

[SEALED] Presidency of Refik Saydam Hygiene Institute

REPUBLIC OF TURKEY  
MINISTRY OF HEALTH  
Presidency of Refik Saydam Hygiene Institute

[SEALED]

**GENERAL DOCUMENTS UNIT**

**Forwarded by (Institution):** PRESIDENCY OF REFİK SAYDAM HYGIENE INSTITUTE

**Forwarded by (Unit):** Directorate of Food Safety and Nutrition Surveys

**Forwarded to:** NANOTEGO NANO TEKN. ÜRN. ARAŞ. GE. KİM.

**Document Number: 2010 / 13819 04.06.2010 15:19:52**

NANOTEGO TEKNOLOJİK ÜRÜNLER  
ARAŞTIRMA GELİŞTİRME KİMYA SANAYİ VE TİCARET A.Ş.  
GOSB Teknopark High Tech Binası Kat: 1 A-10

Gebze/KOCAELİ

Re: Your letter dated 14.05.2010 and numbered same.

The analyses of the samples submitted along with the specified letter are carried out in the respective laboratory of our Presidency, and attached you may find the report dated 01.06.2010 and registered under 2521.

Kindly submitted for your information.

[SIGNED]

Serdar Alp SUBAŞI, Food Engineer  
On behalf of the President  
Director of Food Safety  
and Nutrition Surveys

ATTACHMENTS:

1- 1 Report (3 pages)

2- Suggestions and Comments Form (1 pc.)

<b>[SEALED]</b> <b>Presidency of</b> <b>Refik Saydam</b> <b>Hygiene</b> <b>Institute</b>  <b>RSHMB</b>	<b>REPUBLIC OF TURKEY</b> <b>MINISTRY OF HEALTH</b> <b>Presidency of Refik Saydam Hygiene Institute</b> <b>Directorate of Food Safety and Nutrition Surveys</b>  <b>ANALYSIS REPORT</b>	Page: 1 of 3
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<b>Numbered</b>	: B.10.1.RSH.0.09.24-120.08/1225-2521	01.06.2010
<b>Subject</b>	: Disinfectant Microbiological Activity Control	
<b>Protocol ID</b>	: 35119	

Reason for Submitting the Sample	Control
Individual / Establishment / Institution Submitting the Sample	Nanotego Nano Teknolojik Ürünler Araştırma Geliştirme Kimya Sanayi ve Tic. A.Ş.
Related Letter Date and Number	14.05.2010 – Numbered Same
Sample Collection Address and Date	NA
Sample Owner	Nanotego Nano Teknolojik Ürünler Araştırma Geliştirme Kimya Sanayi ve Tic. A.Ş.
Sample Name/Type – Brand/Manufacturer	Antimic Surface Disinfectant
Sample Packaging and Label – Quantity	In Plastic Container – No Label – 500 mL
Sample Manufacturing Date and Expiry Date	NA / NA
Sample Batch Number – Series Number	NA / NA
Official Report / Contract Date and Number – Seal Condition	NA / No Seal
Voucher / Receipt Date and Number	12.05.2010 – Ref. Nr.: 8756076
Sample Laboratory Receive Date and Time	12.05.2010 – 11:24
Sample Condition	Eligible for Analysis
Analysis Start and Completion Dates	17.05.2010 – 26.05.2010

**Remarks:**

- The sample is not collected by us, and accepted as conforming to Directorate of Food Safety and Nutrition Surveys (GGBM) Acceptance Criteria Instructions.
- The results and comments stated in this report are valid for the aforementioned sample. It is prohibited to use any part of this report independently or separately and cannot be duplicated without the written consent of GGBM. Report not bearing signature and seal are invalid.

Inspected Microbiological Parameters	Method	Plate Counting method (number of plates used)	Test temperature	Incubation temperature	Blocking Agent	Test Organism	Used Neutralizer
<b>Microbiological Parameters (Obligatory terms)</b>							
Disinfectant microbiological activity test	EN 13727 Dilution-Neutralization	Pour Plate (2x1 mL)	20°C	36°C	Bovine albumin (0,3 g/L)	<i>P. aeruginosa</i> (ATCC 15442) <i>S. aureus</i> (ATCC 6538) <i>E. hirae</i> (ATCC 10541)	Tween 30 g/L (80) Lecithin 3 g/L Histidine 3 g/L Sodium – thiosulphate 3 g/L

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01.06.2010

Test Organism: *Pseudomonas aeruginosa* (ATCC 15442) Analysis Results

Validation and Controls											
Validation suspension (Nv <sub>0</sub> )			Control of experimental conditions (A)			Neutralizer control (B)			Method validation (C) Product concentration: 5% (v/v)		
Vc	48	$\bar{x} = 52$	Vc	34	$\bar{x} = 37$	Vc	34	$\bar{x} = 39$	Vc	36	$\bar{x} = 38$
	56			40			44			40	
30 ≤ $\bar{x}$ ≤ 160? [X] Yes [ ] No			A's $\bar{x} \geq 0,5 \times Nv_0 \bar{x}$ ? [X] Yes [ ] No			B's $\bar{x} \geq 0,5 \times Nv_0 \bar{x}$ ? [X] Yes [ ] No			C's $\bar{x} \geq 0,5 \times Nv_0 \bar{x}$ ? [X] Yes [ ] No		

