

Laboratory Test Report

Report Number: 2025-753-2170

Page 1 of 2

Prepared for: Sigmund Lindner GMBH

Address: Oberwarmensteinacher Str 38
95485 Warmensteinach
Germany

Customer Sample Description: Craft Bioglitter ® SPARKLE V2 (C666/2025)

Eurofins Registration Number: 19116 / 2025-753-2170

No. of samples: 1

Test(s) Performed: Readily Biodegradable: Manometric Respirometry OECD
301 F – July 1992

Date Received: 22/05/2025

Date(s) Tested: 05/06/2025 – 23/07/2024

Results and Observations
Please refer to the following page(s)



San Ho
Technical Services Manager

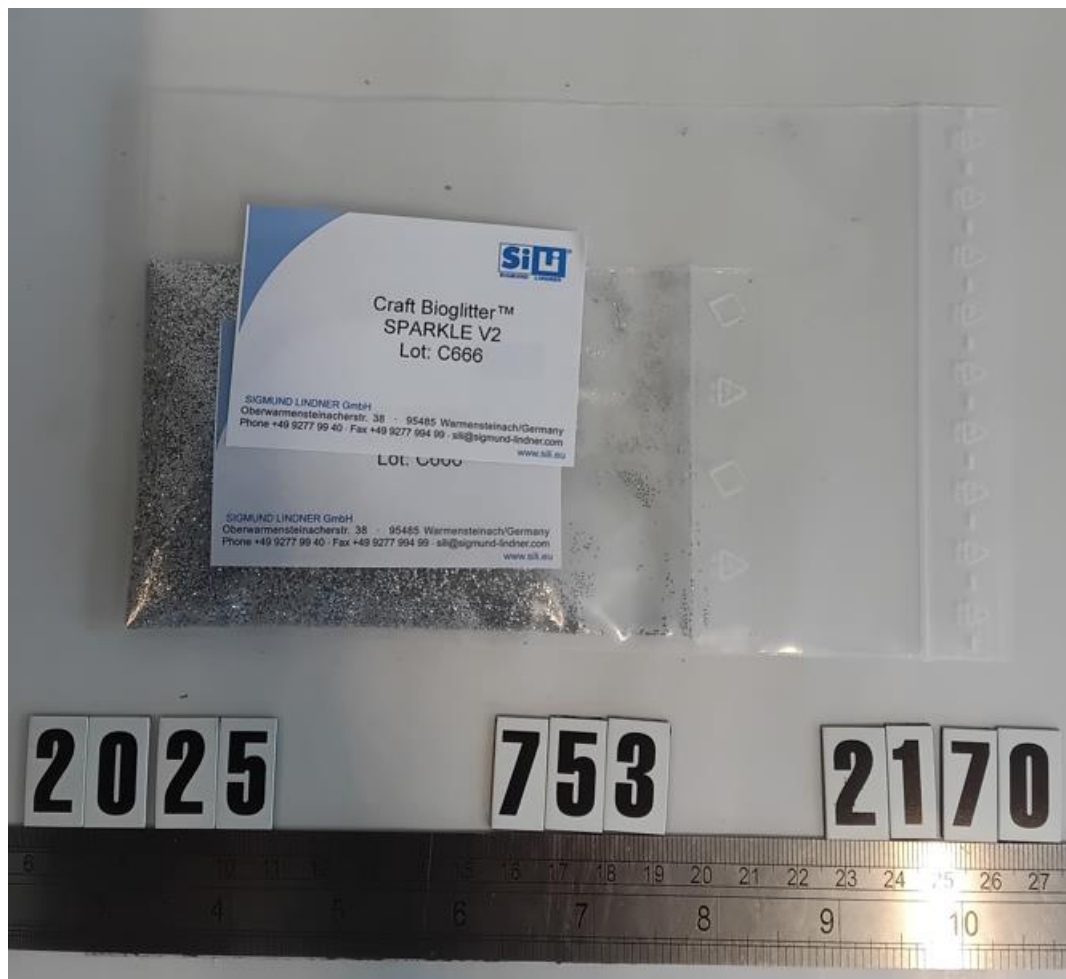
Date: 04/08/2025

The reported results relate exclusively to the tested sample.
The testing was performed by a laboratory within the Eurofins Network.

