

**BIOTECH****TESTING SERVICES**

TEST REPORT

LAB NO. : 13426/ 6	DATE: 10/05/2015
---------------------------	-------------------------

NAME OF CUSTOMER : M/S. UNITED NANOTECH PRODUCTS LTD.

ADDRESS : 7C, Middleton Street,
Kolkatta 700071

REFERENCE : Letter dated 01/04/2015

DATE OF RECEIPT : 01/04/2015

DATE OF INITIATION : 08/04/2015

DATE OF COMPLETION : 10/05/2015

SAMPLE DESCRIPTION : Samples labeled as –

Sr. No.	Sample Description	Biocide name and dosage
6.	Paint	UN P 102 C – 0.3%
Control	Paint without biocide	-

Name of Test:

Resistance of Emulsion Paints in the Container to Attack by Microorganisms; **In Can Preservative Test**

Test Method:

ASTM D 2574-06

Test Organism:

1. Enterobacter aerogenes ATCC 13048
2. Pseudomonas aeruginosa ATCC 9027

Procedure:

Mixed cell suspension of test organism was added to 50 gram sample giving final concentration of 10^6 cells/ ml. Re-inoculation is carried out at weekly intervals of 7, 14, 21 and 28 days. During the entire test duration, the samples were incubated at 30°C. After a contact time of 1, 3 and 7 days, a small aliquot of sample was streaked across the surface of Trypticase Soya agar and incubated at 30°C for 48 hours. The surface was examined for viable colonies. At each week the procedure was repeated over a period of 4 weeks to observe for Bacterial survival.

**Results:****1st Dosing:**

Sl. No.	Sample Description	Observation – 1 week Viable Colonies of Bacteria			
		0 day	1 day	3 days	7 days
6.	Paint + UN P 102 C – 0.3%	4	0	0	0
-	Paint without biocide	4	3	3	3

2nd Dosing:

Sl. No.	Sample Description	Observation – 2 weeks Viable Colonies of Bacteria			
		0 day	1 day	3 days	7 days
6.	Paint + UN P 102 C – 0.3%	4	0	0	0
-	Paint without biocide	4	3	4	4

3rd Dosing:

Sl. No.	Sample Description	Observation – 3 weeks Viable Colonies of Bacteria			
		0 day	1 day	3 days	7 days
6.	Paint + UN P 102 C – 0.3%	4	0	0	0
-	Paint without biocide	4	4	3	3

4th Dosing:

Sl. No.	Sample Description	Observation – 4 weeks Viable Colonies of Bacteria			
		0 day	1 day	3 days	7 days
6.	Paint + UN P 102 C – 0.3%	4	0	0	0
-	Paint without biocide	4	4	4	4

Evaluation Criteria:

Plating Results	Score
No detectable survivors	0
1-10 colonies	1
11-100 colonies	2
101-1000 colonies	3
>1000 colonies	4



BIOTECH

TESTING SERVICES

INTERPRETATIONS:

Preservative Challenge test for Paint samples labeled as **UN P 102 C – 0.3%** is **Successful**, since none of the test organisms have survived over the period of 28 days of the test, when analysed as per **ASTM D 2574-06 test method**.

For **BIOTECH TESTING SERVICES**



Dr Shilpa U. Nair
Quality Manager
(Authorized Signatory)