

**FINAL REPORT**  
**BIODEGRADABILITY TEST AS PER OECD 301 B**  
**FOR SLIME BAFF AND GELLI BAFF**  
**SUBMITTED BY ZIMPLI KIDS LTD.**

**ENVIRONMENTAL DIVISION LABORATORY, MUMBAI**

**INTERTEK INDIA PRIVATE LIMITED**

**Client :** Zimpli Kids Ltd.

**Sample registration date:** 20/12/2018

**Analysis starting date:** 24/12/2018 (pre-conditioning) **Analysis completed on:** 12/02/2019

**Name of product:** Slime Baff and Gelli Baff

**Quantity received and packing:** 1 Packet X 2 samples

**Sample details:** Slime Baff and Gelli Baff

(Powders that turn bath water into a thick gooey or slime and back again)

**Test Required:** Biodegradability test as per OECD 301 B

**Sampling done by:** Sample not drawn by Intertek

**Report No:** MUM/004585/2018

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## **LABORATORY**

Testing as presented in this report was conducted by Environmental division of Intertek India Private Limited. The testing facility is located at F wing, 2<sup>nd</sup> Floor, Chandivali Saki vihar Road, Andheri (East), Mumbai – 400 072, India.

## **SAMPLE RECEIPT**

The sample was received on 20th December, 2018 at the Intertek testing facility. The package received through courier had one packet each of **SLIME BAFF** and **GELLI BAFF**. Samples were at ambient temperature in good condition with no evidence of damage or contamination.

## **SAMPLE DESCRIPTION:**



**Figure 1 : SLIME BAFF and GELLI BAFF**

**SLIME BAFF – Laboratory Ref. No.10771898**

**GELLI BAFF – Laboratory Ref. No.10771899**

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## **PROJECT DESCRIPTION:**

**SLIME BAFF and GELLI BAFF** sample was submitted by Zimpli Kids Ltd. for studying the Readily biodegradability as per OECD 301 B. A measured volume of inoculated mineral medium, containing a known concentration of the test substance (10-20 mg DOC or TOC/l) as the nominal sole source of organic carbon is aerated by the passage of carbon dioxide-free air at a controlled rate in the dark or in diffuse light. Degradation is followed over 28 days by determining the carbon dioxide produced. The CO<sub>2</sub> is trapped in barium or sodium hydroxide and is measured by titration of the residual hydroxide or as inorganic carbon. The amount of carbon dioxide produced from the test substance (corrected for that derived from the blank inoculum) is expressed as a percentage of ThCO<sub>2</sub>. The degree of biodegradation may also be calculated from supplemental DOC analysis made at the beginning and end of incubation. OECD 301B biodegradability testing monitors the degree of activity of microbes exposed to a material that is being tested for a biodegradable status. In the test, if the microorganisms recognize the material as a food source, then an increase in biological activity is observed through data collection specifically designed to assess biological conversion of organic carbon to inorganic carbon. If the material is not a recognizable food source or is toxic or inhibitory, then there is no measurable increase in biological activity or, in some cases, there is a marked decrease in activity relative to a biodegradable control.

## **INOCULUM COLLECTION AND CONDITIONING**

The inoculum was derived from Sewage effluent source. Following collection, the inoculum was immediately transported to the testing facility and was aerated with CO<sub>2</sub> free air. Pre-conditioning was done by aerating the effluent for 5-7 days at the test temperature.

## **TEST SETUP**

The following test vessels were prepared and analyzed for the study: Blank Control, Test Products, and Positive Control. Reactors were setup in triplicates for statistical validation of results.

The Test Products and Positive Control are analyzed for total organic carbon prior to study initiation to determine appropriate dilutions that yield a concentration of organic carbon of 10-20 mg//L per method requirements. The organic carbon contributions for each test reactor are included in the data appendices attached to this report.

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Treatments included test flasks containing test substance and inoculum (test suspension); only inoculum (inoculum blank); a standard reference material, known to be biodegradable, was selected as a reference or positive control.

