

Prüfbericht - Nr.: 0154094628a 001
Test Report No.:

Seite 1 von 18
Page 1 of 18

Auftraggeber: Pontex Polyblend Co.,Ltd.
Client: No.23-6, Longxing LN., Sec.2, Fengxing RD., Tanzi Dist., Taichung City
42742, Taiwan

Gegenstand der Prüfung: BIO BBs 0.3g
Test Item: Additional model: BIO BBs 0.20g, 0.23g, 0.25g, 0.28g

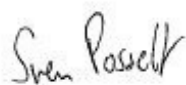
Bezeichnung: TCL141118-12
Identification:

Anlieferungszustand: Good
Delivery condition: **Eingangsdatum:** 2014-11-28
Date of Receipt:

Prüfort: Tested at TÜV Rheinland Shanghai
Testing location:

Prüfgrundlage: ISO 14855-1 in connection with DIN EN 13432
Test specification:

Prüfergebnis: The sample fulfills the requirements.
Test result:



2015-04-24 Sven Posselt Technical Manager

Datum	Name/Stellung	Unterschrift
Date	Name/Position	Signature

Sonstiges / Other Aspects:

Test period:
2014-12-16 to 2015-03-17

Remark: All the test data are refer to 0154077358a 001.

Abkürzungen:	ok / P = entspricht Prüfgrundlage	Abbreviations:	ok / P = passed
	fail / F = entspricht nicht Prüfgrundlage		fail / F = failed
	n.a. / N = nicht anwendbar		n.a. / N = not applicable

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.

This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.

Test Report No. : 0154094628a 001
Customer : Pontex Polyblend Co.,Ltd.

Page 2 of 18
Seite 2 von 18

1 Picture and detailed description of the test sample



Test Report No. : 0154094628a 001
Customer : Pontex Polyblend Co.,Ltd.

Page 3 of 18
Seite 3 von 18

2 Biodegradation

2.1 General test information

Reference material : Cellulose, particle size <20µm

Test vessels : 2000ml, the vessel used for biodegradation test is a high pressure conical flask, volume: 2000 ml. It was provided by Pyrex Co. Ltd.

CO₂-determination : Determination of the amount of carbon dioxide evolved by weighing the carbon dioxide absorbing system. The amount of carbon dioxide is calculated via the difference in the weight of the carbon dioxide absorbing trap in the beginning and in the end of the test.

Thermostat controlled oven : The biodegradation test is proceeded in a temperature controlled oven for maintaining the temperature needed.

2.2 Summary of test results

	Test material	Reference material
45 days biodegradation rate	61.4%	83.3%
Overall biodegradation rate	96.5%	97.9%
Test duration [days]	90	90
Observation	No abnormal findings	No abnormal findings

Validity Criteria

Validity Criteria :

Degree of biodegradation of reference material after 45 days > 70%? ☒ Yes ☐ No

Difference between percentage biodegradation of reference material in the different vessels at the end of test <20%? ☒ Yes ☐ No

Average CO₂ production in the blank vessels after 10 days in the range 50 mg to 150 mg CO₂/g volatile solids? ☒ Yes ☐ No

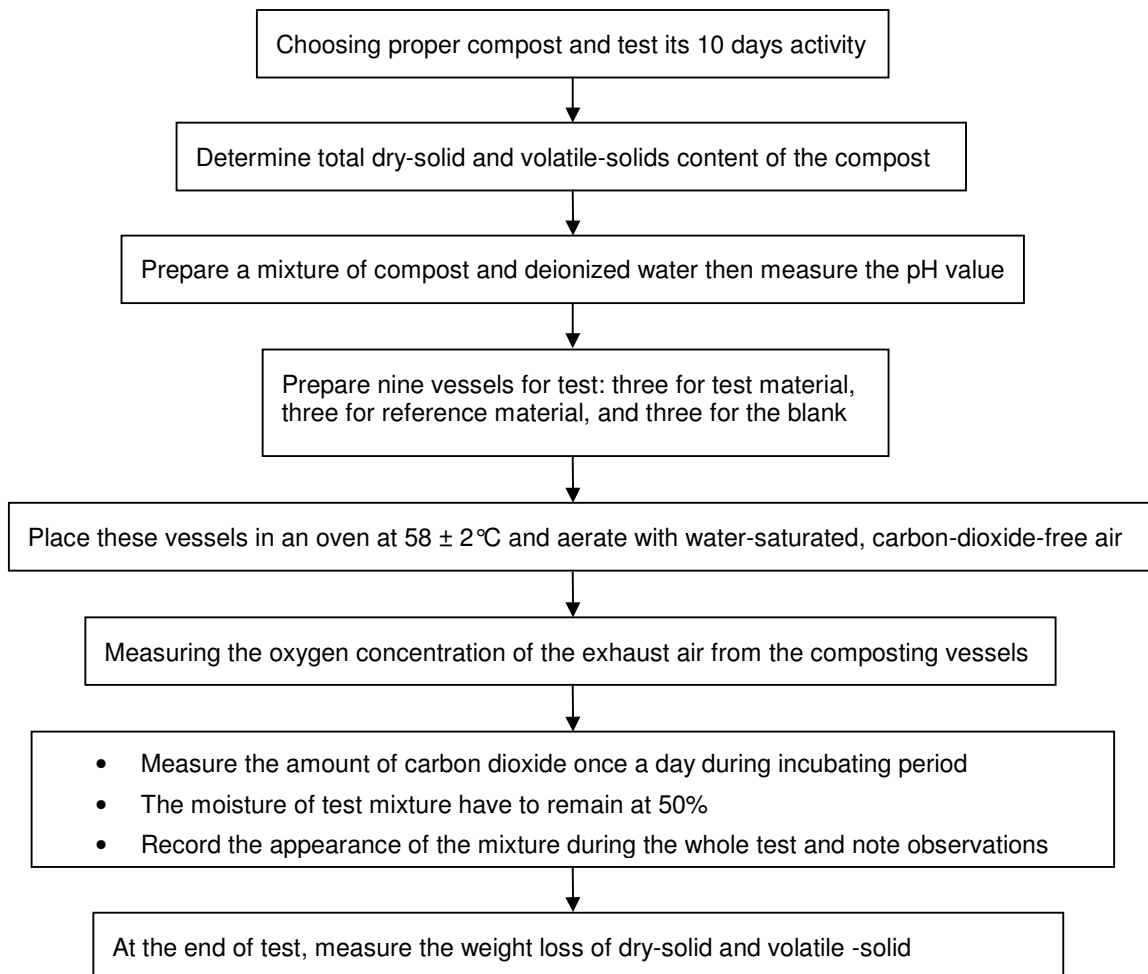
As the three criteria above have been fulfilled, the test is considered to be valid.