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Sample Image**Eurofins Product Testing Services Limited**

Suite 5A, 5th Floor, Duckworth House, Lancasterian
Talbot Road, Stretford, M32 0FP
Tel: +44 (0)161 868 7600
Fax: +44 (0)161 868 7699

Registered Office:

i54 Business Park, Valiant Way
Wolverhampton, WV9 5GB
Registration Number: 7401660
Vat Number: 887 1276 83

To

**EUROFINS PRODUCT TESTING
SERVICES LIMITED**

***EVALUATION OF READILY BIODEGRADABLE FOLLOWING
THE OECD 301 F GUIDELINE***



Sample :

2025-753-2170 - Craft Bioglitter ® SPARKLE V2

Analysis report N°25EE4Z-0925 from 2025/07/23

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Results of this report are only about the sample tested and as received.
This report has 12 pages.*

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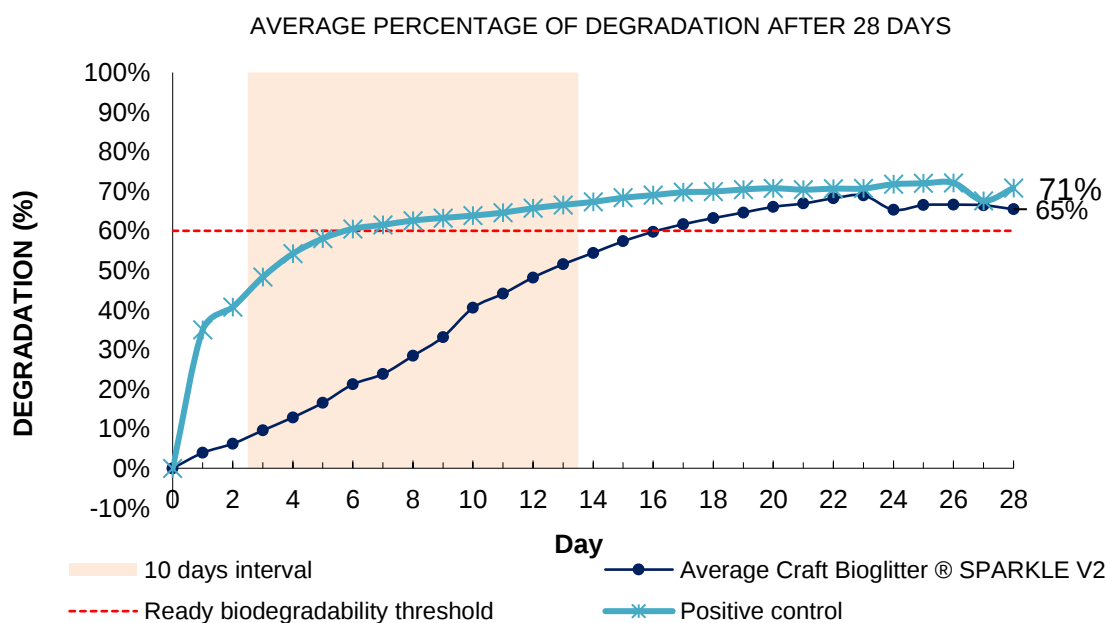
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I. SUMMARY

Normative reference	Readily Biodegradable: Manometric Respirometry OECD 301 F – July 1992
Test time	28 days
Customer sample reference	Craft Bioglitter® SPARKLE V2
Batch No.	C666/2025
ThOD test product (mg O ₂ /mg)	1.24
Test product initial concentration expressed as ThOD in medium	80.5

