



**MICROCHEM**  
L A B O R A T O R Y

## STUDY REPORT

### Study Title

Antibacterial Activity and Sanitizing Efficacy of Tool Klean's Device

### Test Method

ASTM International Method E1153 Modified for Devices

Test Method for Efficacy of Sanitizers Recommended for Inanimate Non-Food Contact Surfaces

### Study Identification Number

NG12946

### Study Sponsor

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### Test Facility

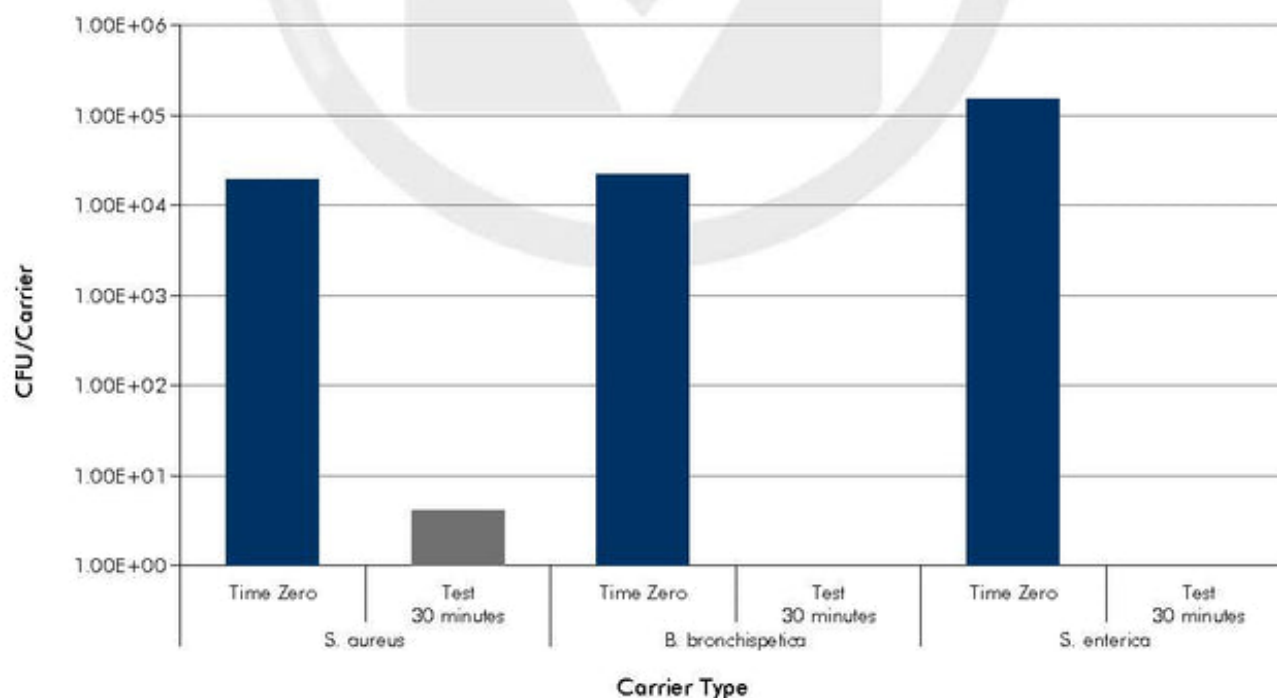
Microchem Laboratory  
1304 W. Industrial Blvd  
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(512) 310-8378