For detailed information, please see the following pages

Test Report No. : 0154094628a 001
Customer : Pontex Polyblend Co.,Ltd.

Page 4 of 18
Seite 4 von 18

2.3 Flow chart of experiment



Test Report No. : 0154094628a 001
Customer : Pontex Polyblend Co.,Ltd.

Page 5 of 18
Seite 5 von 18

2.4 RESULTS

2.4.1 Appearance of compost and sample

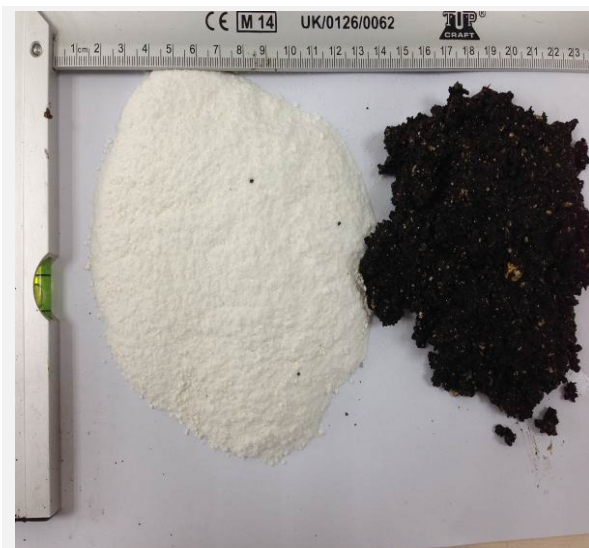


Before test



After test

Compost without any material before and after test



Before test



After test

Compost with reference material before and after test

Test Report No. : 0154094628a 001

Customer : Pontex Polyblend Co.,Ltd.

Page 6 of 18
Seite 6 von 18



Before test



After test

Compost with test material before and after test

Test Report No. : 0154094628a 001
Customer : Pontex Polyblend Co.,Ltd.

Page 7 of 18
Seite 7 von 18

2.4.2 Properties of compost

Table 1 - Properties of compost

Total dry solids (%)	Moisture content (%)	Volatile solids (%)	Ash (%)	Compost Activity Test (mg CO ₂ /g – volatile solid)	Carbon/ Nitrogen ratio (%)
49	51	43	57	59	21

2.4.3 Activity of the compost

Table 2 - The amount of CO₂ for the first 10 days

Days	Amount of carbon dioxide (mg)
1	1.04
2	2.15
3	1.75
6	2.66
7	1.71
8	0.97
Total	10.28

= 61 mg CO₂ /g – volatile solid

Calculation:

Amount of CO₂ absorbed during the first 10 days [g] / (800g *total dry solids * volatile solids) = mg CO₂ / g volatile solids

= 800g is the amount of compost used for each vessel.

Test Report No. : 0154094628a 001
Customer : Pontex Polyblend Co.,Ltd.

Page 8 of 18
Seite 8 von 18

2.4.4 Total Amount of Organic Carbon for Test and Reference Samples

The content of organic carbon in sample and reference material (cellulose) is determined. Results are used.

The theoretical carbon amount of reference material = amount of organic carbon each vessel*TOC = 76.8g * 0,426g/g = 32.7g

TOC of cellulose = 0.426g/g

32.7g of organic carbon lead to a theoretical amount of 119.96g CO₂ evolved by microorganisms when the rate of biodegradation reaches 100%.