Validity criteria	Direct addition
Average total O ₂ consumption in the negative control does not exceed 60 mg/L after 28 days.	33.8 mg
Difference between cumulative oxygen consumption values is less than or equal to 20%.	Except for days 8 to 15 and 27, but this gap is accepted due to the low cumulative O ₂ consumed values.
The percentage of degradation of the reference substance has reached at least 60% at 14 days.	67%
For the toxicity test, degradation is greater than 25% after 14 days.	46%
Biodegradation rate at end of test	65%
Conclusion	Not readily biodegradable
Respecting the 10-day interval	No



II. CUSTOMER INFORMATION

Details	Informations
Applicant's name	EUROFINS PRODUCT TESTING SERVICES LIMITED
Adress	Suite 5A, 5th Floor, Duckworth House, Lancastrian, Talbot Road, Stretford M32 0FP
Order number	2025-753-2170

III SAMPLE PRESENTATION

Details	Sample
Customer sample reference	Craft Bioglitter ® SPARKLE V2
Batch Number	C666/2025
Nature of the sample	Not reported
Solubility of the sample	Insoluble
Composition	Not reported
CAS number	Not reported
Aspect	Silver powder
Conservation temperature	Room temperature
Expiration date	2028/05/01
EUROFINS Ecotoxicologie France reference	25G003140-001
Reception date	2025/06/05

IV. DESCRIPTION OF THE EVALUATION OF "READILY" BIODEGRADABILITY TEST FOLLOWING THE OECD 301F GUIDELINE

IV.1 NORMATIVE AND REGLEMENTARY REFERENCES

- OECD 301 F Guidelines (1992.07.17 revised on 2013.07.26)« Readily biodegradable: Manometric Respirometry Test ».
- Standard ISO 10634:2018: Water quality - Preparation and treatment of sparingly water-soluble organic compounds for assessment of their biodegradability in aqueous media.

IV.2 PRINCIPLE

Biodegradability of organic compounds by micro-organisms in an aquatic medium is determined using a static test system. The test blend contains an inorganic medium, the organic compound as the only nominal source of carbon and energy with a theoretical demand in oxygen of 100 mg/L, and a mixed inoculation from an urban waste water treatment plant (amount of suspended matter inferior to 30 mg/L in the final blend).

The oxygen consumed by microbial degradation is measured by the OXITOP system. The oxygen consumed is compared to the theoretical oxygen demand (ThOD) or chemical oxygen demand (COD) and the biodegradability is expressed as a percentage.

The test standardly lasts 28 days, but can be extended if the biodegradation curve does not reach a plateau on the 28th day.

A substance is considered «readily biodegradable» when the 10-day window is met within the test duration, i.e. within the first 28 days.

IV.3 STANDARD TESTS CONFIGURATION

An analytic session has:

- Negative control (mineral medium and inoculum): 2 replicas
- Positive control (mineral medium, reference compound and inoculum): 1 replica
- Test substance (mineral medium, test substance and inoculum): 2 replicas
- Toxicity control*: 1 replica

*A test product's toxicity control: mineral medium + mix of the reference substance and the test product (tested concentrations) + inoculum

V. TEST CONFIGURATION

Details	Informations
Test start date	2025/06/24
Reference substance	Sodium acetate (CAS n°: 127-09-3) ThOD :mg O ₂ /mg.
Bacterial inoculum origin and information	Maxéville wastewater treatment plant (France) treating mainly domestic wastewater (98%), sampled on 2025/06/23. 7.1.10 ⁷ UFC/L (Theoretical value following the OECD 301F: concentration between 10 ⁷ and 10 ⁸ cells/L). Suspended matter concentration : 12.4g/L (added volume :0.4mL).
Incubation	Temperature: 22°C ± 2°C Duration: 28 jours
pH	Start: 7.4 ; End:7.3
Concentration and mode of introduction	The test substance is tested at a ThOD equal to 100mg O ₂ /mg. Due to the nature of the sample, it was dissolved in the test medium using a mechanical disperser (45s at 17,000 rpm). The mass of raw product is 8,0 mg/L.
ThOD	1.24 mg O ₂ /mg.
Organic carbon content	43.6 %

VI. RESULTS

VI.1 TEST OF READILY BIODEGRADABILITY (OECD 301F)

VI.1.1 Follow-up of the consumed oxygen cumulated (mg O₂/L)