**TEST RESULTS:**

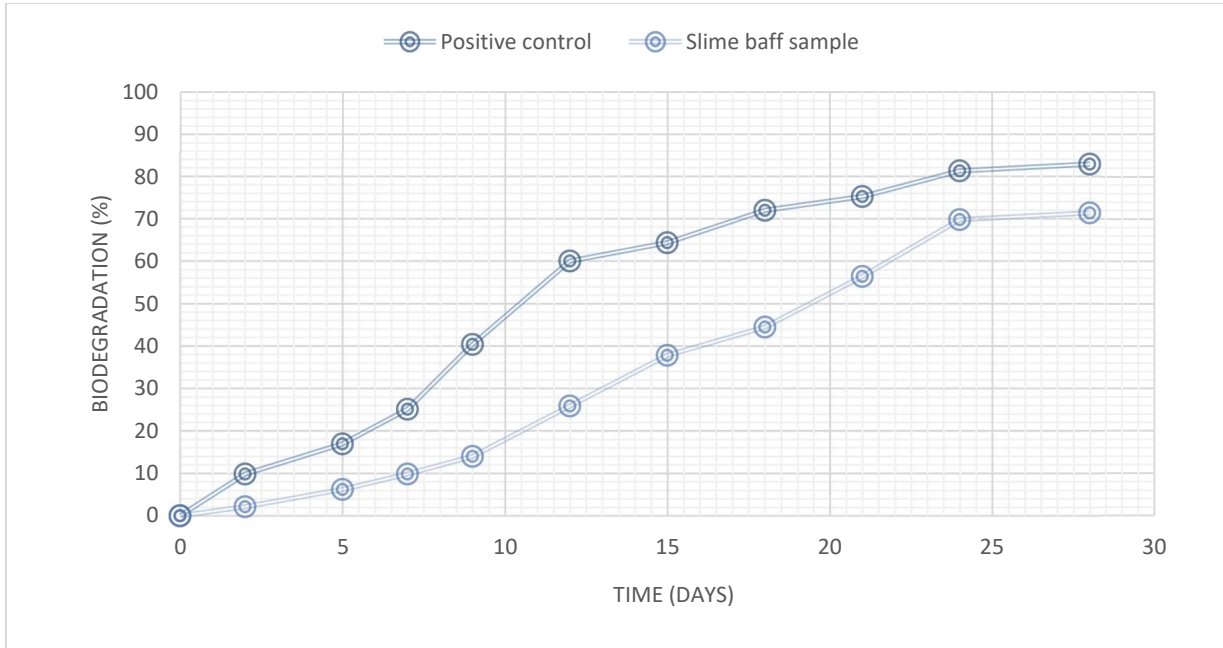
Based on the testing conducted in accordance with the specified method, the test sample **SLIME BAFF and GELLI BAFF** achieved 71.31% and 66.86% by day 28 respectively.

**Table 1:** Represent % biodegradation of Positive Control & the Test Sample SLIME BAFF and GELLI BAFF

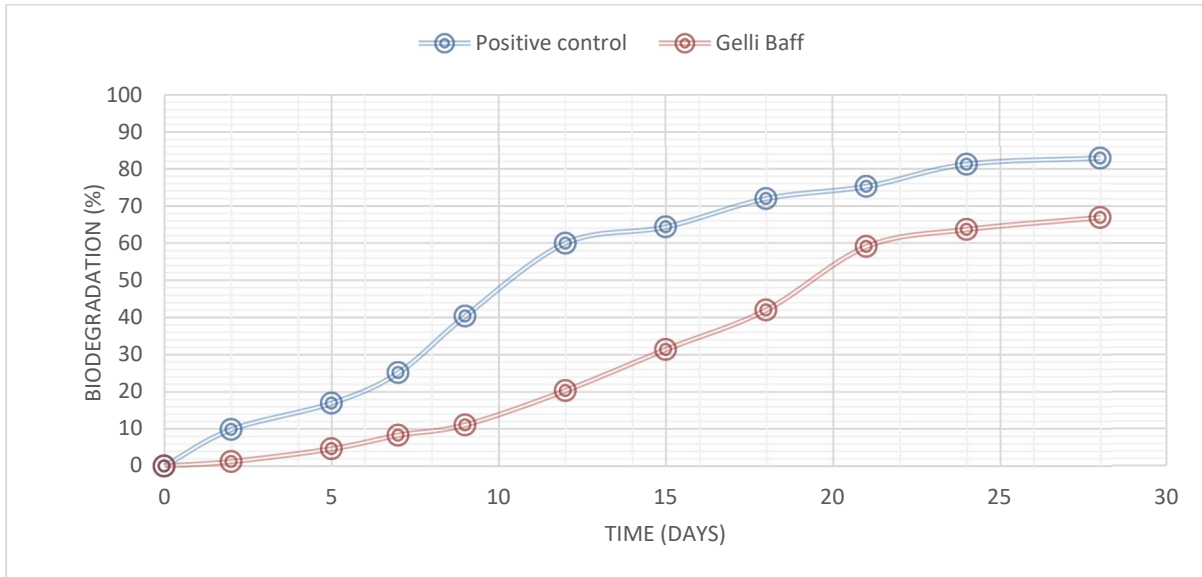
Time (Day)	% Biodegradation		
	POSITIVE CONTROL	SLIME BAFF	GELLI BAFF
0	0.00	0.00	0.00
2	9.81	2.07	1.20
5	16.89	6.20	4.61
7	25.07	9.82	8.30
9	40.33	13.95	11.07
12	59.95	25.84	20.29
15	64.31	37.72	31.36
18	71.93	44.44	41.96
21	75.20	56.33	59.02
24	81.20	69.76	63.63
28	82.83	71.31	66.86

