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APPENDIX

Supplemental tables

Supplemental Table 1: Actual measurements of inhibition zones diameters from the Kirby Bauer assay for the three intervention groups [CHX, GZnO NPs, and Zn $(NO_3)_2 \cdot 6H_2O$ solution]

Intervention	**Volume (µL)**	**Zones of inhibition (diameter in mm)**									**Average (mm)**
0.2% Chlorhexidine (CHX) gluconate	50	10	11	11	12	11	11	11	11.5	11.5	11.11
	100	22	22	22	22	22	22	22	22	21.5	21.94
	150	23.5	24	23.5	23	23.5	23	24	23.5	23.5	23.5
	200	28	27	28	26.5	27	26.5	28	26.5	26.5	27.11
Zinc oxide nanoparticles (GZnO NPs)	50	12	13	14	13	12.5	13	13	13	13	12.94
	100	21	21	22	20	20	19	21	20	21	20.55
	150	22	23	24	22.5	23	23	23	23	23.5	23
	200	30	30	32	31	32	30	29	30	30	30.44
Zinc nitrate hexahydrate [Zn $(NO_3)_2 \cdot 6H_2O$] solution	50	10.5	11	10	12	11	12	11	10.5	10.5	10.94
	100	13	13	12.5	13	13	13	14	13	13	13.05
	150	16	17	16	15.5	16	15	16	16	15.5	15.88
	200	18	17.5	17	17.5	18	17	18	17	17.5	17.5

Supplemental Table 2: The mean diameters of inhibition zone and their respective standard deviations using the Kirby Bauer assay for the three intervention groups

Intervention	**Volume (µL)**	**Zones of inhibition (mean) in mm**	**Standard deviation**	**n**
0.2% Chlorhexidine (CHX) gluconate	50	11.111	0.5465	9
	100	21.944	0.1667	9
	150	23.500	0.3536	9
	200	27.111	0.6972	9
Zinc oxide nanoparticles (GZnO NPs)	50	12.944	0.5270	9
	100	20.556	0.8819	9
	150	23.000	0.5590	9
	200	30.444	1.0138	9
Zinc nitrate hexahydrate [$Zn(NO_3)_2 \cdot 6H_2O$] solution	50	10.944	0.6821	9
	100	13.056	0.3909	9
	150	15.889	0.5465	9
	200	17.500	0.4330	9

Supplemental Table 3: The mean optical densities with their respective standard deviations using the CV staining assay for the three intervention groups

Intervention (100 µL)	Time (hours)	Mean for optical densities (560 nm)	Standard deviation	n
0.2% Chlorhexidine (CHX) gluconate	0	2.3442	0.143	28
	2	2.1187	0.256	28
	4	2.2440	0.017	28
	6	2.2677	0.041	28
	8	2.4592	0.058	28
	12	2.3781	0.168	28
	24	2.2864	0.101	28
	48	2.1821	0.068	28
	72	1.7611	0.188	28
Zinc Oxide Nanoparticles (GZnO NPs)	0	1.5578	0.259	28
	2	1.7072	0.467	28
	4	1.7431	0.043	28
	6	1.6815	0.019	28
	8	1.7851	0.201	28
	12	1.7638	0.100	28
	24	1.5206	0.437	28
	48	1.3513	0.313	28
	72	0.7912	0.107	28
Nystatin	0	2.1380	0.280	28
	2	1.8502	0.128	28
	4	1.8169	0.108	28
	6	1.5127	0.031	28
	8	1.4785	0.380	28
	12	2.1979	0.220	28
	24	1.8236	0.101	28
	48	1.5952	0.113	28
	72	1.3211	0.222	28

Supplemental Table 4: The confidence levels of the multiple comparisons (Tukey's HSD tests) using CV staining assay for the three intervention groups at different time points

