



# Abbott Analytical



Consulting Scientists to the Disinfectant Industry

## Certificate of Analysis

**Sample(s) :** One sample of GreenGold

**Received from:** Busy Cleaning Ltd, Charter Court, Phoenix Way,  
Swansea, SA7 9FS

**Date received:** 23 November 2009      **Date tested:** 27 November 2009

**Certificate no:** 09L.148SB-KR.ENZ      **Certificate date:** 4 December 2009

**Sample ref:** 9L/148      **Page:** 1 of 2

**Analysis required:** EN 13697, Chemical disinfectants and antiseptics -  
Quantitative non-porous surface test for the evaluation of  
bactericidal and/or fungicidal activity of chemical  
disinfectants used in food, industrial, domestic and  
institutional areas - Test method and requirements without  
mechanical action (phase 2, step 2)

**Product stored at:** Room temperature

**Active substance:** Not declared

**Test conditions:** 'Clean'

**Interfering substance:** 0.3g/l bovine albumin +  
1g/l tryptone

**Product test concentration:** 10.0% v/v

**Product diluent used during test:** Sterile hard water 300mg/l CaCO<sub>3</sub>

**Contact time:** 5 minutes

**Test temperature:** 20°C ± 0.5°C

**Neutralising solution:** 30g/l polysorbate 80, 3g/l lecithin,  
1g/l histidine, 1g/l cysteine

**Incubation temperature:** 37°C ± 1°C

**Identification of bacterial strain(s)  
used:**

<i>Pseudomonas aeruginosa</i>	ATCC 15442
<i>Escherichia coli</i>	NCTC 10418
<i>Staphylococcus aureus</i>	NCTC 10788
<i>Enterococcus hirae</i>	ATCC 8043

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## Test results:

Test Organism	<i>Pseudomonas aeruginosa</i>		<i>Escherichia coli</i>		<i>Staphylococcus aureus</i>		<i>Enterococcus hirae</i>	
Validation Suspension	10 <sup>-1</sup>	Vc1 654 Vc2 638	Vc1 314 Vc2 426	Vc1 536 Vc2 447	Vc1 411 Vc2 285			
		Nv0 6.46 x10 <sup>3</sup>	Nv0 3.70 x10 <sup>3</sup>	Nv0 4.92 x10 <sup>3</sup>	Nv0 3.48 x10 <sup>3</sup>			
Experimental Control	10 <sup>0</sup>	Vc1 566 Vc2 592	Vc1 350 Vc2 308	Vc1 440 Vc2 412	Vc1 222 Vc2 306			
		A 5.79 x10 <sup>2</sup>	A 3.29 x10 <sup>2</sup>	A 4.26 x10 <sup>2</sup>	A 2.64 x10 <sup>2</sup>			
Neutraliser Control	10 <sup>0</sup>	Vc1 588 Vc2 542	Vc1 372 Vc2 214	Vc1 378 Vc2 400	Vc1 344 Vc2 258			
		B 5.65 x10 <sup>2</sup>	B 2.93 x10 <sup>2</sup>	B 3.89 x10 <sup>2</sup>	B 3.01 x10 <sup>2</sup>			
Method Validation	10 <sup>0</sup>	Vc1 582 Vc2 514	Vc1 300 Vc2 336	Vc1 404 Vc2 362	Vc1 277 Vc2 260			
		C 5.48 x10 <sup>2</sup>	C 3.18 x10 <sup>2</sup>	C 3.83 x10 <sup>2</sup>	C 2.69 x10 <sup>2</sup>			
Surface Inoculum	10 <sup>-5</sup>	Vc1 536 Vc2 468	Vc1 392 Vc2 428	Vc1 356 Vc2 394	Vc1 344 Vc2 272			
	10 <sup>-6</sup>	Vc1 54 Vc2 46	Vc1 46 Vc2 53	Vc1 44 Vc2 56	Vc1 31 Vc2 46			
		N 5.01 x10 <sup>7</sup>	N 4.53 x10 <sup>7</sup>	N 4.38 x10 <sup>7</sup>	N 3.47 x10 <sup>7</sup>			
Results	10 <sup>-1</sup>	Vc 0	Vc 0	Vc 0	Vc 0			
		Na <1.00 x10 <sup>1</sup>	Na <1.00 x10 <sup>1</sup>	Na <1.00 x10 <sup>1</sup>	Na <1.00 x10 <sup>1</sup>			
		R >5.01 x10 <sup>6</sup>	R >4.53 x10 <sup>6</sup>	R >4.38 x10 <sup>6</sup>	R >3.47 x10 <sup>6</sup>			
Log <sub>10</sub> Reduction	> 6.70		> 6.66		> 6.64		> 6.54	

Vc = Viable count

Nv = cfu/ml in the validation suspension

N = cfu/ml in the surface inoculum

Na = cfu/ml in the test mixture

R = Reduction in viability

## Requirements & Conclusion:

To pass EN 13697 a log<sub>10</sub> reduction of at least 4 is required.

This batch of GreenGold, when diluted to 10.0% v/v, passes the requirements of EN 13697 for bactericidal activity in 5 minutes at 20°C under 'clean' conditions against the reference organisms detailed.

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