

19th January 2014

# Big Wipes 4x4 Antibacterial Test

# **Summary:**

According to EN 1276, the batch: **Syc mp 4-002** of the product **Sycamor BIG WIPES 4X4** possesses bactericidal activity in 1 minute at 200C, under dirtyconditions (3g/l bovine albumin), for references strains: *Pseudomonas aeruginosa, E. coli, Staphilococcus aureus* and *Enterococcus hirae.* 

# **Product name:**

Multi Purpose (Black) Heavy Duty (Red)
Multi Surface (Green) Power Spray (Red)
ALL SIZES



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#### 1. Identification of test laboratory

Institute for Food Microbiology and Consumer goods LTD

#### 2. Identification of test Sample

Name of product: Sycamor BIG WIPES 4X4

Manufacturer: Sycamor group

**Application:** 

Substance(s) and concentration(s) in 100 g

Batch Syc mp 4-002

Active substance Not declared

Sampled by The customer

**Appearance and odor** Opaque, beige liquid

Conditions of storage Room temperature

**Date of receipt at laboratory** 25/12/2013

**Lab number** 1759/12

#### 3. Reference:

BS 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)

#### 4. Definition:

EN 1276 defines a bactericidal product, when it has the capability to produce at least a  $10^5$  reduction in the number of viable cells of the tested organisms, under defined experimental conditions.

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#### 5. Principle of the test method:

A test suspension of bacteria in a solution of 0.3% bovine albumin, as an interfering substance, was added to the undiluted product. The mixture was maintained at 20<sup>o</sup>C-23<sup>o</sup>C, for 1 min., then the bactericidal action of the product was neutralized, and the number of surviving bacteria, was determined.

#### 6. Test organisms:

- 1. E. coli ATCC 8739
- 2. Staphylococcus aureus ATCC 6538
- 3. Pseudomonas aeruginosa ATCC 9027
- 4. Enterococcus hirae ATCC 10541

The bacterial strains were maintained and counted by the pour plate method in accordance with EN 1276: (2009).

# 7. Experimental conditions:

Tested product Sycamor-BIG WIPES 4X4 Formula SYC MP 4-002

Test Temperature  $20^{0}c \pm 0.5^{0}c$ 

Concentration of test product Not declared

Contact times 1 minutes

Interfering substance 3.0g/l bovine albumin- dirty conditions

Neutralizing Method Membrane Filtration

Neutralizer

Temperature of incubation  $30^{\circ}\text{C} \pm 1^{\circ}\text{C}$ 

# 8. Test procedure:

Membrane Filtration method was used for assessing the bactericidal effect of the product, and the results are summarized in Table No. 2.

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#### 9. Validation and verification of the methodology:

Validation tests are summarized in Table No. 2.

Verification of the methodology for each test organism:

- a) The number of CFU/ml of the bacterial test suspension is between  $1.5 \times 10^8$  and  $5.0 \times 10^8$  CFU/ml (N in Table No. 1).
- b) The number of CFU/ml of the bacterial suspension is between  $6.0 \times 10^2$  and  $3.0 \times 10^3$  CFU/ml (Nv in Table No. 2).
- c) The number of CFU/ml of the neutralizer toxicity control (B in Table No. 2) is equal to, or greater than 0.05 times the number of CFU/ml of the bacterial suspension (Nv in Table No. 2).
- d) The number of CFU/ml of the dilution neutralization control (C in Table No.
  2) is equal to, or greater than 0.5 times the number of CFU/ml of the neutralizer toxicity control (B in Table No. 2).
- e) The number of CFU/ml of the experimental condition validation (A in Table No. 2) is equal to, or greater than 0.05 times of the number of CFU/ml of the bacterial suspension (Nv in Table No. 2).