Time (hours)	Intervention (I)	Intervention(J)	Mean difference (I-J) of optical density	Significance (P-value)	95% Confidence Interval	
					Lower Bound	Upper Bound
0	GZnO NPs	Chlorhexidine	0.08252	0.7300	-0.1291	0.2942
	GZnO NPs	Nystatin	-0.02783	0.9852	-0.2395	0.1838
	GZnO NPs	Negative control	0.2390	0.0211*	0.02730	0.4506
	CHX	Nystatin	-0.1104	0.5151	0.3220	0.1013
	CHX	Negative control	0.1564	0.2157	-0.05522	0.3681
	Nystatin	Negative control	0.2668	0.0081**	0.05513	0.4785
2	GZnO NPs	Chlorhexidine	0.3539	<.0001****	0.2225	0.4853
	GZnO NPs	Nystatin	0.3111	<.0100****	0.1797	0.4425
	ZnO NPs	Negative control	0.2070	0.0006***	0.07563	0.3384
	CHX	Nystatin	-0.04279	0.8230	-0.1742	0.08858
	CHX	Negative control	-0.1469	0.0228*	-0.2783	-0.01552
	Nystatin	Negative control	-0.1041	0.1656	-0.2355	0.02727
4	GZnO NPs	Chlorhexidine	0.3141	0.0076**	0.06656	0.5616
	GZnO NPs	Nystatin	0.3677	0.0013**	0.1202	0.6152
	GZnO NPs	Negative control	0.6684	<.0100****	0.4208	0.9159
	CHX	Nystatin	0.05361	0.9392	-0.1939	0.3011
	CHX	Negative control	0.3543	0.0021**	0.1067	0.6018
	Nystatin	Negative control	0.3007	0.0114*	0.05311	0.5482
6	GZnO NPs	Chlorhexidine	0.2427	0.0032**	0.06659	0.4188
	GZnO NPs	Nystatin	0.5210	<.0001****	0.3449	0.6971
	GZnO NPs	Negative control	0.5752	<.0001****	0.3991	0.7513
	CHX	Nystatin	0.2783	0.0006***	0.1022	0.4544
	CHX	Negative control	0.3325	<.0001****	0.1564	0.5086
	Nystatin	Negative control	0.05426	0.8458	-0.1218	0.2304
8	GZnO NPs	Chlorhexidine	0.2274	<.0001****	0.1201	0.3347
	GZnO NPs	Nystatin	0.64143066	<.0001****	0.5341	0.7488
	GZnO NPs	Negative control	0.6494	<.0001****	0.5421	0.7567

Time (hours)	Intervention (I)	Intervention(J)	Mean difference (I-J) of optical density	Significance (P-value)	95% Confidence Interval	
					Lower Bound	Upper Bound
	CHX	Nystatin	0.4140	<.0001****	0.3067	0.5214
	CHX	Negative control	0.4220	<.0001****	0.3147	0.5294
	Nystatin	Negative control	0.007989	0.9972	-0.09934	0.1153
12	GZnO NPs	Chlorhexidine	0.2549	<.0001****	0.1515	0.3584
	GZnO NPs	Nystatin	0.1229	<.0138*	0.01946	0.2264
	GZnO NPs	Negative control	0.1172	0.0205*	0.01374	0.2207
	CHX	Nystatin	-0.1320	0.0072**	-0.2355	-0.02857
	CHX	Negative control	-0.1377	0.0047**	-0.2412	-0.03429
	Nystatin	Negative control	-0.005719	0.9989	-0.1092	0.09774
24	GZnO NPs	Chlorhexidine	0.08156	0.0919	-0.009060	0.1722
	GZnO NPs	Nystatin	0.1553	0.0002****	0.06470	0.2459
	GZnO NPs	Negative control	0.1587	0.0001***	0.06808	0.2493
	CHX	Nystatin	0.07376	0.1481	-0.01686	0.1644
	CHX	Negative control	0.07714	0.1211	-0.01348	0.1678
	Nystatin	Negative control	0.003375	0.9996	-0.08725	0.09400
48	GZnO NPs	Chlorhexidine	-0.01543	0.9906	-0.1524	0.1216
	GZnO NPs	Nystatin	0.1556	0.0202*	0.01857	0.2926
	GZnO NPs	Negative control	0.1212	0.1003	-0.01579	0.2583
	CHX	Nystatin	0.1710	0.0089**	0.03400	0.3080
	CHX	Negative control	0.1367	0.0508	-0.0003604	0.2737
	Nystatin	Negative control	-0.03436	0.9096	-0.1714	0.1027
72	GZnO NPs	Chlorhexidine	-0.2918	<.0001****	-1.4367	-0.1470
	GZnO NPs	Nystatin	-0.1772	0.0107*	-0.3220	-0.03231
	GZnO NPs	Negative control	-0.08054	0.4593	-0.2254	0.06433
	CHX	Nystatin	0.1146	0.1665	-0.03021	0.2595
	CHX	Negative control	0.2113	0.0017**	-0.06642	0.3561
	Nystatin	Negative control	0.09663	0.2990	-0.04823	0.2415

Supplemental Table 5: Means optical density for biofilm reduction of *C. albicans* for the three inventions at consecutive time point across the 72 Hours using CV staining assay

Average gradients for each intervention	**2hr-0hr**	**12hr-2hr**	**24hr-12hr**	**48hr-24hr**	**72hr-48hr**	**MEANS**	**STDEV**
CHX	-0.113	0.026	-0.008	-0.004	-0.018	-0.023	0.047
Nystatin	-0.144	0.035	-0.031	-0.010	-0.011	-0.032	0.060
GZnO NPs	0.075	0.006	-0.020	-0.007	-0.023	0.006	0.036
Neg. Control	0.086	0.014	-0.022	-0.005	-0.013	0.012	0.039