127.5	

Pre-test Sample	Post-test Sample
	LOST