Day n°	Negatif control			Positive control	Sample Craft Bioglitter ® SPARKLE V2				Toxicity control
	Direct addition 1	Direct addition 2	Average		Direct addition 1	Direct addition 2	Average	Difference in cumulative oxygen consumption	
1	2.2	3.7	3.0	37.9	6.7	7	6.85	-4%	37.3
2	7.1	9.1	8.1	48.8	14.4	14.2	14.3	1%	49.7
3	10.6	12.8	11.7	60.0	21.6	20.9	21.25	3%	61.3
4	13.1	15.9	14.5	68.7	28.3	26.4	27.35	7%	71
5	14.6	18.1	16.4	74.4	35.1	30.7	32.9	13%	79.2
6	15.5	19.7	17.6	78.1	42	35.6	38.8	15%	88.1
7	17.3	21.7	19.5	81.0	47.4	39.2	43.3	17%	89.5
8	18.3	23.3	20.8	83.4	55.1	43.3	49.2	21%	93.8
9	19.5	25.2	22.4	85.6	63.3	47.7	55.5	25%	97.5
10	15.3	20.2	17.8	81.6	68.7	47.9	58.3	30%	94.5
11	16.3	21.3	18.8	83.4	74.0	51.8	62.9	30%	100.4
12	16.1	21.9	19.0	84.7	78.6	55.8	67.2	29%	106.5
13	17.3	23	20.2	86.7	82.7	60.7	71.7	27%	109.4
14	18.9	24.5	21.7	89.0	86.7	65.5	76.1	24%	113.8
15	19	24.7	21.9	90.2	88.7	69.7	79.2	21%	118.2
16	19.3	25.3	22.3	91.3	90.8	73.3	82.05	19%	121.5
17	20	25.9	23.0	92.7	92.8	76.4	84.6	18%	126.6
18	20.7	26.9	23.8	93.7	94.7	79.3	87	16%	131.1
19	20.7	26.8	23.8	94.2	96.1	80.6	88.35	16%	136.3
20	21.1	27.6	24.4	95.1	97.9	82.9	90.4	15%	141.1
21	21.7	27.9	24.8	95.2	99.3	84.1	91.7	15%	145.5
22	21.7	28	24.9	95.5	100.8	85.3	93.05	15%	148.5
23	22.4	28.8	25.6	96.3	102.3	86.8	94.55	15%	152.5
24	32.1	39.8	36.0	107.7	108	94.5	101.25	13%	164.9
25	31.8	39.8	35.8	107.8	108.9	95.7	102.3	12%	167.9
26	33.3	40.9	37.1	109.2	110.2	97.2	103.7	12%	170.6
27	29.9	33.9	31.9	99.5	110.9	85.8	98.35	23%	168.9
28	30.6	37	33.8	104.6	108.4	90.1	99.25	17%	170.6

Validity criteria:

- Oxygen consumption in the negative control is normally between 20 and 30 mg O₂/L on test day 28 and must not exceed 60 mg O₂/L. If values in excess of 60 mg O₂/L are obtained, the results and experimental methods should be examined critically.
- The difference between cumulative oxygen release values is less than or equal to 20% on all measurement days.

VI.1.2 Follow-up of the degradation compared to ThOD

Day n°	Positive control	Sample Craft Bioglitter® SPARKLE V2			Toxicity control
		Direct addition 1	Direct addition 2	Average	
1	35%	4%	4%	4%	17%
2	41%	6%	6%	6%	21%
3	48%	10%	9%	10%	25%
4	54%	14%	12%	13%	28%
5	58%	19%	14%	17%	31%
6	61%	24%	18%	21%	35%
7	62%	28%	20%	24%	35%
8	63%	34%	23%	28%	37%
9	63%	41%	25%	33%	38%
10	64%	51%	30%	41%	38%
11	65%	55%	33%	44%	41%
12	66%	60%	37%	48%	44%
13	67%	63%	41%	52%	45%
14	67%	0%	44%	54%	46%
15	68%	67%	48%	57%	48%
16	69%	69%	51%	60%	50%
17	70%	70%	53%	62%	52%
18	70%	71%	56%	63%	54%
19	70%	72%	57%	65%	56%
20	71%	74%	59%	66%	58%
21	70%	75%	59%	67%	60%
22	71%	76%	60%	68%	62%
23	71%	77%	61%	69%	63%
24	72%	72%	59%	65%	64%
25	72%	73%	60%	67%	66%
26	72%	73%	60%	67%	67%
27	68%	79%	54%	66%	69%
28	71%	75%	56%	65%	68%