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**Table No. 1: Test results** 

	Test	Conc. Of	Conc. Of	Conc. Of the
Test Organisms	suspension	the product	the product	product 25%
	cells/ml (N)	100%	50%	
E. coli ATCC 8739	$10^{-6:} > 165$ $10^{-7}: 29,21$ N: $2.6 \times 10^{8}$	Vc: 0,0 Na: <140 lgNa: < 2.15 <b>Lg R</b> :>5.26	Vc: 0,0 Na: <140 lgNa:<2.15 <b>LgR</b> :> 5.26	Vc: 0,0 Na: <140 lgNa:<2.15 <b>LgR</b> : > 5.26
Staphylococcus aureus ATCC 6538	10 <sup>-6:</sup> >165 10 <sup>-7</sup> : 33,19 N: 2.8 x 10 <sup>8</sup>	Vc: 0,0 Na: <140 lgNa:<2.15 <b>Lg R</b> :>5.29	Vc: 0,0 Na: <140 lgNa:<2.15 <b>LgR</b> :>5.29	Vc: 0,0 Na: <140 lgNa:<2.15 <b>LgR</b> :>5.29
Pseudomonas aeruginosa ATCC 9027	10 <sup>-6:</sup> >165 10 <sup>-7</sup> : 22, 18 N: 1.9 x 10 <sup>8</sup>	Vc: 0,0 Na: <140 lgNa:<2.15 <b>Lg R</b> :>5.12	Vc: 0,0 Na: <140 lgNa:,2.15 <b>LgR</b> :>5.12	Vc: 0,0 Na: <140 lgNa:,2.15 <b>LgR</b> :>5.12
Enterococcus hirae ATCC 10541	10 <sup>-6:</sup> >165 10 <sup>-7</sup> : 19,22 N: 2.4 x 10 <sup>8</sup>	Vc: 0,0 Na: <140 lgNa:<2.15 <b>Lg R</b> :>5.23	Vc: 0,0 Na: <140 lgNa:<2.15 <b>LgR</b> :>5.23	Vc: 0,0 Na: <140 lgNa:<2.15 <b>LgR</b> :>5.23

Vc = Viable Count

 $N = Number\ of\ CFU/ml\ of\ the\ bacterial\ test\ \ suspension$ 

Na = Number of CFU/ml in test mixture

R = Reduction in viability

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**Table No. 2: Validation and controls** 

Test Organisms	Validation suspension	Experimental Conditions control	Filtration Control	Method Validation
E. coli ATCC 8739	Vc: 194,188	Vc: 151,141	Vc: 103,132	Vc: 189,193
L. con Micc 0/3/	$Nv_0$ : $1.9x10^2$	A: $1.5 \times 10^2$	B: $1.2 \times 10^2$	C: $1.9 \times 10^2$
Staphylococcus aureus	Vc: 199,215	Vc: 155,146	Vc: 165,130	Vc: 188,189
ATCC 6538	Nv <sub>0</sub> :2.0x10 <sup>2</sup>	A: $1.5 \times 10^2$	B: $1.5x10^2$	C: $1.9 \times 10^2$
Pseudomonas	Vc: 189,217	Vc: 125,148	Vc:137,143	Vc: 166,172
aeruginosa ATCC 9027	$Nv_0$ : $2.0x10^2$	A: $1.3 \times 10^2$	B: $1.4 \times 10^2$	C: 1.7x10 <sup>2</sup>
Enterococcus hirae	Vc: 139,143	Vc: 100,142	Vc: 114,113	Vc: 144,163
ATCC 10541	$Nv_0$ : 1.4x10 <sup>2</sup>	A: $1.3 \times 10^2$	B: 1.1 x10 <sup>2</sup>	C: $1.5 \times 10^2$

Vc = Viable Count

Nv = Number of CFU/ml of the bacterial suspension

N = Number of CFU/ml of the bacterial Test suspension

A = Number of CFU/ml of the experimental conditions validation

B = Number of CFU/ml of neutralization toxicity validation

C = Number of CFU/ml of the dilution-neutralization validation

#### 10. Conclusions:

According to EN 1276, the batch: **Syc mp 4-002** of the product **Sycamor BIG WIPES 4X4** possesses bactericidal activity in 1 minute at 20<sup>o</sup>C, under dirty conditions (3g/l bovine albumin), for references strains: *Pseudomonas aeruginosa, E. coli, Staphilococcus aureus* and *Enterococcus hirae*.