

BACTERICIDAL EFFICACY TESTS (EN 1276)

(PHASE 2, STEP 1)

TEKNON BIOCLEANSE CONCENTRATE

QUADRALENE Ltd

HOSPITAL INFECTION RESEARCH LABORATORY

CITY HOSPITAL

DUDLEY ROAD

BIRMINGHAM B18 7QH

April 2006

MANUFACTURER

Quadralene Ltd

Bateman Street

Derby

DE23 8JL

UK

TEST PRODUCT

Teknon Biocleanse Concentrate

LOT NUMBER

QL/32/122

EXPIRY DATE

Not stated

TEST ORGANISMS

*Methicillin resistant
Staphylococcus aureus*

NCTC 12493

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).

REQUIREMENT

The test product when tested in accordance with the test methodology described under simulated clean and dirty conditions shall demonstrate at least a 5 log₁₀ reduction.

Product test concentration	2%
Appearance product dilution	Clear Blue Solution
Contact time	1, 2 and 5 minutes
Test temperature	20 ⁰ C
Interfering substance	Bovine albumin 0.03% clean conditions 0.3% dirty conditions
Inhibition method	Dilution/neutralization

Neutralizer

Tween 80 30g/l, Lecithin 3g/l,
Sodium lauryl sulphate 4g/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. This neutralizer was found to be suitable.

SUMMARY OF TEST METHODS

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).

Copies available from BSI, 389 Chiswick High Road, London W4 4AL.

The test method involves mixing 1 ml of the test bacteria with 1 ml of soil (0.3 or 3% albumin and then adding 8 ml of disinfectant. After the required contact time, 1 ml is removed to 9 ml of recovery/neutralizer, which is then plated to detect surviving test bacteria.

RESULTS

BACTERICIDAL ACTIVITY OF TEKNON BIOCLEANSER USING PHASE 2

STEP 1 SUSPENSION TEST EN 1276

Log₁₀ counts/reductions achieved in 1, 2, 5 and 10 minutes

(Tests carried out in duplicate)

Test Organism Staphylococcus aureus (MRSA) NCTC 12493	Log₁₀ initial count	Contact Time		
		1 min	2 mins	5 mins
<u>Clean conditions (0.03% albumin)</u>	8.53	>7.53	>7.53	>7.53
<u>Dirty conditions (0.3% albumin)</u>	8.53	>7.53	>7.53	>7.53

* A contact time of 5 mins is stated in EN 1276. However 1, 2 and 5 min contact times were commissioned by Quadralene Ltd as more relevant for hard surface disinfectant for use in health care premises. The tests carried out were therefore, more stringent.

CONCLUSION

When tested in accordance with EN 1276 (1997), a 2% solution of Teknon Biocleanse at 20°C. A >5 Log₁₀ (99.999%) reduction was achieved with MRSA in 1 min, 2 mins and 5 mins under clean (0.03% albumin) and dirty (0.3% albumin) conditions. To satisfy the requirements for the test, at least a 5 Log₁₀ reduction in specified test organisms is required within 5 mins when the disinfectant is tested at its intended use dilution(s). Teknon Biocleanse when tested at 2%, therefore, satisfies the requirements of the test.

Performance under light (clean) and moderate to heavy (dirty) soiling was assessed. The presence of soil does not appear to affect the performance of the product.

.....
Erin Traynor
Biomedical Scientist

.....
Christina Bradley
Laboratory Manager

.....
Dr Adam P Fraise
Director