Table 3 - Total amount of organic carbon

Parameter	Unit	Reference material	Test material
Total organic carbon (TOC)	(%)	42.8	12.56
Amount of organic carbon (TOC) in test vessel	(g)	20	9.6
Theoretical amount of evolved carbon dioxide	(ThCO ₂), (g)	73.3	35.4
Diameter	(mm)	-	5.95
shape	-	powder	ball
Total dry solids	(%)	94.4	99.7
Moisture content	(%)	5.6	0.3

2.4.5 The amount of sample and compost in the test vessel

Table 4 - The amount of sample and compost in the test vessel

	Compost		Sample	
	Weight (g)	Total dry solids (g)	Weight (g)	Total dry solids (g)
Blank	800	392	None	None
Reference	800	392	76.8	72.5
Sample	800	392	76.8	76.6

Test Report No. : 0154094628a 001
Customer : Pontex Polyblend Co.,Ltd.

Page 9 of 18
Seite 9 von 18

2.5 pH Value

The pH value of the compost is checked at the beginning and at the end of the test. It is determined by diluting compost with distilled water by 1:5 and measuring the value with an electrical pH-meter.

Table 5 - The pH values before and after test

	Blank 1	Blank 2	Blank 3
Before Test	7.1	7.0	7.1
After 4 weeks	7.3	7.6	7.8
After 8 weeks	7.2	7.5	7.2
After Test	7.1	7.1	7.1

Table 6 - The pH values before and after test

	Reference material 1	Reference material 2	Reference material 3
Before Test	7.2	7.3	7.0
After 4 weeks	7.6	7.5	7.4
After 8 weeks	7.1	7.4	7.2
After Test	7.1	7.0	7.1

Table 7 - The pH values before and after test

	Test material 1	Test material 2	Test material 3
Before Test	7.0	7.1	7.1
After 4 weeks	7.4	7.4	7.3
After 8 weeks	7.2	7.2	7.5
After Test	7.1	7.1	7.0

The pH values of the vessels do not show any obvious differences to the other vessels.

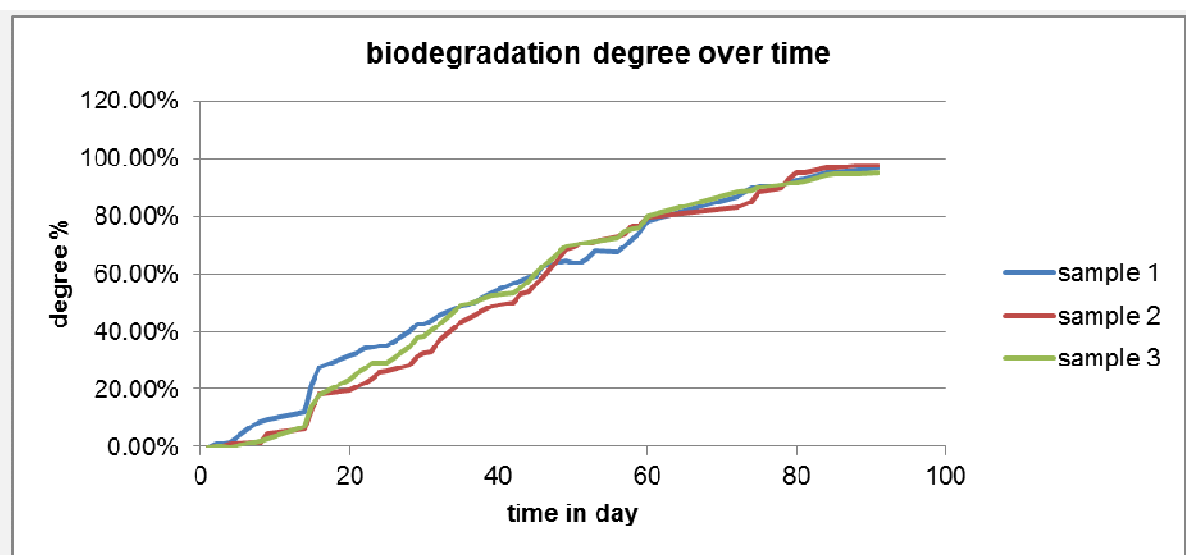
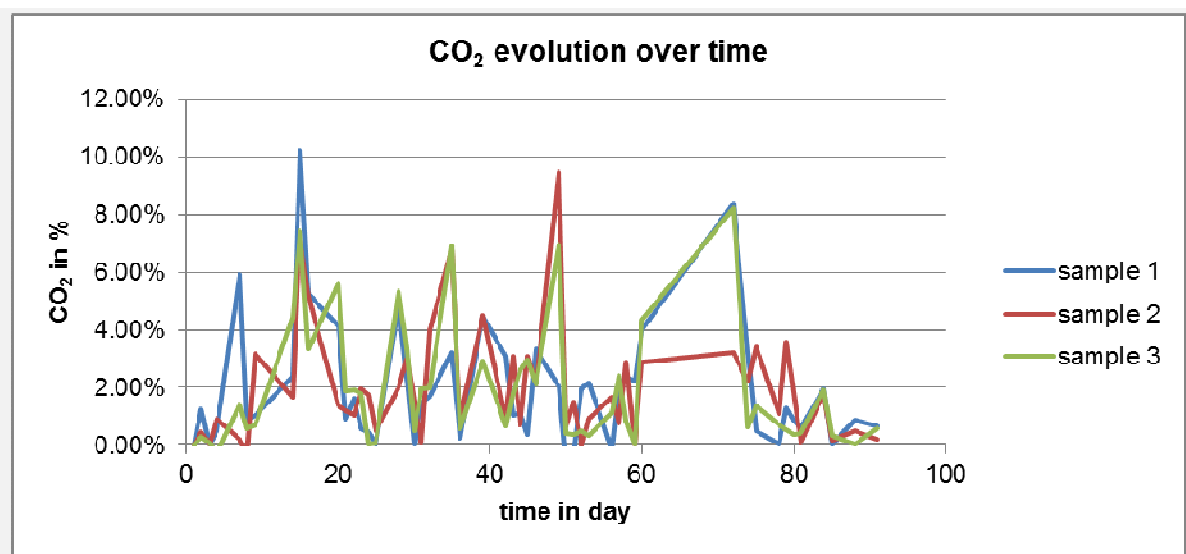
Test Report No. : 0154094628a 001
Customer : Pontex Polyblend Co.,Ltd.