Testing performed by: B. Shaffer

## Results of the Study (cont.)– UV Trolley Cart Room Air Sanitizer

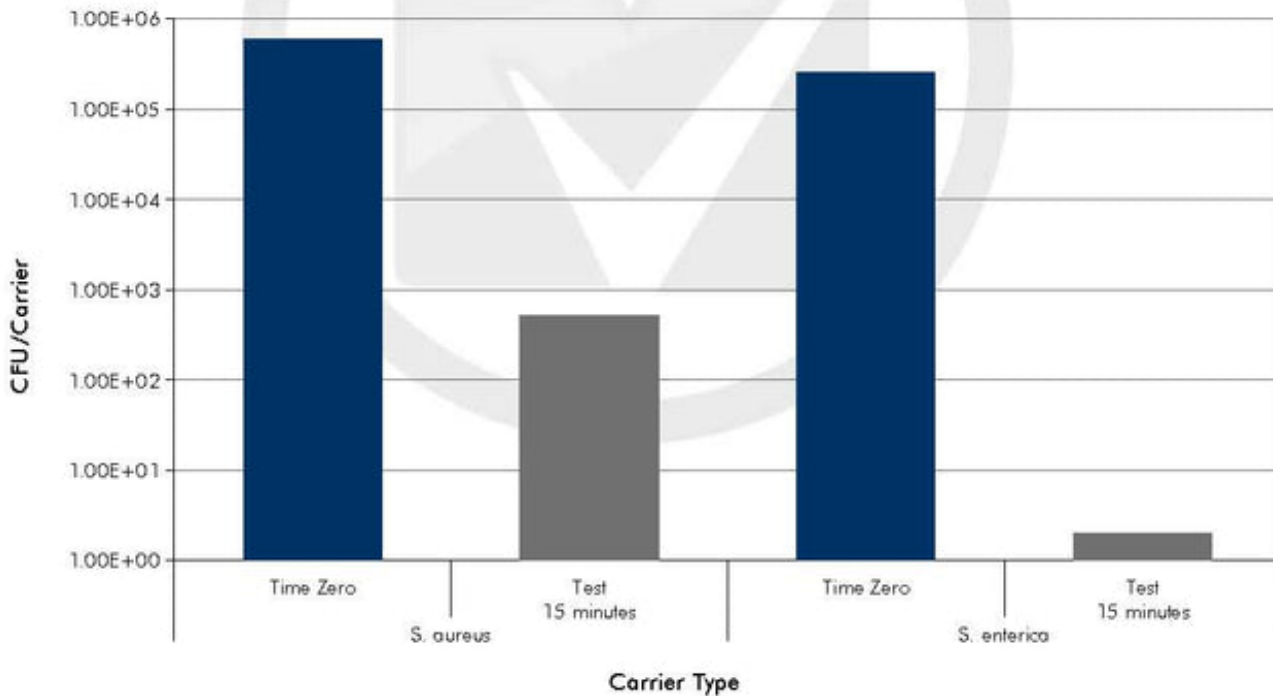
Test Device	Test Microorganism	Contact Time	CFU/Carrier	Percent Reduction Compared to Control at Time Zero	Log <sub>10</sub> Reduction Compared to Control at Time Zero
UV Trolley Cart Room Air Sanitizer	<i>S. aureus</i> ATCC 6538	Time Zero	1.90E+04	N/A	
		30 minutes	4.00E+00	99.98%	3.68
	<i>B. bronchiseptica</i> ATCC 10580	Time Zero	2.20E+04	N/A	
		30 minutes	1.00E+00	99.995%	4.34
	<i>S. enterica</i> ATCC 10708	Time Zero	1.53E+05	N/A	
		30 minutes	<1.00E+00	>99.9993%	>5.18

Note: The limit of detection for the above sample is 1.00E+00 CFU/Carrier. Values observed below this limit are denoted as <1.00E+00 CFU/Carrier. The limit of detection is used to calculate percent and log reductions.



