

Test report No. sd1119

EVALUATION OF FUNGICIDAL OR YEASTICIDAL ACTIVITY IN THE MEDICAL AREA  
(EN 13624)

Name of the product: STERISEPT PLUS  
Batch number: 212310518  
Order number: 18014  
Manufacturer: Chemi-Pharm Ltd.  
Client, representative: Chemi-Pharm Ltd., Põllu 132, Tallinn, 10917, ESTONIA  
Maris Millner, +372-51-77-090  
Date of delivery: 04.10.2018  
Test material conditions: No specific features, sample in the manufacturers tare  
Storage conditions: In room temperature, dark  
Active substance – conc.: N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine 12.5%; Didecyl-Dimethyl-Ammonium Chloride (DDAC) 12.5%  
Appearance of the product: Transparent liquid  
Test concentration: 0.25%, 0.50%  
Contact time: 15 min  
Interfering substance: 3.0 g/l bovine albumin + 3.0 ml/l sheep blood erythrocytes = dirty conditions; 0.3 g/l bovine albumin = clean conditions  
Rinsing liquid: Tryptone 1 g/l + NaCl 9 g/l  
Neutralizer: -  
Test organisms: *Candida albicans* ATCC 10231  
Testing method: EVS-EN 13624:2013  
Quantitative suspension test for the evaluation of fungicidal or yeasticidal activity in the medical area.  
Testing date: 28.10.2018 – 30.10.2018  
Results: look appendix 1-2



Allar Laaneleht  
Chief specialist

Date of test report: 15.01.2019

TEST RESULTS (yeastidal suspension test)

EVS-EN 13624:2013; Phase 2, step 1;  
Membrane filtration method;  
Rinsing liquid: Tryptone 1 g/l + NaCl 9 g/l;  
Test organism: *Candida albicans* ATCC 10231;  
Test temperature: +20° C; Incubation temperature: +30° C  
Interfering substance: 3.0 g/l bovine albumin + 3.0 ml/l sheep blood erythrocytes = dirty conditions;  
0.3g/l bovine albumin = clean conditions  
Nordic Tersus Laboratory LLC.; Date of test: 28.10.2018  
Responsible person: Allar Laaneleht

Validation and controls

Dirty and clean conditions

Validation suspension $N_{vo}$			Experimental conditions control (A)			Filtration control (B)			Method validation (C)		
$V_{C1}$	48	$\bar{x} = 46$	$V_{C1}$	41	$\bar{x} = 39$	$V_{C1}$	33	$\bar{x} = 35$	$V_{C1}$	42	$\bar{x} = 42$
$V_{C2}$	44		$V_{C2}$	37		$V_{C2}$	37		$V_{C2}$	42	
$30 \leq \bar{x} N_{vo} \leq 160$ ? yes X; no <input type="checkbox"/>			$\bar{x} A$ is $\geq 0.5 \bar{x} N_{vo}$ ? yes X; no <input type="checkbox"/>			$\bar{x} B$ is $\geq 0.5 \bar{x} N_{vo}$ ? yes X; no <input type="checkbox"/>			$\bar{x} C$ is $\geq 0.5 \bar{x} N_{vo}$ ? yes X; no <input type="checkbox"/>		

Test suspension and test

Testsuspension:	$N$	$V_{C1}$	$V_{C2}$	$\bar{x}_{wm} = 2.06 \times 10^7$ ; $\log N = 7.22$ $N_0 = N/10$ ; $\log N_0 = 6.22$ $6.17 \leq \log N_0 \leq 6.70$ ; yes X; no <input type="checkbox"/>
$N$ and $N_0$	$10^{-5}$	166	171	
	$10^{-6}$	15	16	

Experimental results

Concentration of the product	Dilution step	$V_{C1}$	$V_{C2}$	$Na$ ( $=\bar{x} * 10$ )	$\log Na$	$\log R$	Contact time	Conditions
0.05%	-	>165	>165	>1650	>3.22	<3.00	15 min	Dirty
0.25%	-	<14	<14	<140	<2.15	>4.07	15 min	Clean
0.50%	-	<14	<14	<140	<2.15	>4.07	15 min	Dirty
2.50%	-	<14	<14	<140	<2.15	>4.07	15 min	Dirty

Explanations:

- $V_C$  = count per ml (one plate or more)
- $\bar{x}$  = average of  $V_{C1}$  and  $V_{C2}$  (1. + 2. duplicate)
- $N$  = cfu/ml microbes in testsuspension
- $N_0$  = cfu/ml at the start of the contact time (t=0)
- $N_{vo}$  = cfu/ml in the validation suspension (t=0)
- $Na$  = surviving microbes after the test
- $R$  = reduction factor ( $R = N_0 / Na$ ;  $\log R = \log N_0 - \log Na$ )

Appendix 2

Interpretation:

The product STERISEPT PLUS (batch no. 212310518) was tested according to the test method EVS-EN 13624:2013. The test was performed at  $20\text{ °C} \pm 1\text{ °C}$ , under clean and dirty conditions during contact time of 15 min, with the concentrations of 0.25% and 0.50%. The membrane filtration method was used for testing the products effectiveness against the reference strain: *Candida albicans* ATCC 10231. Under dirty conditions the tested product was effective against the reference strain within 15 min for 0.50% and under clean conditions 0.25% within 15 min.

Conclusion:

The surviving count of the reference strain showed at least 4 lg reduction meaning that the 0.25% solution of the product STERISEPT PLUS has a yeasticidal effect under clean conditions within 15 min and 0.50% under dirty conditions within 15 min.



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Allar Laaneleht

Chief specialist

15.01.2019