Page 10 of 18
Seite 10 von 18

2.6 Controlled Aerobic Composting Test (Mass of Organic Matter)

2.6.1 Test Material

Amount of total organic carbon (TOC) of the test material placed in each vessel	9.6 g
This TOC leads to a theoretical amount of evolved carbon dioxide (ThCO ₂), caused by the degradation of the test material	35.4 g



Test Report No. : 0154094628a 001

Customer : Pontex Polyblend Co.,Ltd.

Page 11 of 18

Seite 11 von 18

Table 8 - Controlled aerobic composting test data of test material

Day	CO ₂ (g/vessel)								D (%)			
	B1	B2	B3	B _{mean}	t1	t2	t3	t _{mean}	t1 (%)	t2	t3	t _{mean}
1	1.34	1.60	0.19	1.04	1.49	1.20	1.14	1.28	1.24%	0.44%	0.27%	0.65%
2	2.62	2.72	1.10	2.15	2.16	2.16	2.17	2.16	0.04%	0.04%	0.06%	0.05%
3	1.93	2.14	1.19	1.75	1.93	2.08	1.64	1.88	0.49%	0.91%	-0.32%	0.36%
6	2.53	2.78	2.66	2.66	4.78	2.73	3.16	3.56	5.90%	0.20%	1.40%	2.50%
7	0.66	2.49	1.98	1.71	2.03	1.60	1.92	1.85	0.89%	-0.31%	0.58%	0.39%
8	0.56	1.30	1.05	0.97	1.35	2.11	1.22	1.56	1.06%	3.17%	0.70%	1.64%
13	3.46	3.13	2.93	3.17	4.03	3.77	4.76	4.19	2.38%	1.66%	4.41%	2.82%
14	0.45	1.08	0.90	0.81	4.49	3.37	3.48	3.78	10.23%	7.12%	7.42%	8.26%
15	1.45	2.01	1.39	1.62	3.50	3.47	2.81	3.26	5.24%	5.15%	3.32%	4.57%
19	1.36	2.05	1.75	1.72	3.21	2.21	3.74	3.05	4.14%	1.36%	5.62%	3.71%
20	1.45	1.83	1.81	1.70	2.02	2.13	2.37	2.17	0.90%	1.20%	1.87%	1.33%
21	1.32	1.39	1.17	1.29	1.87	1.66	1.98	1.84	1.60%	1.02%	1.91%	1.51%
22	0.57	1.83	0.97	1.12	1.33	1.82	1.77	1.64	0.57%	1.94%	1.80%	1.44%
23	0.84	1.49	0.64	0.99	1.16	1.62	1.01	1.26	0.47%	1.75%	0.06%	0.76%
24	2.49	0.93	0.62	1.35	1.36	1.53	1.37	1.42	0.04%	0.51%	0.06%	0.20%
27	1.40	1.87	2.46	1.91	3.68	2.63	3.83	3.38	4.92%	2.00%	5.34%	4.09%
28	0.85	0.86	1.96	1.22	2.05	2.31	2.42	2.26	2.30%	3.02%	3.33%	2.88%
29	0.96	1.10	1.70	1.25	1.26	1.79	1.43	1.49	0.02%	1.49%	0.49%	0.67%
30	0.86	1.49	1.22	1.19	1.71	1.22	1.89	1.61	1.45%	0.08%	1.95%	1.16%
31	0.47	1.41	0.58	0.82	1.43	2.26	1.54	1.74	1.70%	4.00%	2.00%	2.57%

Test Report No. : 0154094628a 001

Page **12 of 18**

Customer : Pontex Polyblend Co.,Ltd.