## Results of the Study (cont.)– Tabletop UV Room Air

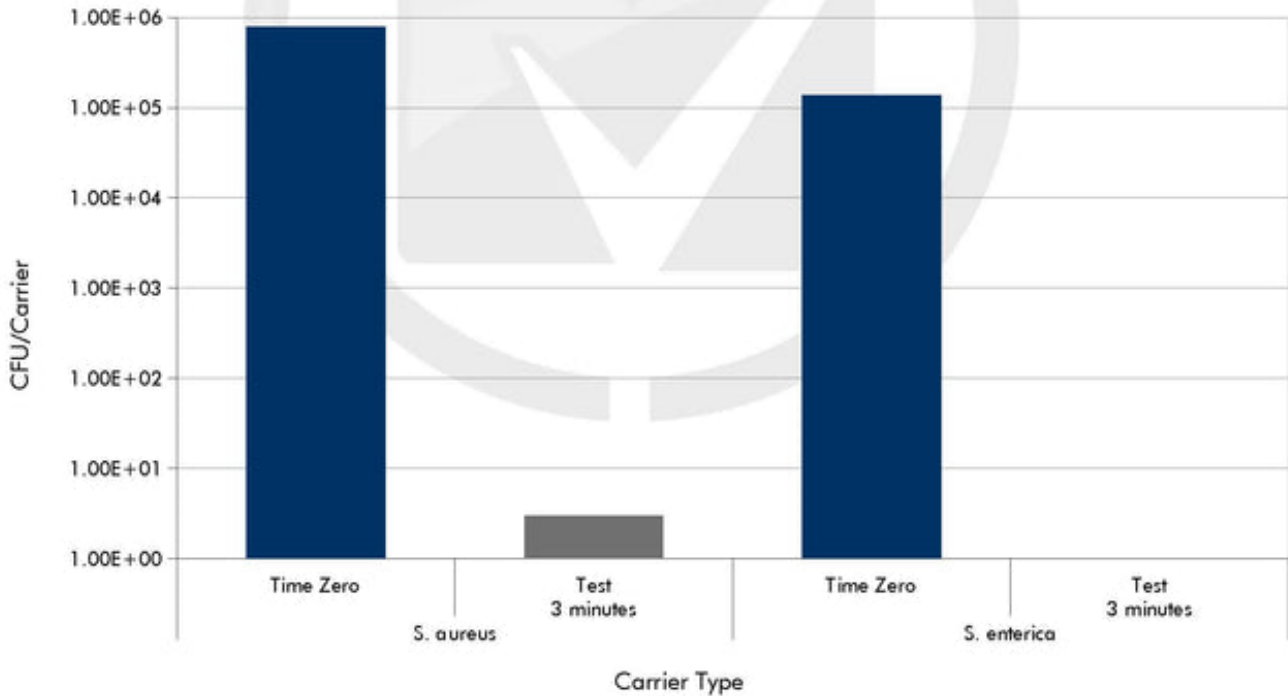
Test Device	Test Microorganism	Contact Time	CFU/Carrier	Percent Reduction Compared to Control at Time Zero	Log <sub>10</sub> Reduction Compared to Control at Time Zero
Tabletop UV Room Air	<i>S. aureus</i> ATCC 6538	Time Zero	5.90E+05	N/A	
		15 minutes	5.18E+02	99.91%	3.06
	<i>S. enterica</i> ATCC 10708	Time Zero	2.53E+05	N/A	
		15 minutes	2.00E+00	99.9992%	5.10



## Results of the Study– Hot Cup

Test Device	Test Microorganism	Contact Time	CFU/Carrier	Percent Reduction Compared to Control at Time Zero	Log <sub>10</sub> Reduction Compared to Control at Time Zero
Hot Cup	<i>S. aureus</i> ATCC 6538	Time Zero	7.90E+05	N/A	
		3 minutes	3.00E+00	99.9996%	5.42
	<i>S. enterica</i> ATCC 10708	Time Zero	1.38E+05	N/A	
		3 minutes	<1.00E+00	>99.9993%	>5.14

