

Certificate of Analysis

Product: Mesosilver[®]

Project: Phase II: *Candida albicans*

EMSL Reference: 030320332

Experimental Design Summary:

Test survival of *Candida albicans* American Type Culture Collection Strain No. 10231 in a silver colloid product (Mesosilver 20 ppm) using 2 (1 and 10%) concentrations of product as supplied. The organism was tested for survival at 4 (0, 2, 5, and 24 h) time points. A negative control (no product) was included for comparison. All tests were performed in triplicate and plated in duplicate.

Experimental Results Summary:

Candida albicans at 1.2×10^4 cells ml⁻¹ was used to determine the effect of Mesosilver on bacterial survival. The results show that the product has a negative impact on the survival of *C. albicans* (Tables 1 and 2), however only the 10% concentration of the product was successful in reducing the numbers of cells to below the level of detection within 24 hours.

Analyst _____
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Table 1. Survival of *Candida albicans* ATCC 10231 inoculated at 1.2×10^4 cells ml⁻¹ in the presence of 1 and 10% Mesosilver colloidal silver.

Mesosilver (%)	CFU ml ⁻¹		
	2 h	5 h	24 h
0	$1.0 \times 10^4 \pm 3.6 \times 10^2$	$8.5 \times 10^3 \pm 3.5 \times 10^2$	$8.6 \times 10^3 \pm 2.4 \times 10^3$
1.0	$1.1 \times 10^4 \pm 9.5 \times 10^2$	$1.0 \times 10^4 \pm 5.0 \times 10^2$	$1.6 \times 10^3 \pm 1.2 \times 10^3$
10.0	$1.1 \times 10^4 \pm 1.3 \times 10^3$	$4.8 \times 10^3 \pm 7.8 \times 10^2$	<1

All treatments performed in triplicate in 0.35% NaCl incubated without continuous mixing at 35°C. All plate counts performed in duplicate using Sabouraud Dextrose agar incubated at 35°C for 72 hours. Results reported as mean \pm standard deviation. Media sterility controls showed no growth.

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Treatment	Time Point (hours)					
	2		5		24	
	Colony Count	Dilution Factor	Colony Count	Dilution Factor	Colony Count	Dilution Factor
0.35% Saline-1	110/105	100	95/80	100	61/64	100
0.35% Saline-2	82/130	100	91/82	100	105/114	100
0.35% Saline-3	90/112	100	85/77	100	90/80	100
1.0 % Mesosilver-1	108/90	100	96/117	100	21/37	100
1.0 % Mesosilver-2	122/113	100	104/98	100	81/90	10
1.0 % Mesosilver-3	102/116	100	98/94	100	96/86	10
10% Mesosilver-1	91/120	100	68/47	100	0/0	1
10% Mesosilver-2	123/136	100	41/46	100	0/0	1
10% Mesosilver-3	103/113	100	44/45	100	0/0	1

average colony count x dilution factor = colony forming units per ml