Seite **12 von 18**

Day	CO ₂ (g/vessel)								D (%)			
	B1	B2	B3	B _{mean}	t1	t2	t3	t _{mean}	t1 (%)	t2	t3	t _{mean}
34	1.35	1.70	0.83	1.29	2.45	3.73	3.78	3.32	3.22%	6.77%	6.91%	5.63%
35	0.74	1.05	0.94	0.91	1.00	1.24	1.12	1.12	0.25%	0.92%	0.58%	0.58%
38	1.19	0.49	0.26	0.65	2.25	2.27	1.69	2.07	4.46%	4.51%	2.90%	3.96%
41	1.41	0.97	1.18	1.19	2.30	1.52	1.43	1.75	3.10%	0.93%	0.68%	1.57%
42	0.68	1.05	0.29	0.67	1.05	1.79	1.31	1.38	1.05%	3.10%	1.77%	1.97%
43	0.99	1.29	0.33	0.87	1.27	1.12	1.80	1.40	1.11%	0.70%	2.59%	1.46%
44	1.02	0.88	0.29	0.73	0.87	1.84	1.79	1.50	0.39%	3.09%	2.95%	2.14%
45	0.52	0.91	0.78	0.74	1.93	1.52	1.50	1.65	3.32%	2.18%	2.12%	2.54%
after 45d	35.5	43.8	33.2	37.5	60.0	58.7	60.1	59.6	62.5%	59.0%	62.8%	61.4%

(CO₂)_B = Measured cumulative CO₂ production by blank

(CO₂)_t = Measured cumulative CO₂ production by test or reference material

(CO₂)_{Bmean} = [(CO₂)_{B1}+(CO₂)_{B2}+(CO₂)_{B3}] / 3

D = [(CO₂)_t - (CO₂)_{Bmean}] / ThCO₂

D_{mean} = (D_{t1}+D_{t2}+D_{t3}) / 3

Test Report No. : 0154094628a 001

Page **13 of 18**

Customer : Pontex Polyblend Co.,Ltd.

Seite **13 von 18**

Day	CO ₂ (g/vessel)								D (%)			
	B1	B2	B3	B _{mean}	t1	t2	t3	t _{mean}	t1 (%)	t2	t3	t _{mean}
48	1.03	2.45	1.17	1.55	2.28	4.95	4.06	3.76	2.03%	9.45%	6.98%	6.15%
49	0.93	0.68	0.84	0.82	0.64	1.05	0.96	0.88	-0.49%	0.65%	0.40%	0.19%
50	0.83	0.84	1.04	0.90	0.79	1.44	1.03	1.09	-0.32%	1.49%	0.35%	0.51%
51	1.02	0.93	1.05	1.00	1.70	1.00	1.18	1.29	1.95%	0.00%	0.50%	0.82%
52	0.96	0.76	0.82	0.85	1.63	1.18	0.97	1.26	2.18%	0.93%	0.34%	1.15%
55	0.96	2.71	3.04	2.24	2.19	2.84	2.64	2.56	-0.13%	1.68%	1.12%	0.89%
56	1.12	0.65	0.83	0.87	1.58	1.13	1.73	1.48	1.98%	0.73%	2.40%	1.71%
57	0.41	0.80	0.89	0.70	1.56	1.73	1.00	1.43	2.39%	2.86%	0.83%	2.03%
58	0.90	0.87	0.67	0.81	1.61	0.83	0.83	1.09	2.21%	0.05%	0.05%	0.77%
59	0.51	0.50	0.68	0.56	2.01	1.60	2.13	1.91	4.02%	2.88%	4.36%	3.75%
71	2.99	2.01	2.10	2.37	5.39	3.52	5.32	4.74	8.41%	3.21%	8.21%	6.61%
73	0.61	0.67	0.51	0.60	1.75	1.39	0.82	1.32	3.21%	2.21%	0.62%	2.01%
74	0.68	0.68	0.42	0.59	0.77	1.82	1.09	1.23	0.49%	3.41%	1.38%	1.76%
77	0.91	1.45	1.22	1.19	1.20	1.58	1.44	1.41	0.02%	1.07%	0.69%	0.59%
78	0.32	0.48	0.78	0.53	0.99	1.81	0.72	1.17	1.29%	3.57%	0.54%	1.80%
79	0.23	0.37	0.80	0.47	0.78	1.13	0.60	0.84	0.87%	1.84%	0.37%	1.03%
80	0.27	0.38	0.69	0.45	0.65	0.47	0.59	0.57	0.57%	0.06%	0.40%	0.34%
83	1.08	1.07	1.15	1.10	1.81	1.74	1.79	1.78	1.97%	1.78%	1.92%	1.89%
84	0.52	0.82	0.46	0.60	0.61	0.66	0.72	0.66	0.03%	0.17%	0.33%	0.18%
87	0.96	0.34	0.68	0.66	0.98	0.84	0.67	0.83	0.89%	0.50%	0.03%	0.47%
90	0.82	0.29	0.77	0.63	0.87	0.70	0.84	0.80	0.68%	0.20%	0.59%	0.49%
after 90 d	53.5	63.6	53.8	57.0	91.7	92.1	91.2	91.7	96.7%	97.7%	95.2%	96.5%