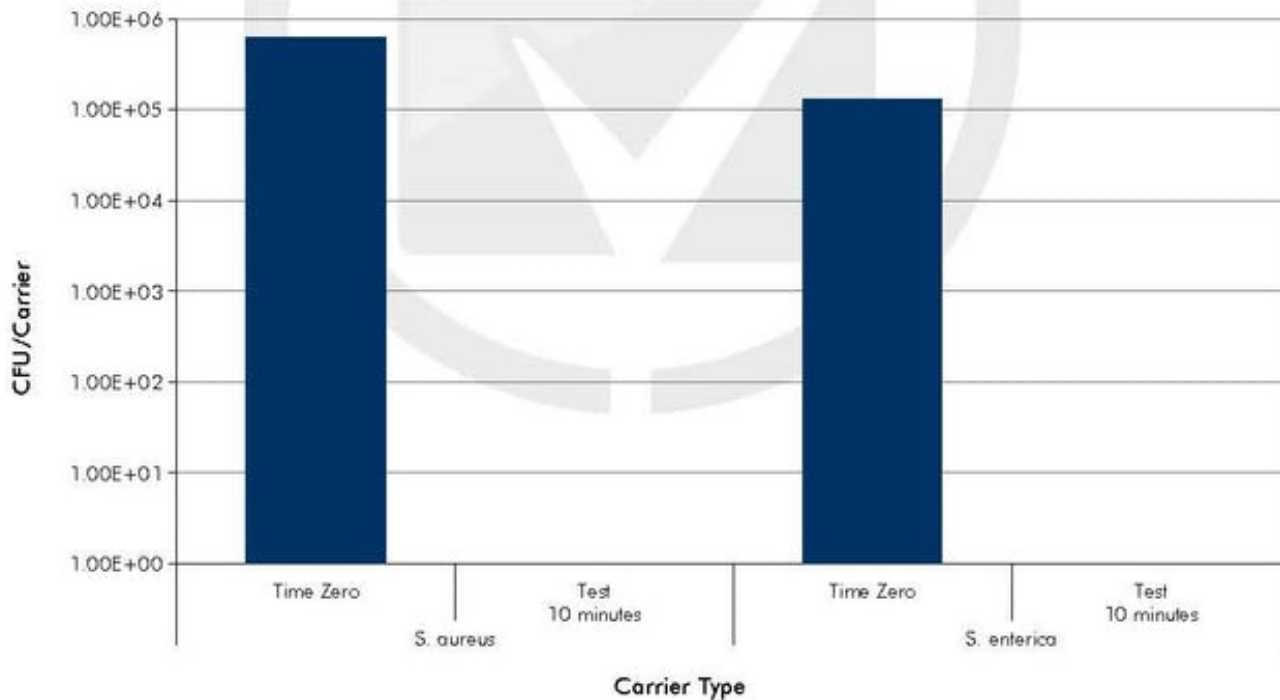
Note: The limit of detection for the table above is 1 CFU/Carrier. Values observed below the limit of detection are denoted as <1.00E+00 CFU/Carrier. The limit of detection is used to calculate percent and log reductions.



## Results of the Study (cont.)– UV Oven Pro

Test Device	Test Microorganism	Contact Time	CFU/Carrier	Percent Reduction Compared to Control at Time Zero	Log <sub>10</sub> Reduction Compared to Control at Time Zero
UV Oven Pro	<i>S. aureus</i> ATCC 6538	Time Zero	6.20E+05	N/A	
		10 minutes	1.00E+00	99.9998%	5.79
	<i>S. enterica</i> ATCC 10708	Time Zero	1.29E+05	N/A	
		10 minutes	<1.00E+00	>99.9992%	>5.11

Note: The limit of detection for the above sample is 1.00E+00 CFU/Carrier. Values observed below this limit are denoted as <1.00E+00 CFU/Carrier. The limit of detection is used to calculate percent and log reductions.



## Results of the Study (cont.)– UV Light Stik

Test Device	Test Microorganism	Contact Time	CFU/Carrier	Percent Reduction Compared to Control at Time Zero	Log <sub>10</sub> Reduction Compared to Control at Time Zero
UV Light Stik	<i>S. enterica</i> ATCC 10708	Time Zero	1.68E+05	N/A	
		90 seconds	2.30E+01	99.99%	3.86
	<i>T. interdigitale</i> ATCC 9533	Time Zero	1.80E+06	N/A	
		90 seconds	6.00E+00	99.9997%	5.48