Test Suspension and Test

Test-suspension (N and No):	N	Vc		$\bar{x}$ wm = 2,8x10 <sup>8</sup> No = N/10; 7,17 ≤ logN ≤ 7,70?	logN = 8.45 logNo = 7.45 [X] Yes [ ] No
	10 <sup>-6</sup>	260	300		
	10 <sup>-7</sup>	28	30		

% w/w product concentration	Vc		Na (= $\bar{x}$ x10)	log Na	log R (logNo=7.45)	Contact time (minutes)
1	<14	<14	<140	<2.15	>5.30	5
2.5	<14	<14	<140	<2.15	>5.30	5
5	<14	<14	<140	<2.15	>5.30	5

Test organism: *Staphylococcus aureus* (ATCC 6538) Analysis Results

Validation and Controls											
Validation suspension (Nv <sub>0</sub> )			Control of experimental conditions (A)			Neutralizer control (B)			Method validation (C) Product concentration: 5% (v/v)		
Vc	71	$\bar{x} = 77$	Vc	84	$\bar{x} = 81$	Vc	83	$\bar{x} = 86$	Vc	69	$\bar{x} = 72$
	82			78			89			74	
30 ≤ $\bar{x}$ ≤ 160? [X] Yes [ ] No			A's $\bar{x} \geq 0,5 \times Nv_0 \bar{x}$ ? [X] Yes [ ] No			B's $\bar{x} \geq 0,5 \times Nv_0 \bar{x}$ ? [X] Yes [ ] No			C's $\bar{x} \geq 0,5 \times Nv_0 \bar{x}$ ? [X] Yes [ ] No		

Test Suspension and Test

Test-suspension (N and No):	N	Vc		$\bar{x}$ wm = 3.1x10 <sup>8</sup> No = N/10; 7,17 ≤ logN ≤ 7,70?	logN = 8.49 logNo = 7.49 [X] Yes [ ] No
	10 <sup>-6</sup>	320	309		
	10 <sup>-7</sup>	33	24		

% w/w product concentration	Vc		Na (= $\bar{x}$ x10)	log Na	log R (logNo=7.49)	Contact time (minutes)
1	<14	<14	<140	<2.15	>5.34	5
2.5	<14	<14	<140	<2.15	>5.34	5
5	<14	<14	<140	<2.15	>5.34	5

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**Test Organism: *Enterococcus hirae* (ATCC 10541) Analysis Results**

Validation and Controls											
Validation suspension (Nv <sub>0</sub> )			Control of experimental conditions (A)			Neutralizer control (B)			Method validation (C) Product concentration: 5% (v/v)		
Vc	44	$\bar{x} = 49$	Vc	41	$\bar{x} = 48$	Vc	40	$\bar{x} = 46$	Vc	31	$\bar{x} = 37$
	53			54			52			42	
30 ≤ $\bar{x}$ ≤ 160? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			A's $\bar{x} \geq 0,5 \times Nv_0$ $\bar{x}$ ? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			B's $\bar{x} \geq 0,5 \times Nv_0$ $\bar{x}$ ? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			C's $\bar{x} \geq 0,5 \times Nv_0$ $\bar{x}$ ? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

**Test Suspension and Test**

Test-suspension (N and No):	N	Vc		$\bar{x}$ wm = 2.2x10 <sup>8</sup> No = N/10; 7,17 ≤ logN ≤ 7,70? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	10 <sup>-6</sup>	200	240		logN = 8.34 logNo = 7.34
	10 <sup>-7</sup>	23	30		

% v/v product concentration	Vc		Na (= $\bar{x}$ x 10)	log Na	log R (logNo=7.34)	Contact time (minutes)
1	<14	<14	<140	<2.15	>5.19	5
2.5	<14	<14	<140	<2.15	>5.19	5
5	<14	<14	<140	<2.15	>5.19	5

**Remarks:**

Vc = number of colonies in each ml

$\bar{x}$  = Vc average in two petri's

Na = number of live bacteria remaining in mL after contact time

$\bar{x}$  wm = weighted average of  $\bar{x}$

R = Reduction (log R = logNo – LogNa)

Assessment:	The product demonstrated the desired 5 log reduction in the tested microorganisms at specified 5% usage concentration. The product is found to be efficient for surface disinfection under clean conditions and the required terms of the method used.	
Analysis carried out by Bio. Nalan BUDAK [SIGNED]	Laboratory Responsible [SIGNED] Mic. Specialist Umut BERBEROĞLU	Tahsin ÇANLI Msc. Dr. Agricultural Engineer Deputy Director [SIGNED]
Bil. Sr. Bio. Yaşar SARIZ [SIGNED]		
Sr. Bio. Oya LENK [SIGNED]		
	Serdar Alp SUBAŞI, Food Engineer Director [SIGNED]	