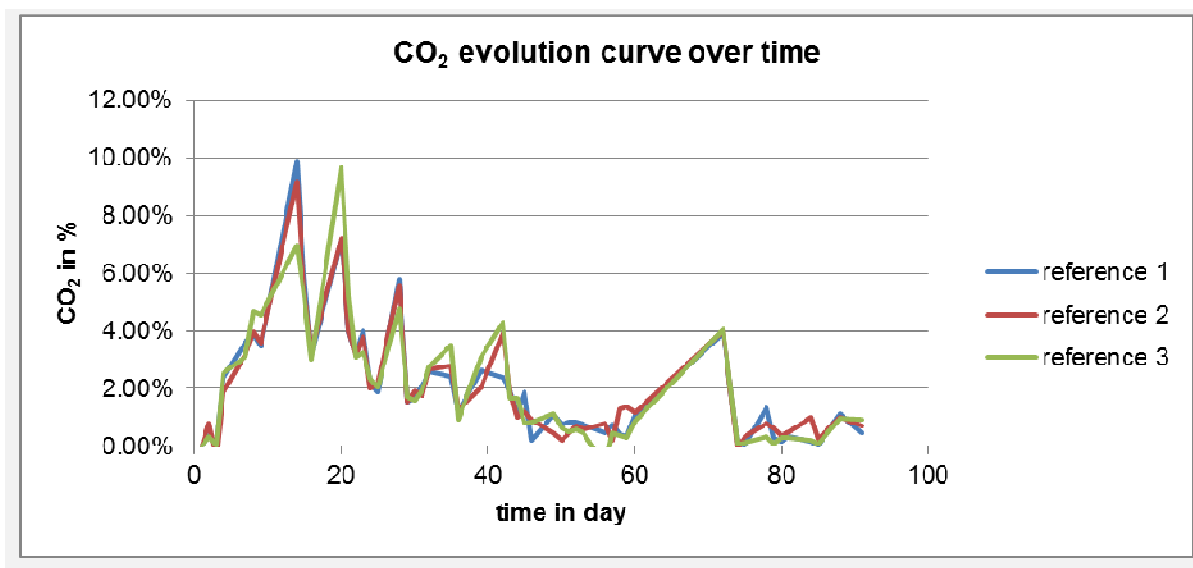
The rate of biodegradation reached 90% for each vessel

Test Report No. : 0154094628a 001
Customer : Pontex Polyblend Co.,Ltd.

Page 14 of 18
Seite 14 von 18

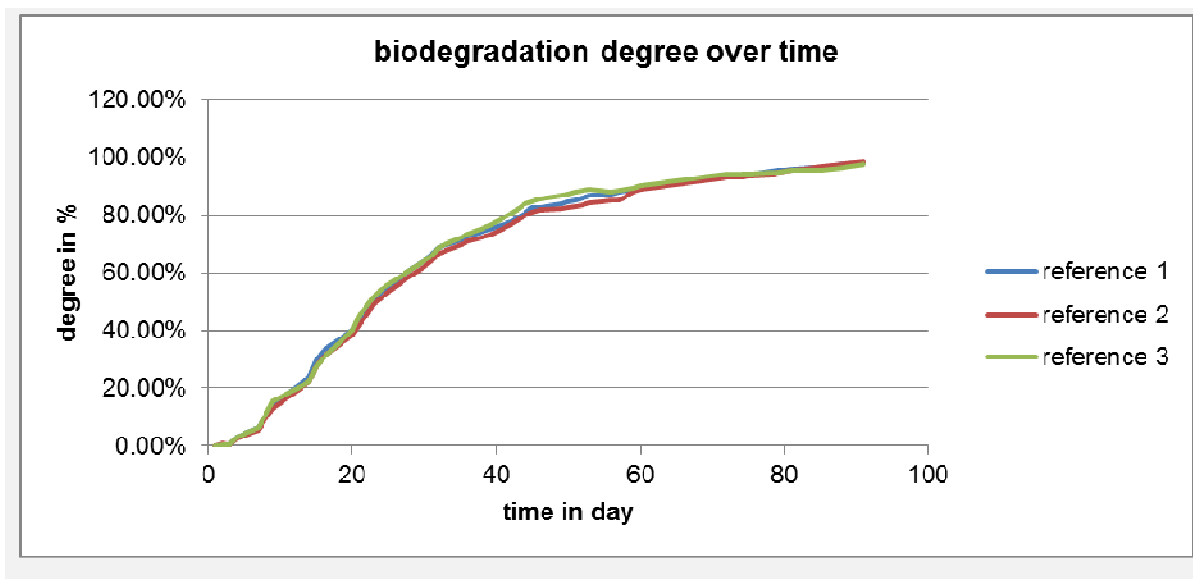
Reference Material

Amount of total organic carbon (TOC) of the reference material placed in each vessel	32.7 g
This TOC leads to a theoretical amount of evolved carbon dioxide (ThCO ₂), caused by the degradation of the test material	76.8 g



CO₂ Evolution Curve of Reference Material
Production of CO₂ over time

CO₂ Evolution Curve of Reference Material
Production of CO₂ over time



Biodegradation Curve of Reference Material
Degree of degradation over time

Test Report No. : 0154094628a 001

Customer : Pontex Polyblend Co.,Ltd.

