



CONTROL MICROBIOLÓGICO SL.

Ctra. de la Coruña Km. 23,200. Edificio Las Rozas 23. 28230 LAS ROZAS.
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TEST REPORT N° 200915 (Page 1 of 7)

DETERMINATION OF THE BACTERICIDAL AND FUNGICIDAL VIABILITY ON GYPSUM ELEMENTS FOR SUSPENDED CEILINGS

a) Identification of the test laboratory	"Control Microbiológico S.L."
b) Client	ATEDY (Asociación Técnica y Empresarial del Yeso)
c) Identification of the sample	
Name of the product	GYPSUM ELEMENTS FOR SUSPENDED CEILINGS
Supplier	ATEDY'S members
Date of delivery	28/11/2008
Storage conditions	Room temperature
Appearance of the product	Gypsum ceiling tiles samples of 5X5 cm with diverse porosity and surface.
b) Test method and its validation	
<ul style="list-style-type: none">- Bacterial test suspensions: Adjust the number of colony forming units in the final suspension to 10^4- Count the colony obtained in a Rodhac plate for bacterial and fungi in every surface as a control. Incubate the plates for 24 –72h.- Add 0.5 ml of bacterial test suspension to the 4 surface for each time assay (0, 1 , 5 and 8 days)- After 1 minute, take a sample surface. It will be time 0. Incubate the plates for 24 –72h.- Repeat the procedure after 1, 5 and 8 days.- Calculate the reduction percentage.	
c) Experimental conditions	
Period of analysis	From 04/12/2008 to 16/01/2009
test temperature	18-25°C (room temperature)
Temperature of incubation	30 and 37 °C± 1°C
Identification of the Bacterial strains used	<i>Pseudomonas aeruginosa</i> ATCC 15442
	<i>Escherichia coli</i> ATCC 10536
	<i>Staphylococcus aureus</i> ATCC 6538
	<i>Bacillus subtilis</i> ATCC 6633
	<i>Candida albicans</i> ATCC 10231
	<i>Aspergillus niger</i> ATCC16404
e) Test results: See Table	
f) Conclusion:	
According to the results obtained, we observe a significant reduction of the microorganisms inoculated on the Gypsum ceiling tiles. This reduction depends on the incubation time and the microorganism tested.	

Madrid, 20/01/2009

Signature.: Juan Manuel Aguiar.
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Signature.: Olga Talavera Ávila
Laboratory Technician



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Pseudomonas aeruginosa ATCC 15442

DATE	BACTERIAL SUSPENSION Ufc/ml	CONTROL ufc/25cm ²	COUNT ufc/25cm ²	REDUCTION PERCENTAGE ufc/25cm ²
08/01/2009 time"0"	2,7X10 ⁴	68	161	-
09/01/2009 24 h	2,7X10 ⁴	69	120	25,46%
12/01/2009 5 days	2,7X10 ⁴	80	107	33,54%
15/01/2009 8 days	2,7X10 ⁴	113	77	52,17%



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***Escherichia coli* ATCC 10536**

DATE	BACTERIAL SUSPENSION Ufc/ml	CONTROL ufc/25cm ²	COUNT ufc/25cm ²	REDUCTION PERCENTAGE ufc/25cm ²
08/01/2009 time "0"	3,1X10 ⁴	192	132	-
09/01/2009 24 h	3,1X10 ⁴	123	107	18,9%
12/01/2009 5 days	3,1X10 ⁴	126	97	26,5%
15/01/2009 8 days	3,1X10 ⁴	130	60	49,2%



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Staphylococcus aureus ATCC 6538

DATE	BACTERIAL SUSPENSION Ufc/ml	CONTROL ufc/25cm ²	COUNT ufc/25cm ²	REDUCTION PERCENTAGE ufc/25cm ²
08/01/2009 time "0"	3,9X10 ⁴	55	147	-
09/01/2009 24 h	3,9X10 ⁴	111	83	43,53%
12/01/2009 5 days	3,9X10 ⁴	40	47	68,02%
15/01/2009 8 days	3,9X10 ⁴	92	24	83,67%



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Bacillus subtilis ATCC 6633

DATE	BACTERIAL SUSPENSION Ufc/ml	CONTROL ufc/25cm ²	COUNT ufc/25cm ²	REDUCTION PERCENTAGE ufc/25cm ²
08/01/2009 time "0"	2,9X10 ⁴	65	3	-
09/01/2009 24 h	2,9X10 ⁴	47	2	33,3%
12/01/2009 5 days	2,9X10 ⁴	66	1	66,6%
15/01/2009 8 days	2,9X10 ⁴	93	0	100%



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Candida albicans ATCC 10231

DATE	FUNGICAL SUSPENSION Ufc/ml	CONTROL ufc/25cm ²	COUNT ufc/25cm ²	REDUCTION PERCENTAGE ufc/25cm ²
08/01/2009 time "0"	2,7X10 ⁴	27	1120	-
09/01/2009 24 h	2,7X10 ⁴	36	1080	3,57%
12/01/2009 5 days	2,7X10 ⁴	21	920	17,85%
15/01/2009 8 days	2,7X10 ⁴	14	750	33,03%



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Aspergillus niger ATCC 16404

DATE	FUNGICAL SUSPENSION Ufc/ml	CONTROL ufc/25cm ²	COUNT ufc/25cm ²	REDUCTION PERCENTAGE ufc/25cm ²
08/01/2009 time "0"	2,7X10 ⁴	0	760	-
09/01/2009 24 h	2,7X10 ⁴	1	346	54,4%
12/01/2009 5 days	2,7X10 ⁴	3	282	62,8%
15/01/2009 8 days	2,7X10 ⁴	2	197	74,07%