

सिपेट : एस. ए. आर. पि.-पॉलीमेरिक, मटेरीयल में अत्याधुनिक अनुसंधान हेतु प्रयोगशाला

रसायन एवं पेट्रोसायन विभाग, रसायन एवं उर्वरक मंत्रालय, भारत सरकार

बी/ २५, सि.एन.आई.कॉम्प्लेक्स, पटिआ, भुवनेश्वर-751024, ओडिशा

CIPET : SARP - LABORATORY FOR ADVANCED RESEARCH IN POLYMERIC MATERIALS



सिपेट CIPET

Dept. of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India

B/25, C.N.I. Complex, Patia, Bhubaneswar-751 024, Odisha

Ph : 0674 - 2742852, 2740173, Fax : 0674 - 2740463

E-mail : larpm@cipet.gov.in, Web : www.larpm.gov.in



CERTIFICATE OF ANALYSIS AS PER ISO 17088:2021

LARPM/CIPET/Testing/2024-25/

Date-29.10.2024

To,
M/s. Basilblooms International Private Limited
Shah Industrial Park 3, Plot No. 30/F,
Vadodara Halol Highway, Kotambi,
District – Vadodara, State-Gujarat, Pin - 391510

Sub Test Report Rcg.

Dear Sir,

Ref No : 1) SSF & Letter dated 05.02.2024.

2) Our Work Order No.: LARPM/BBS./2023-24/198 dated 07.02.2024

With reference to the above, the submitted sample was analyzed as per ISO 17088:2021. The summary detail of testing & analysis is given below:

Company Name & Address : M/s. Basilblooms International Private Limited
Shah Industrial Park 3, Plot No. 30/F,
Vadodara Halol Highway, Kotambi,
District – Vadodara, State-Gujarat, Pin - 391510

Sample Details : “Compostable Film for making products from it like different kind
of bags, packaging rolls, sheets, gloves, aprons, etc.– as stated by the party

Test Report No : 01409 & dated 29.10.2024

Date of Receipt of sample : 07.02.2024

Date of Initiation : 20.02.2024

Date of Completion : 29.10.2024

Percentage of Compostability : 91.17

In 170 days

Requirement of Compostability in : 90 %
180 days as per ISO 17088:2021

The sample submitted by M/s. Basilblooms International Private Limited is compostable and the percentage of compostability in 170 days reported vide test report No. 01409 is 91.17%.

The submitted sample also complies with the terms of compostability seed germination and disintegration as per ISO 17088:2021.

Thanks & Regards,

Dr. Akshaya Kumar Palai
(Quality Manager)

Encl : Analysis Report



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ANALYSIS REPORT

Report No. : 01409

Date : 29.10.2024

Issued to

M/s. Basilblooms International Private Limited

Shah Industrial Park 3, Plot No. 30/F,

Vadodara Halol Highway, Kotambi,

District Vadodara, State-Gujarat, Pin - 391510

Customer Ref. No. & Date : SSF & Letter dated 05.02.2024.

Work order Ref. No. & Date : LARPM/BBS./2023-24/198 dated 07.02.2024

As per Standard : Refer part C

PART A: PARTICULARS OF SAMPLE SUBMITTED

- a) Name of the Sample : "Compostable Film for making products from it like different kind of bags, packaging rolls, sheets, gloves, aprons, etc."
-as stated by the party.
- b) Grade/verity/Type/Size/Class etc. : Nil.
- c) Code No. : Nil.
- d) Quantity (pcs./mtr/gm/nos) : 500 gm (Approx)
- e) Mode of packing
(Sealed carton/polypouch/container or not) : Packed in Carton.
- f) Date of receipt of sample : 07.02.2024
- g) Date of Performance of test : 20.02.2024 – 29.10.2024
- h) Any other information : Interim Report No. 01297 dated 16.08.2024

PART B: SUPPLEMENTARY INFORMATION

- a) Reference to sampling procedure : Drawn & Supplied by the party
- b) Supporting documents for
Measurements taken and results derived : As per part -C
like graphs, tables, sketches and/or
Photographs as appropriate to
test report if any (to be attached)
- c) Deviation from the test methods as : Nil
Prescribed in relevant ASTM/ISO/BIS/
Work Instructions, If any-