Page **15 of 18**

Seite **15 von 18**

Table 9 - Controlled aerobic composting test data of reference material

Day	CO ₂ (g/vessel)								D (%)			
	B1	B2	B3	B _{mean}	t1	t2	t3	t _{mean}	t1 (%)	t2	t3	t _{mean}
1	1.34	1.60	0.19	1.04	1.49	2.00	1.46	1.65	0.37%	0.80%	0.35%	0.51%
2	2.62	2.72	1.10	2.15	2.22	1.72	2.21	2.05	0.06%	-0.36%	0.05%	-0.08%
3	1.93	2.14	1.19	1.75	4.62	3.98	4.80	4.47	2.39%	1.86%	2.54%	2.26%
4	2.53	2.78	2.66	2.66	6.97	6.46	6.37	6.60	3.59%	3.17%	3.09%	3.29%
7	0.66	2.49	1.98	1.71	6.34	6.44	7.32	6.70	3.86%	3.94%	4.67%	4.16%
8	0.56	1.30	1.05	0.97	5.13	5.29	6.44	5.62	3.47%	3.60%	4.56%	3.87%
9	3.46	3.13	2.93	3.17	15.05	14.21	11.55	13.60	9.90%	9.20%	6.98%	8.69%
14	0.45	1.08	0.90	0.81	7.94	7.32	7.05	7.44	5.94%	5.42%	5.20%	5.52%
15	1.45	2.01	1.39	1.62	5.40	5.64	5.22	5.42	3.15%	3.35%	3.00%	3.17%
16	1.36	2.05	1.75	1.72	10.34	10.38	13.34	11.35	7.18%	7.22%	9.68%	8.03%
20	1.45	1.83	1.81	1.70	6.46	6.48	7.94	6.96	3.97%	3.99%	5.20%	4.39%
21	1.32	1.39	1.17	1.29	5.13	5.09	5.01	5.08	3.20%	3.16%	3.10%	3.15%
22	0.57	1.83	0.97	1.12	5.91	5.66	5.03	5.53	3.99%	3.78%	3.26%	3.68%
23	0.84	1.49	0.64	0.99	3.60	3.40	3.80	3.60	2.18%	2.01%	2.34%	2.18%
24	2.49	0.93	0.62	1.35	3.62	3.93	3.81	3.79	1.89%	2.15%	2.05%	2.03%
25	1.40	1.87	2.46	1.91	8.88	8.63	7.64	8.38	5.81%	5.60%	4.78%	5.39%
28	0.85	0.86	1.96	1.22	3.06	3.07	3.29	3.14	1.53%	1.54%	1.72%	1.60%
29	0.96	1.10	1.70	1.25	3.26	3.57	3.13	3.32	1.67%	1.93%	1.56%	1.72%
30	0.86	1.49	1.22	1.19	3.74	3.28	3.55	3.52	2.13%	1.74%	1.97%	1.94%
31	0.47	1.41	0.58	0.82	3.92	4.03	4.11	4.02	2.58%	2.67%	2.74%	2.67%

Test Report No. : 0154094628a 001

Customer : Pontex Polyblend Co.,Ltd.

Page **16 of 18**

Seite **16 von 18**

Day	CO ₂ (g/vessel)								D (%)			
	B1	B2	B3	B _{mean}	t1	t2	t3	t _{mean}	t1 (%)	t2	t3	t _{mean}
32	1.35	1.70	0.83	1.29	4.21	4.63	5.52	4.79	2.43%	2.78%	3.52%	2.91%
35	0.74	1.05	0.94	0.91	2.35	2.43	2.00	2.26	1.20%	1.27%	0.91%	1.12%
36	1.19	0.49	0.26	0.65	3.82	3.08	4.36	3.75	2.64%	2.03%	3.09%	2.59%
39	1.41	0.97	1.18	1.19	4.04	5.88	6.32	5.41	2.38%	3.91%	4.28%	3.52%
42	0.68	1.05	0.29	0.67	2.95	2.90	2.68	2.84	1.90%	1.86%	1.67%	1.81%
43	0.99	1.29	0.33	0.87	2.29	2.09	2.85	2.41	1.18%	1.02%	1.65%	1.28%
44	1.02	0.88	0.29	0.73	2.96	2.19	1.70	2.28	1.86%	1.22%	0.81%	1.29%
45	0.52	0.91	0.78	0.74	1.00	1.83	1.71	1.51	0.22%	0.91%	0.81%	0.65%
after 45d	35.5	43.8	33.2	37.5	136.7	135.6	140.2	136.0	82.7%	81.8%	85.6%	83.3%

Validity parameter: After 45 days the rate of biodegradation of the reference material has to be 70% or higher. This requirement has been fulfilled .

