

## Test survey Nr. B 2693

**Product name:** Steriplant N (manufactured by Steriplant AG)  
**Charge:** 13112003 and 03062004  
**Accumulated tests:** Quantitative suspension test for deciding the bacterial effects by using chemical disinfectants.  
**Client:** Swiss Steriplant AG  
**Methods:** SN/EN 1276 phase 2/Level 2  
**Test date:** 3.6.2004

CERTIFIED TRUE & CORRECT TRANSLATION

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Aug 16, 2012

### 1. Tests

Bacterial effectiveness of Steriplant N. by SN/EN 1276 phase 2 Level 1.  
Tests with lower albumin amount.

Steriplant N. is an electrolyte liquid which has bacteria disinfecting properties through a mixture of active chloride, ozone, hydrogen peroxide and other active substances.

The test have been done in two stages. The first tests have been done in October 2003 (test survey nr. 2364). The second stage was done in July 2004. For a clearer understanding both test results are shown here.

### 2. Test methods

Steriplant N was stored in a refrigerator at 8°C from the 13.11. to the 17.11. 2003. For thinning Steriplant N we have used drinking water.  
A clear, colorless liquid.

The usage was tested in accordance to 5.4 by EN 1276 and tested in the given standard time.

We have conducted a thinning neutralization procedure. A lower amount of 0.3 gram/liter Cow albumin (sterilized and filtered using membrane filters) has been used. The tests were conducted on the 18<sup>th</sup>, 19<sup>th</sup> and 20<sup>th</sup> November 2003 and evaluated after the incubation at 37°C (for Candida albicans 30°C on the 20<sup>th</sup>, 21<sup>st</sup> and evaluated on the 24<sup>th</sup> of November 2003).

As a neutralizer we have used Sodium Thiosulphate 0.5% which has been sterilized by filtration.

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As for the growth mediums the Bacterias TSA-Agar (Oxoid) and also Asp. Niger Sabouraud – Agar(Oxoid) were used.

The tests have been conducted in regulations to EN1276.

The test was made of:

1ml solution was made up of 0.1ml Inoculum. After 2minutes  
8.9ml Steriplant N was added into the mixture. After 3,15,30 and 60 minutes  
1ml of the mixture was put into an  
8ml test tube and  
1ml sterilized water was added. After 5 minutes reaction time  
1ml was taken out and put on the petri dish using a pipette, then  
15ml of a cooled liquid growth medium was poured over the substance. After the  
Agar solidified the plates were then hatched at the correct temperatures and  
then evaluated.

The Inoculum had following concentrations:

Candida albicans DSM 1386:	$8.1 \times 10^8$ CFU / ml
Staphylococcus aureus ATTC 6538:	$9.3 \times 10^8$ CFU / ml
Pseudomonas aeruginosa ATTC 15442:	$4.2 \times 10^8$ CFU / ml
E. coli ATTC 10536:	$4.2 \times 10^9$ CFU / ml
Enterococcus hirae ATTC 10541:	$1.0 \times 10^{10}$ CFU / ml
Asp. Niger C 1103 (Oxoid):	$4.0 \times 10^6$ CFU / ml
Listeria monocytogens (Oxoid):	$3.0 \times 10^9$ CFU / ml
Legionella pneumophila C 3950(Oxoid):	$6.0 \times 10^3$ CFU / ml
Salmonella typhimurium C 6000 (Oxoid :	$8.0 \times 10$ CFU / ml

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### 3. Results (1<sup>st</sup> Stage)

	Candida	Ps. aeruginosa	Staph. aureus	E. Coli	Ent.hirae
Steriplant 100%					
3 minutes	0 CFU log 6	0 CFU log 6	0 CFU log 6	0 CFU log 6	0 CFU log 6
15 minutes	0 CFU log 6	0 CFU log 6	0 CFU log 6	0 CFU log 6	0 CFU log 6
30 Minutes	0 CFU log 6	0 CFU log 6	0 CFU log 6	0 CFU log 6	0 CFU log 6
60 Minutes	0 CFU log 6	0 CFU log 6	0 CFU log 6	0 CFU log 6	0 CFU log 6
Steriplant 50%					
3 minutes	0 CFU log 6	0 CFU log 6	0 CFU log 6	0 CFU log 6	0 CFU log 6
15 minutes	0 CFU log 6	0 CFU log 6	0 CFU log 6	0 CFU log 6	0 CFU log 6
30 Minutes	0 CFU log 6	0 CFU log 6	0 CFU log 6	0 CFU log 6	0 CFU log 6

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60 Minutes	0 CFU log 6	0 CFU log 6	0 CFU log 6	0 CFU log 6	0 CFU log 6
Steriplant 10%					
3 minutes	2 CFU log 5	0 CFU log 6	1080 CFU log 3	50 CFU log 5	0 CFU log 6
15 minutes	0 CFU log 6	0 CFU log 6	700 CFU log 4	4 CFU log 5	0 CFU log 6
30 minutes	0 CFU log 6	0 CFU log 6	32 CFU log 5	0 CFU log 5	0 CFU log 6
60 minutes	0 CFU log 6	0 CFU log 6	0 CFU log 6	0 CFU log 6	0 CFU log 6

The above number is taken from CFU, the original measurement found on the Inoculum

The number below is the logarithmic reduction factor

Steriplant had to reduce the live germ number by  $10^5$  to pass the EN1040 requirements.

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## 2<sup>nd</sup> Stage

	Asp. Niger	List. Monocytogenes	Legionella	Salmonella	
Steriplant 100%	0 CFU log 6	0 CFU log 9	0 CFU log 3	0 CFU log 8	
3 minutes	0 CFU log 6	0 CFU log 9	0 CFU log 3	0 CFU log 8	
15 minutes	0 CFU log 6	0 CFU log 9	0 CFU log 3	0 CFU log 8	
30 minutes	0 CFU log 6	0 CFU log 9	0 CFU log 3		
Steriplant 50%					
3 minutes	0 CFU log 6	Growth	0 CFU log 3	Growth	
15 minutes	0 CFU log 6	0 CFU log 9	0 CFU log 3	0 CFU log 8	
30 minutes	0 CFU log 6	0 CFU log 9	0 CFU log 3	0 CFU log 8	
Steriplant 10%					
3 minutes	Growth	Growth	0 CFU log 3	Growth	
15 minutes	Growth	0 CFU log 9	0 CFU log 3	Growth	
30 minutes	0 CFU log 6	0 CFU log 9	0 CFU log 3	Growth	

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#### 4. End results

Steriplant 100% has passed the EN 1276 after an effect time of 3 minutes

Steriplant 50% has passed the EN 1276 after an effect time of 15 minutes

Steriplant 10% has passed the EN 1276 after an effect time of 30 minutes with exception to Samonella typhimurium.

Zofingen 28.6.2004

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