Validity criteria:

- The percentage degradation of the reference substance has reached at least 60% after 14 test days.
- The percentage degradation of the toxicity control must be greater than 25% after 14 days of testing.

VI.2 TEST VALIDITY CRITERIA

Validity criteria	Test results
	In direct addition
Average total O ₂ consumption in the negative control does not exceed 60 mg/L after 28 days	33.8 mg
Difference between cumulative oxygen consumption values is less than or equal to 20%	Except for days 8 to 15 and 27, but this gap is accepted due to the low cumulative O ₂ consumed values.
The percentage of degradation of the reference substance has reached at least 60% at 14 days	67%
For the toxicity test, degradation is greater than 25% after 14 days	46%
The pH at the end of the test was between 6 and 8.5	7.3

The test is thus valid.

VI.3 10-day time interval criteria

	Addition directe	
	Day	% degradation
Start of 10-day interval	3	10%
End of 10-day interval	13	52%

For direct addition:

The product tested has not reached at least 60% degradation (52%) 10 days after reaching 10% degradation.

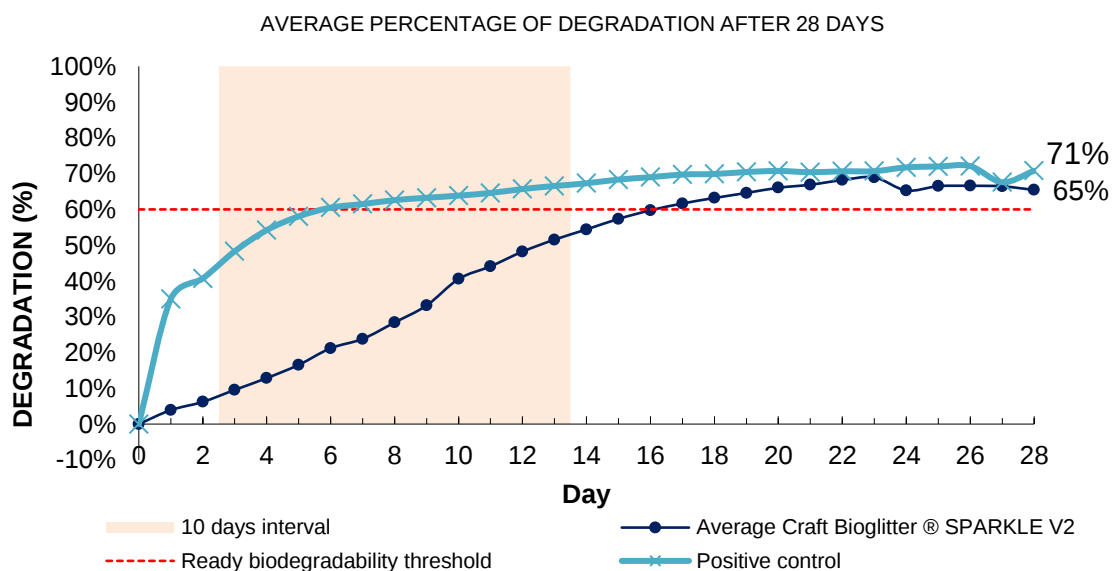
The 10-day interval is not respected.

VII. CONCLUSION

The report's conclusions are based on OECD 301 criteria.

- The 10-day interval is not respected.
- The test product « Craft Bioglitter ® SPARKLE V2 » is not considered as readily biodegradable.
- The biodegradability of the product « Craft Bioglitter ® SPARKLE V2 » is 65% after 28 days.