Mr. Rajendra Kumar Swain
(Technical Manager)
AUTHORISED SIGNATORY


Dr. Akshaya Kumar Pului
(Quality Manager)
AUTHORISED SIGNATORY

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PART C: TEST RESULTS

ANALYSIS REPORT

Report No : 01409

Date : 29.10.2024

Sl. No	Name of the Test	Test Method/Standard	Unit	Results Obtained	Specified Requirements
Sample Details: "Compostable Film for making products from it like different kind of bags, packaging rolls, sheets, gloves, aprons, etc.- as stated by the party"					
1.	Material Identification	FTIR/DSC	--	Polylactic Acid (PLA) & Polybutylene adipate terephthalate (PBAT) based material	---
2.	Disintegration (Dry mass remains in 2 mm sieve after 84 days)	Cl. 6.2 of ISO 17088:2021	%	7.51	Not more than 10% of its original dry mass
3.	Ultimate aerobic Biodegradation (with reference to 100% degradation of positive reference)	Cl. 6.3.1 of ISO 17088:2021 ISO:14855-1	%	91.17 (at the end of 170 days)	> 90 (at the end of the test period not more than 180 days.)
4.	Plant Growth study a) Monocotyledon (Rice) % Seed Emergence b) Dicotyledon (Mung) % Seed Emergence	Cl. 6.4.3 of ISO 17088:2021 (Annex C)	% % %	93.9 92.8	> 90 > 90


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AUTHORISED SIGNATORY


Dr. Akshaya Kumar Palai
(Quality Manager)
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PART C: TEST RESULTS

ANALYSIS REPORT

Report No : 01409

Date : 29.10.2024

Sl. No	Name of the Test	Test Method/Standard	Unit	Results obtained	Specified Requirements
5.	Acute Ecotoxic Effects to earthworm				
a.	Survival of adult earthworm at the end of 7 days	Cl. 6.4.4 of ISO 17088-2021 (Annex D)	%	100	> 90% of those from the corresponding blank compost
b.	Survival of adult earthworm at the end of 14 days		%	100	
c.	Biomass at the end of 14 days		%	98.5	
6.	Chronic Ecotoxic Effects to earthworm				
a.	Survival of adult earthworm at the end of 28 days	Cl. 6.4.5 of ISO 17088-2021 (Annex E)	%	100	> 90% of those from the corresponding blank compost
b.	Offspring at the end of 56 days		%	100	
c.	Biomass at the end of 56 days		%	96.0	

Note: The detailed observation on biodegradability test is enclosed as **Annexure-I**.


Mr. Rajendra Kumar Swain
(Technical Manager)
AUTHORISED SIGNATORY


Dr. Akshaya Kumar Palai
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ANALYSIS REPORT

Report No.: 01409

Date : 29.10.2024

PART C: TEST RESULTS

Sl. No	Name of the Test	Test Method/ Standard	Unit	Results obtained	Specified Requirements (*)
7.	Heavy metals concentration				
a	Arsenic (As)	ISO 17088: 2021	mg/kg	0.06	10
b	Cadmium (Cd)			1.72	5
c	Chromium (Cr)			2.37	50
d	Copper (Cu)			0.91	300
e	Lead (Pb)			1.96	100
f	Mercury (Hg)			0.01	0.15
g	Nickel (Ni)			0.99	50
h	Zinc (Zn)			11.64	1000

(*) – Based on the solid waste management Rules, 2016 notified on 08th April 2016 by Ministry of Environment, Forests & Climate Change, Government of India.

PART D: REMARKS: NIL

- Note:**
1. This Test Report / Certificate is issued only for the samples submitted to CIPET:SARP-LARPM.
 2. The results stated above related only to the items tested.
 3. The quality of the subsequent production lot has to be ensured by the purchaser.
 4. This Test Report shall not be reproduced except in full without the written approval of the laboratory.
 5. Any anomaly/discrepancy in this report should be brought to the notice of CIPET:SARP-LARPM within 30 days from the date of issue.
 6. Subcontracted Tests (if any): Nil.

** End of the Report **


Mr. Rajendra Kumar Swain
(Technical Manager)
AUTHORISED SIGNATORY


Dr. Akshaya Kumar Palai
(Quality Manager)
AUTHORISED SIGNATORY