

HygCen GmbH · Werksgelände 24 · A-5503 Bischofshofen-Mitterberghütten

Stockhausen GmbH & Co.

Bischofshofen, 2002-06-01

Postfach 100452

D-47704 Krefeld

Test report B 2931e:

STOKOSEPT GEL

Lab-No.: B 2931

EN 1650 (February 1998)

Quantitative suspension test for evaluation of fungicidal activity (phase 2 / step 1)

Client: Stockhausen GmbH & Co, Krefeld
Order: 2002-05-03
Material receipt: 2002-05-13
Period of analysis: 2002-05-28 to 2002-06-01

Name of the product: STOKOSEPT GEL no perfume
Batchnumber: BL 4-56 / 5.4.02

Active substances:

62,0% Ethanol (96,5 percent)
10,0% 2-Propanol (99,7 percent)

Odour: aromatic alcoholic

Appearance: colourless, turbid, viscous liquid

pH-values (glasselectrode):
80% 7.2
50% 6.4

Testreport B 2391e

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01/02/2006

Geschäftsführer: HygCen · Centrum für Hygiene und
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FN 180657 y
UID-Nr.: ATU 46628403

Test method:

EN 1650 (February 1998)

Quantitative suspension test for the evaluation of fungicidal activity of products used in food, industrial, domestic and institutional areas (phase 2 / step 1)

Test strains:*Candida albicans* ATCC 10231*Aspergillus niger* ATCC 16404**Test temperature:**

30°C ± 1°C

Neutralizer:

3,0% polysorbate 80 + 3% saponine + 0,1% histidine + 0,1% cysteine

Counting procedure:

Pour plate method

Product test concentration:

80%, 50% (endconcentration)

Diluent:Water of standardised hardness (300mg/kg CaCO₃)**Contact time:**

30 sec., 1 min., 5 min.

Temperature of incubation:

30°C ± 1°C

Interfering substance:

0.3 g/l of bovine albumine (clean conditions)

3.0 g/l of bovine albumine (dirty conditions)

Stability of the mixture (interfering Substance and product diluted in hard water):

precipitate absent throughout the test under clean conditions

precipitate under dirty conditions

01.06.02

Test results:

Product: STOKOSEPT GEL – no perfume

Contact time: 30 sec.

Interfering substance	Test organisms	Validation tests					Fungal test suspension	Test procedure at concentration % (v/v)	
		Fungal suspension	Experimental conditions	Neutralizer toxicity control	Dilution neutralization control	80%		50%	
0.03% bovine albumin (clean conditions)	<i>Candida albicans</i> ATCC 10231	Vc: 152/112 Nv: 1.3x10 ³	Vc: 86/91 A: 8.9x10 ²	Vc: 78/105 B: 9.2x10 ²	Vc: 92/61 C: 7.7x10 ²	>300/>300 84/48 6.6x10 ⁷	Vc: 0/0 Na: <1.5x10 ² R: >10 ⁴	>300/>300 >3.0x10 ³ <10 ⁴	
		Vc: 87/80 Nv: 8.4x10 ²	Vc: 55/46 A: 5.1x10 ²	Vc: 79/56 B: 6.8x10 ²	Vc: 46/45 C: 4.6x10 ²		Vc: 26/23 Na: 2.5x10 ² R: >10 ⁴	>300/>300 >3.0x10 ³ <10 ⁴	
0.3% bovine albumin (dirty conditions)	<i>Candida albicans</i> ATCC 10231	Vc: 152/112 Nv: 1.3x10 ³	Vc: 105/116 A: 1.1x10 ³	Vc: 78/105 B: 9.2x10 ²	Vc: 64/69 C: 6.7x10 ²	>300/>300 84/48 6.6x10 ⁷	Vc: 0/0 Na: <1.5x10 ² R: >10 ⁴	63/55 5.9x10 ² >10 ⁴	
		Vc: 87/80 Nv: 8.4x10 ²	Vc: 67/42 A: 5.5x10 ²	Vc: 79/56 B: 6.8x10 ²	Vc: 59/52 C: 5.6x10 ²		Vc: 0/0 Na: <1.5x10 ² R: >10 ⁴	>300/>300 >3.0x10 ³ <10 ⁴	

Vc = Viable count

N = Number of cfu/ml of the fungal test suspension

Nv = Number of cfu/ml of the fungal suspension

R = Reduction of viability

Na = Number of cfu/ml in the test mixture

A = Number of cfu/ml of the experimental condition control

B = Number of cfu/ml of the neutralizer toxicity control

C = Number of cfu/ml of the dilution neutralization test control

01.06.02

Test results:

Product: STOKOSEPT GEL – no perfume

Contact time: 1 min

Interfering substance	Test organisms	Validation tests					Fungal test suspension	Test procedure at concentration % (v/v)	
		Fungal suspension	Experimental conditions	Neutralizer toxicity control	Dilution neutralization control	80%		50%	
0.03% bovine albumin (clean conditions)	<i>Candida albicans</i> ATCC 10231	Vc: 152/112 Nv: 1.3x10 ³	Vc: 74/81 A: 7.8x10 ²	Vc: 78/105 B: 9.2x10 ²	Vc: 92/61 C: 7.7x10 ²	10 ⁻² : >300/>300 10 ⁻⁶ : 84/48 N: 6.6x10 ⁷	Vc: 0/0 Na: <1.5x10 ² R: >10 ⁴	>300/>300 >3.0x10 ³ <10 ⁴	
	<i>Aspergillus niger</i> ATCC 16404	Vc: 87/80 Nv: 8.4x10 ²	Vc: 51/49 A: 5.0x10 ²	Vc: 79/56 B: 6.8x10 ²	Vc: 46/45 C: 4.6x10 ²	10 ⁻² : >300/>300 10 ⁻⁶ : 46/53 N: 5.0x10 ⁷	Vc: 3/3 Na: <1.5x10 ² R: >10 ⁴	>300/>300 >3.0x10 ³ <10 ⁴	
0.3% bovine albumin (dirty conditions)	<i>Candida albicans</i> ATCC 10231	Vc: 152/112 Nv: 1.3x10 ³	Vc: 95/78 A: 8.7x10 ²	Vc: 78/105 B: 9.2x10 ²	Vc: 64/69 C: 6.7x10 ²	10 ⁻² : >300/>300 10 ⁻⁶ : 84/48 N: 6.6x10 ⁷	Vc: 0/0 Na: <1.5x10 ² R: >10 ⁴	0/0 <1.5x10 ² >10 ⁴	
	<i>Aspergillus niger</i> ATCC 16404	Vc: 87/80 Nv: 8.4x10 ²	Vc: 54/48 A: 5.1x10 ²	Vc: 79/56 B: 6.8x10 ²	Vc: 59/52 C: 5.6x10 ²	10 ⁻² : >300/>300 10 ⁻⁶ : 46/53 N: 5.0x10 ⁷	Vc: 0/0 Na: <1.5x10 ² R: >10 ⁴	>300/>300 >3.0x10 ³ <10 ⁴	

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Test results:

Product: STOKOSEPT GEL – no perfume

Interfering substance	Test organisms	Validation tests					Fungal test suspension	Contact time: 5 min	
		Fungal suspension	Experimental conditions	Neutralizer toxicity control	Dilution neutralization control	Fungal test suspension		Test procedure at concentration % (v/v)	
								80%	50%
0.03% bovine albumin (clean conditions)	<i>Candida albicans</i> ATCC 10231	Vc: 152/112 Nv: 1.3x10 ³	Vc: 92/93 A: 9.3x10 ²	Vc: 78/105 B: 9.2x10 ²	Vc: 92/61 C: 7.7x10 ²	10 ⁻⁵ : >300/>300 10 ⁻⁶ : 84/48 N: 6.6x10 ⁷	Vc: 0/0 Na: <1.5x10 ² R: >10 ⁴	0/0 <1.5x10 ² >10 ⁴	
		Vc: 87/80 Nv: 8.4x10 ²	Vc: 59/53 A: 5.6x10 ²	Vc: 79/56 B: 6.8x10 ²	Vc: 46/45 C: 4.6x10 ²	10 ⁻⁵ : >300/292 10 ⁻⁶ : 46/53 N: 5.0x10 ⁷	Vc: 0/0 Na: <1.5x10 ² R: >10 ⁴	>300/>300 >3.0x10 ³ <10 ⁴	
0.3% bovine albumin (dirty conditions)	<i>Candida albicans</i> ATCC 10231	Vc: 152/112 Nv: 1.3x10 ³	Vc: 86/102 A: 9.4x10 ²	Vc: 78/105 B: 9.2x10 ²	Vc: 64/69 C: 6.7x10 ²	10 ⁻⁵ : >300/>300 10 ⁻⁶ : 84/48 N: 6.6x10 ⁷	Vc: 0/0 Na: <1.5x10 ² R: >10 ⁴	0/0 <1.5x10 ² >10 ⁴	
		Vc: 87/80 Nv: 8.4x10 ²	Vc: 73/57 A: 6.5x10 ²	Vc: 79/56 B: 6.8x10 ²	Vc: 59/52 C: 5.6x10 ²	10 ⁻⁵ : >300/292 10 ⁻⁶ : 46/53 N: 5.0x10 ⁷	Vc: 0/0 Na: <1.5x10 ² R: >10 ⁴	>300/>300 >3.0x10 ³ <10 ⁴	

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B = Number of cfu/ml of the neutralizer toxicity control

C = Number of cfu/ml of the dilution neutralization test control

N is between 1.5 x 10⁷ cfu/ml and 5 x 10⁷ cfu/ml, not for *C. albicans*
 Nv is between 6 x 10² cfu/ml and 1.5 x 10³ cfu/ml

B is equal to or greater than 0.05 times Nv

C is equal to or greater than 0.5 times B

A is equal to or greater than 0.05 times Nv


Conclusion

According to EN 1650 (February 1998) the Batch BL 4-56 / 5.4.02 of product STOKOSEPT GEL processes a fungicidal activity in 30 sec. at 30°C under clean conditions (0.3g/l bovine albumin) and dirty conditions (3.0g/l bovine albumine) for the referenced strains *Candida albicans* and *Aspergillus niger* when diluted at 80% (v/v) in water of standardised hardness.

The test results given in this test-report relate only to the items tested. This test report shall not be reproduced except in full without the written approval of the testing laboratory.

HygCen
Centrum für Hygiene und
medizinische Produktsicherheit

Dr. A. Sorger
technical manager



as/01.06.02