TEST REPORT

ISSUED BY EVANS VANODINE MICROBIOLOGY LABORATORY

Date of Issue **12 JULY 2004** Report Number **BIO/13074**

UKAS TESTING
1108

Evans Vanodine International PLC
Brierley Road
Walton Summit
Preston
PR5 8AH

Tel No. 01772 322200
Fax No. 01772 626000

TITLE	FUNGICIDAL ACTIVITY OF ANTIBAK PRO UNDER CLEAN CONDITIONS
CONTACT AT TESTING LABORATORY	VALERIE FOTHERINGHAM
CUSTOMER	Bio Technics Ltd Upper Mill Inverbervie Aberdeenshire Scotland DD10 OSP

IDENTIFICATION OF SAMPLE

Name of sample:	AntiBak Pro
Laboratory Number:	02/14064
Appearance:	Clear Colourless Liquid
Storage conditions:	Room Temperature
Date of receipt:	14/06/04
Date(s) of test(s):	06/07/04 and 07/07/04

TEST METHOD

BS EN 1650: 1998 Chemical disinfectants and antiseptics - Quantitative suspension test for the evaluation of fungicidal activity of chemical disinfectants and antiseptics used in food, industrial, domestic and institutional areas (phase 2, step 1) and documented in-house procedures as Standard Operating Procedure (SOP)

EXPERIMENTAL CONDITIONS

Procedure:	Dilution-neutralization
Test dilutions:	1:50, (20ml/l.2%), 1:70, (14.3ml/l 1.43%) 1:100, (10ml/l, 1.0%) prepared in hard water
Neutralizer:	Lecithin 3g/l, polysorbate 80 30g/l, sodium thiosulphate 5g/l, L-histidine 1g/l, saponine 30g/l in diluent
Test temperature:	20°C +/- 1°C
Test conditions:	Clean:- conditions representative of surfaces which have received a satisfactory cleaning programme and/or are known to contain minimal levels of organic and/or inorganic materials. (final concentration of bovine albumin 0.3g/l)
Contact time:	15 minutes
Temperature of incubation:	30°C +/- 1°C
Test organisms:	*Aspergillus niger* NCPF 2275 *Candida albicans* NCPF 3179

REQUIREMENTS

The product diluted in standardised hard water when tested, in accordance with clause 5* BSEN 1650, under the required test conditions (20°C, 15 minutes, 2 referenced strains), shall demonstrate at least a 10^4 logarithmic reduction in viable counts.

The determined fungicidal concentration of the test product is suggested as being suitable for practical situations of use.

The product shall be deemed to have passed the test if it demonstrates a 10^4 or more reduction in viability under conditions defined above.

*The validation test (see Annex A BS EN 1650) shall also be carried out at the same time as the test procedure using only the highest product concentration and the same conditions as used in the test.

RESULTS VALIDATION TESTS

TABLE 1 Verification of the methodology and validation of dilution-neutralization method for AntiBak Pro under clean conditions with *Aspergillus niger*

Viable count (cfu/ml)				
Fungal test suspension (N)	**Fungal suspension (N_v)**	**Validation of experimental conditions (A)**	**Neutralizer toxicity control (B)**	**Dilution neutralization control (C)**
2.3×10^7	8.2×10^2	8.4×10^1	7.3×10^1	8.4×10^1

TABLE 2 Verification of the methodology and validation of dilution-neutralization method for AntiBak Pro under clean conditions with *Candida albicans*

Viable count (cfu/ml)				
Fungal test suspension (N)	**Fungal suspension (N_v)**	**Validation of experimental conditions (A)**	**Neutralizer toxicity control (B)**	**Dilution neutralization control (C)**
2.4×10^7	6.5×10^2	5.2×10^1	5.2×10^1	5.0×10^1

KEY:

For the strain tested :
N is between 1.5×10^7 colony forming units per millilitre (cfu/ml) and 5×10^7 cfu/ml
N_v is between 6×10^2 cfu/ml and 1.5×10^3 cfu/ml
A is equal to or greater than $0.05 \times N_v$
B is equal to or greater than $0.05 \times N_v$
C is equal to or greater than $0.5 \times B$
NOTE: The test method is validated for *Aspergillus niger* and *Candida albicans*

RESULTS TEST

TABLE 3 Reduction in viability of *Aspergillus niger* by three dilutions of AntiBak Pro under clean conditions at 20°C with a 15 minute contact time

Dilution	Viable counts for the test mixture	Viable counts (cfu/ml) for the test mixture (N_a)	Reduction in viability ($N \times 10^{-1} \div N_a$)	Status
1:50	0,0	$<1.5 \times 10^2$	$>1.5 \times 10^4$	PASS
1:70	0,0	$<1.5 \times 10^2$	$>1.5 \times 10^4$	PASS
1:100	0,0	$<1.5 \times 10^2$	$>1.5 \times 10^4$	PASS

TABLE 4 Reduction in viability of *Candida albicans* by three dilutions of AntiBak Pro under clean conditions, 20°C, 15 minute contact time

Dilution	Viable counts for the test mixture	Viable counts (cfu/ml) for the test mixture (N_a)	Reduction in viability ($N \times 10^{-1} \div N_a$)	Status
1:50	0,0	$<1.5 \times 10^2$	$>1.6 \times 10^4$	PASS
1:70	0,0	$<1.5 \times 10^2$	$>1.6 \times 10^4$	PASS
1:100	0,0	$<1.5 \times 10^2$	$>1.6 \times 10^4$	PASS

KEY:

> = Greater than
< = Less than
PASS = $\geq 10^4$ reduction in viability
FAIL = $< 10^4$ reduction in viability

TEST REPORT

UKAS ACCREDITED TESTING LABORATORY No. 1108

Report Number BIO/13074

CONCLUSION

According to BS EN 1650 : 1998, AntiBak Pro, when diluted 1:100 in hard water, possesses fungicidal activity in fifteen minutes at 20°C under clean conditions for the referenced strains *Candida albicans* and *Aspergillus niger*.

SIGNATURE.....

L A SPEED
DEPUTY QUALITY MANAGER (MICROBIOLOGY)

AUTHORISED BY

SIGNATURE.....

V J C FOTHERINGHAM
TECHNICAL MANAGER