NB: The « readily biodegradable » is only applicable to ingredients.



In Maxéville, on 2025/07/23
Mathilde Roche Bril, Chargée d'études



Appendix 1: definition

- BOD: Biochemical Oxygen Demand (mg) is the amount of oxygen consumed by micro-organisms when metabolising a test compound; also expressed as mg oxygen uptake per mg test compound.
- Lag phase: period between the sowing moment and the moment when the percentage of degradation has reached around 10 %.
- Degradation period: period which begins at the end of the latency period and ends when 90% of the degradation maximal rate is reached.
- Readily biodegradable: a product is considered as easily biodegradable if the biodegradation rate has reached at least 60% in the 10-day interval which has to fall within the 28 (firsts) days of the test.
- 10-day window: 10 days which directly follow the moment when the biodegradation rate has reached 10 % within the 28 (firsts) days of the test.
- ThOD: Theoretical oxygen demand (mg) is the total amount of oxygen required to oxidise a chemical completely; it is calculated from Chemical Oxygen Demand (COD) and is also expressed as mg oxygen required per mg test compound.

Appendix 2 : calculation rules

- The thOD in mg is calculated according to the following equation if the elemental composition is known for the following compound:

$$C_c H_h C_{cl} N_n N a_{na} O_o P_p S_s$$

the ThOD, in the absence of nitrification, will be equal to :

$$ThOD_{NH_3} = \frac{16 [2c + 1/2(h - cl - 3n) + 3s + 5/2p + 1/2na - o]mg/mg}{MW}$$

and, if nitrification takes place, it will be equal to :

$$ThOD_{No_3} = \frac{16 [2c + 1/2(h - cl) + 5/2n + 3s + 5/2p + 1/2na - o]mg/mg}{MW}$$

where MW = molecular weight.

- The degradation rate at a given time is determined using the following equation:

$$\%degradation = \frac{BOD (mgO_2/mg)}{ThOD (mgO_2/mg)} \times 100$$

- **Correction of consumed Oxygen:**

Biodegradation calculations are performed after subtracting the average value of the cumulated oxygen results of the negative controls (representing the inoculum endogenous activity).

- **Biodegradation result for the positive controls or products to test:**

For a given product, the result of biodegradation at the different times of measurement corresponds to the average of the biodegradation values achieved.

- The 10 days interval choice:

Per default, selecting the closer biodegradability's results day to 10%. When the gap between to consecutives values is the same from either side to 10%, choose the corresponding day to the value inferior to 10% like the starting 10 days window.

If there is litigation, a graphic evaluation can be made.

Appendix 3 : composition of mineral medium

Each solution is prepared in osmosed water.

Stock solution composition:

Stock solution A:

- Potassium dihydrogen phosphate, KH_2PO_4 : 8.50 g
- Potassium hydrogen phosphate, K_2HPO_4 : 21.75 g
- Sodium hydrogen phosphate dihydrate, $\text{Na}_2\text{HPO}_4 \cdot 2\text{H}_2\text{O}$: 33.40 g
- Ammonium chloride, NH_4Cl : 0.50 g

Dissolve in water and make up to 1 liter; pH equals to 7.4.

Stock solution B:

- Anhydrous calcium chloride, CaCl_2 : 27.50 g
- or calcium chloride dihydrate, $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$: 36.40 g

Dissolve in water and make up to 1 liter.

Stock solution C:

- Magnesium sulfate heptahydrate, $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$: 22.50 g

Dissolve in water and make up to 1 liter.

Stock solution D:

- Ferric chloride hexahydrate, $\text{FeCl}_3 \cdot 6\text{H}_2\text{O}$: 0.25 g

Dissolve in water and make up to 1 liter.

Add a drop of hydrochloric acid for preservation

Preparation of the mineral medium (Must be prepared extemporaneously):

Stir 10 mL of solution A with 800 mL of osmosed water, then add 1 mL of solutions B, C and D and complete to 1 Liter.

The mineral medium pH must be equal to: 7.4 ± 0.2 .