

**ASSESSMENT OF THE
CLEANSING PERFORMANCE
OF EBIOX HARD SURFACE
DISINFECTANT**



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MANUFACTURER Ebiox Limited
1 Whitehall
Whitehall Road
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TEST PRODUCT Ebiox Hard Surface Disinfectant supplied at use concentration. Constituents unknown.

Tests also carried out with two widely used disinfectants i.e. 1% Stericol, a clear soluble phenolic and 1000 ppm chlorine releasing agent (NaDCC)

LOT NUMBER Not stated

EXPIRY DATE Not stated

STORAGE CONDITIONS room temperature

TEST ORGANISMS

Staphylococcus aureus NCTC 4163.

Pseudomonas aeruginosa NCTC 6749

TEST METHOD AND VALIDATION 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 (Phase 2, step 1). Tests for disinfectants for medical establishments not yet ratified.

Product diluent used during the test sterile hard water 300mg/kg CaCO₃

Product test concentration Undiluted

Appearance product dilution Clear solution

Contact time 1 and 5 minutes

Test temperature 20°C

Interfering substance Bovine albumin
0.03% clean conditions
0.3% dirty condition

Inhibition method

Dilution/neutralization

Neutralizer

Tween 80 30g/l, sodium lauryl sulphate 4g/l,
lecithin 3g/l

Tests were performed to establish the suitability of this neutralizer in neutralizing the activity of the disinfectant without being inhibitory to the test organisms.

RESULTS

BACTERICIDAL ACTIVITY OF EBIOX HARD SURFACE DISINFECTANT (HSD) USING PHASE 2 STEP 1 SUSPENSION TEST EN 1276

Log₁₀ reductions achieved with *Staphylococcus aureus*

| Product | Test | 1 minute | | 5 minutes | |
|-----------------------------------|------|------------------|------------------|------------------|------------------|
| | | Clean conditions | Dirty conditions | Clean conditions | Dirty conditions |
| EBIOX HSD | Pre | 7.10 | 7.10 | 7.10 | 7.10 |
| | 1 | >5.10 | >5.10 | >5.10 | >5.10 |
| | 2 | >5.10 | >5.10 | >5.10 | >5.10 |
| | 3 | >5.10 | >5.10 | >5.10 | >5.10 |
| | Mean | >5.10 | >5.10 | >5.10 | >5.10 |
| 1000 ppm chlorine releasing agent | Pre | 7.10 | 7.10 | 7.10 | 7.10 |
| | 1 | >5.10 | >5.10 | >5.10 | >5.10 |
| | 2 | >5.10 | >5.10 | >5.10 | >5.10 |
| | 3 | >5.10 | >5.10 | >5.10 | >5.10 |
| | Mean | >5.10 | >5.10 | >5.10 | >5.10 |
| 1% Stericol | Pre | 7.10 | 7.10 | 7.10 | 7.10 |
| | 1 | 3.63 | 3.63 | >5.10 | >5.10 |
| | 2 | 3.66 | 3.67 | >5.10 | >5.10 |
| | 3 | 3.72 | 3.69 | >5.10 | >5.10 |
| | Mean | 3.67 | 3.67 | >5.10 | >5.10 |

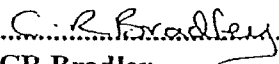
**BACTERICIDAL ACTIVITY OF EBIOX HARD SURFACE DISINFECTANT
USING PHASE 2 STEP 1 SUSPENSION TEST EN 1276
Log₁₀ reductions achieved with *Pseudomonas aeruginosa***

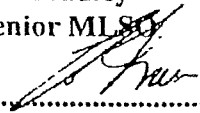
| Product | Test | 1 minute | | 5 minutes | |
|-----------------------------------|------|------------------|------------------|------------------|------------------|
| | | Clean conditions | Dirty conditions | Clean conditions | Dirty conditions |
| EBIOX HSD | Pre | 7.18 | 7.18 | 7.18 | 7.18 |
| | 1 | >5.18 | >5.18 | >5.18 | >5.18 |
| | 2 | >5.18 | >5.18 | >5.18 | >5.18 |
| | 3 | >5.18 | >5.18 | >5.18 | >5.18 |
| | Mean | >5.18 | >5.18 | >5.18 | >5.18 |
| 1000 ppm chlorine releasing agent | Pre | 7.18 | 7.18 | 7.18 | 7.18 |
| | 1 | >5.18 | >5.18 | >5.18 | >5.18 |
| | 2 | >5.18 | >5.18 | >5.18 | >5.18 |
| | 3 | >5.18 | >5.18 | >5.18 | >5.18 |
| | Mean | >5.18 | >5.18 | >5.18 | >5.18 |
| 1% Stericol | Pre | 7.18 | 7.18 | 7.18 | 7.18 |
| | 1 | 5.18 | 4.23 | >5.18 | >5.18 |
| | 2 | 4.93 | 4.29 | >5.18 | >5.18 |
| | 3 | 4.60 | 4.21 | >5.18 | >5.18 |
| | Mean | 4.90 | 4.24 | >5.18 | >5.18 |

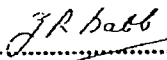
CONCLUSION

Ebiox Hard Surface Disinfectant possesses bactericidal activity at 20°C. A 5 log₁₀ (99.999%) reduction was achieved using both test organisms i.e. *Ps. aeruginosa* and *Staph. aureus* in 1 and 5 mins under clean (0.03% albumin) and dirty (0.3% albumin) conditions.

The tests were repeated with 1% Stericol, a clear soluble phenolic, and sodium dichloroisocyanurate (NaDCC). These are two widely used hard surface disinfectants in healthcare premises. The chlorine releasing agent NaDCC at 1000 ppm av CI was similarly effective i.e. >5 log₁₀ reduction in 1 and 5 mins under clean and dirty conditions but the 1% Stericol just failed to achieve a 5 log₁₀ reduction in the shorter time interval of 1 min.


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