$(CO_2)_B$ = Measured cumulative CO₂ production by blank

$(CO_2)_t$ = Measured cumulative CO₂ production by test or reference material

$(CO_2)_{Bmean} = [(CO_2)_{B1} + (CO_2)_{B2} + (CO_2)_{B3}] / 3$

$D = [(CO_2)_t - (CO_2)_{Bmean}] / ThCO_2$

$D_{mean} = (D_{t1} + D_{t2} + D_{t3}) / 3$

Test Report No. : 0154094628a 001

Page 17 of 18

Customer : Pontex Polyblend Co.,Ltd.

Seite 17 von 18

Day	CO ₂ (g/vessel)								D (%)			
	B1	B2	B3	B _{mean}	t1	t2	t3	t _{mean}	t1 (%)	t2	t3	t _{mean}
48	1.03	2.45	1.17	1.55	2.86	2.11	2.90	2.62	1.09%	0.47%	1.12%	0.89%
49	0.93	0.68	0.84	0.82	1.70	1.04	1.55	1.43	0.74%	0.19%	0.61%	0.51%
50	0.83	0.84	1.04	0.90	1.88	1.43	1.50	1.60	0.81%	0.44%	0.50%	0.58%
51	1.02	0.93	1.05	1.00	1.99	1.87	1.71	1.86	0.82%	0.72%	0.59%	0.71%
52	0.96	0.76	0.82	0.85	1.75	1.56	1.37	1.56	0.75%	0.59%	0.44%	0.59%
55	0.96	2.71	3.04	2.24	2.77	3.19	1.42	2.46	0.44%	0.79%	-0.68%	0.19%
56	1.12	0.65	0.83	0.87	1.74	1.12	1.39	1.42	0.73%	0.21%	0.44%	0.46%
57	0.41	0.80	0.89	0.70	1.18	2.23	1.14	1.52	0.40%	1.28%	0.37%	0.68%
58	0.90	0.87	0.67	0.81	1.23	2.46	1.15	1.61	0.35%	1.37%	0.28%	0.67%
59	0.51	0.50	0.68	0.56	1.85	1.96	1.59	1.80	1.07%	1.16%	0.86%	1.03%
71	2.99	2.01	2.10	2.37	7.08	7.19	7.22	7.16	3.93%	4.02%	4.04%	4.00%
73	0.61	0.67	0.51	0.60	0.70	0.52	0.71	0.64	0.09%	-0.06%	0.09%	0.04%
74	0.68	0.68	0.42	0.59	0.64	0.97	0.74	0.78	0.04%	0.31%	0.12%	0.16%
77	0.91	1.45	1.22	1.19	2.79	2.13	1.59	2.17	1.33%	0.78%	0.33%	0.81%
78	0.32	0.48	0.78	0.53	0.89	1.26	0.61	0.92	0.30%	0.61%	0.07%	0.33%
79	0.23	0.37	0.80	0.47	0.67	0.89	0.82	0.79	0.17%	0.35%	0.29%	0.27%
80	0.27	0.38	0.69	0.45	0.85	1.03	0.77	0.88	0.34%	0.49%	0.27%	0.36%
83	1.08	1.07	1.15	1.10	1.32	2.28	1.36	1.65	0.18%	0.98%	0.22%	0.46%
84	0.52	0.82	0.46	0.60	0.66	0.92	0.67	0.75	0.05%	0.27%	0.06%	0.13%
87	0.96	0.34	0.68	0.66	2.01	1.85	1.82	1.89	1.12%	0.99%	0.97%	1.03%
90	0.82	0.29	0.77	0.63	1.19	1.45	1.70	1.45	0.47%	0.69%	0.89%	0.68%
after 90 d	53.5	63.6	53.8	57.0	174.5	175.1	173.9	174.5	97.9%	98.4%	97.5%	97.9%

The rate of biodegradation of the reference material is 97.9% after 90 days.

The rate of biodegradation of the test material, compared to the reference material (reference is set to 100%) is 98.6%

Test Report No. : 0154094628a 001

Customer : Pontex Polyblend Co.,Ltd.

Page **18 of 18**
Seite **18 von 18**

2.7 Additional information (*observations, reasons for rejection of test results and others*)

The peaks in the diagrams "CO₂ production over time" are caused by not measuring the amount of CO₂ on weekends, therefore the amount on Mondays also contains the amount absorbed during the weekend and is higher than on other weekdays.

For adjusting humidity in the composting vessels water was carefully added to the vessel once a week.

The concentration of oxygen was checked every day during the first week of the test and once a week afterwards. For aerobic conditions the concentration of oxygen shall be higher than 6%. The concentration did not fall below 18% during the test

-End-