



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.148B-KR.ENZ **Certificate date:** 2 December 2009

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

Analysis required: EN 1276, Chemical disinfectants and antiseptics -
Quantitative suspension test for the evaluation of
bactericidal activity of chemical disinfectants and
antiseptics used in food, industrial, domestic and
institutional areas - Test method and requirements
(phase 2, step 1)

Product stored at: Room temperature

Active substance: Not declared

Test conditions: 'Dirty'

Interfering substance: 3.0g/l bovine albumin

Product test concentration: 10.0% v/v

Product diluent used during test: Sterile hard water 300mg/l CaCO₃

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 ⁻¹ | Vc1 696 Vc2 744 | Vc1 358 Vc2 464 | Vc1 512 Vc2 464 | Vc1 154 Vc2 238 | | | |
| | | Nv0 7.20 x10 ³ | Nv0 4.11 x10 ³ | Nv0 4.88 x10 ³ | Nv0 1.96 x10 ³ | | | |
| Experimental Control | 10 ⁰ | Vc1 538 Vc2 522 | Vc1 292 Vc2 370 | Vc1 570 Vc2 492 | Vc1 106 Vc2 150 | | | |
| | | A 5.30 x10 ² | A 3.31 x10 ² | A 5.31 x10 ² | A 1.28 x10 ² | | | |
| Neutraliser Control | 10 ⁰ | Vc1 492 Vc2 570 | Vc1 340 Vc2 256 | Vc1 438 Vc2 476 | Vc1 124 Vc2 178 | | | |
| | | B 5.31 x10 ² | B 2.98 x10 ² | B 4.57 x10 ² | B 1.51 x10 ² | | | |
| Method Validation | 10 ⁰ | Vc1 530 Vc2 612 | Vc1 308 Vc2 366 | Vc1 422 Vc2 496 | Vc1 140 Vc2 106 | | | |
| | | C 5.71 x10 ² | C 3.37 x10 ² | C 4.59 x10 ² | C 1.23 x10 ² | | | |
| Test Suspension | 10 ⁻⁷ | Vc1 1590 Vc2 2440 | Vc1 2620 Vc2 1440 | Vc1 3520 Vc2 4140 | Vc1 1360 Vc2 1580 | | | |
| | 10 ⁻⁸ | Vc1 252 Vc2 340 | Vc1 176 Vc2 208 | Vc1 396 Vc2 284 | Vc1 248 Vc2 200 | | | |
| | | N 2.49 x10 ¹⁰ | N 1.98 x10 ¹⁰ | N 3.62 x10 ¹⁰ | N 1.86 x10 ¹⁰ | | | |
| Results | 10 ⁻² | Vc 12 | Vc 0 | Vc 3 | Vc 0 | | | |
| | | Na 1.20 x10 ³ | Na <1.00 x10 ² | Na 3.00 x10 ² | Na <1.00 x10 ² | | | |
| | | R 2.07 x10 ⁷ | R >1.98 x10 ⁸ | R 1.21 x10 ⁸ | R >1.86 x10 ⁸ | | | |
| Log ₁₀ Reduction | | 7.32 | >8.30 | 8.08 | >8.27 | | | |

Vc = Viable count

Nv = cfu/ml in the validation suspension

N = cfu/ml in the test suspension

Na = cfu/ml in the test mixture

R = Reduction in viability

Requirements & Conclusion:

To pass EN 1276 a log₁₀ reduction of at least 5 is required.

This batch of GreenGold, when diluted to 10.0% v/v, passes the requirements of EN 1276 for bactericidal activity in 5 minutes at 20°C under 'dirty' conditions against the reference organisms detailed.

D C Watson

D C Watson BSc, CBiol, MSB, MIFST, ACIEHO
PO Box 95, New Ferry, Wirral, CH62 6HA
Tel: 0151 637 3331 Mob: 07767 871275
email: abbottanalytical@hotmail.co.uk