The control sample achieved 40.33 % biodegradation by day 9 and a plateau of 81.2 % biodegradation on day 24 of the test. The Test product SLIME BAFF and GELLI BAFF demonstrated biodegradability achieving a plateau of 71.31% and 66.86% by day 28 respectively. Test sample SLIME BAFF and GELLI BAFF demonstrated ready biodegradability according to the conditions set forth in OECD 301B requirements of achieving the 60% conversion to CO2 within the required timeframe.

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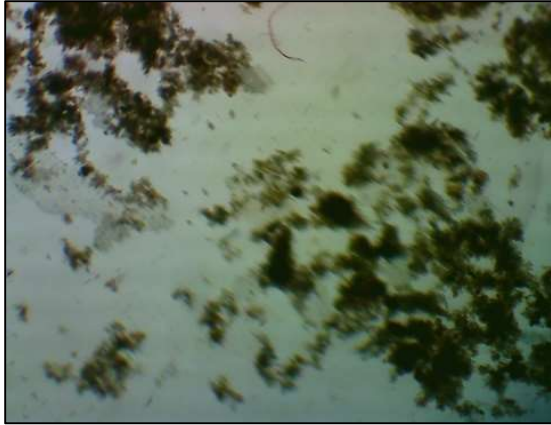


**Graph 1: Graphical representation of biodegradability tests OECD 301 B on SLIME BAFF**

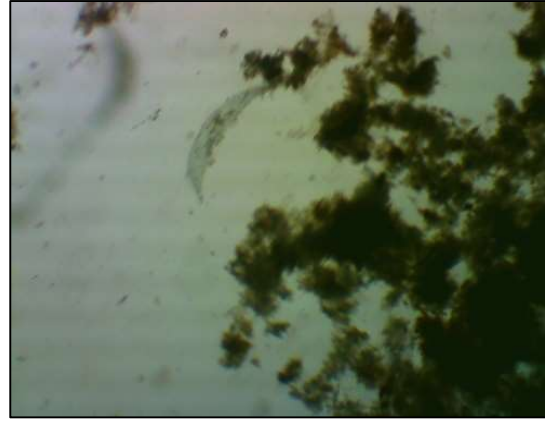


**Graph 2: Graphical representation of biodegradability tests OECD 301 B on GELLI BAFF**

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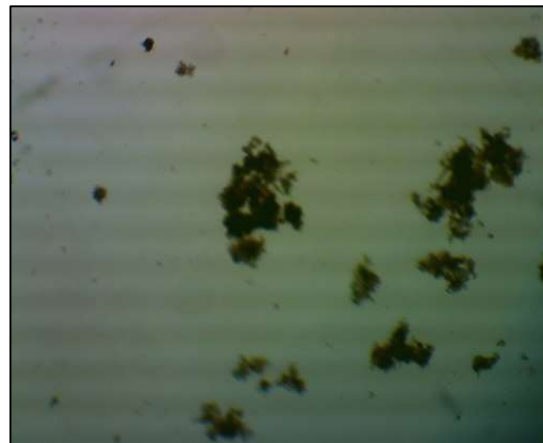
(A)



(B)



(C)



(D)

**Figure 2: Microscopic examination of the SLIME BAFF (A-B) and GELLI BAFF (C-D) after incubation**

## **CONCLUSION**

Test samples **SLIME BAFF** and **GELLI BAFF** are readily biodegradable in accordance to the conditions set forth in OECD 301B - requirements of achieving the 60% conversion to CO<sub>2</sub> within the required timeframe.

## **Authorized Signatory**

**Dhanashree Bhelose**  
**Assistant Manager – Environment**

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