

# Antimicrobial Test Laboratories

## Fast, Reliable Antimicrobial Efficacy Testing

### Microbiology Study Report

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#### Client Information

Company Name:	<u>Advanced Vapor Technologies</u>	Sponsor:	<u>Rick Hoverson</u>
Sponsor's Phone:	<u>(800) 997-6584</u>	E-mail:	<u>rick@advap.com</u>

#### Test Information

Test(s) Performed:	<u>AVT LT Study #4 (Qualitative Technology Comparison: SVS w/TANCS, Hypochlorite, Quat, Phenolic)</u>		
Study ID #:	<u>PT508</u>	SOP Followed:	<u>Custom Study - See Notes</u>
		Performed by:	<u>B. Tanner and A. Branch</u>

#### Sample Information

Test Substance ID(s):	<u>SVS w/TANCS Technology</u>	Unit or Lot Number:	<u>55120401165</u>
	<u>Clorox Germicidal Bleach</u>		<u>A8717011 5813-CA3</u>
	<u>Lysol I.C. Quaternary Disinfectant</u>		<u>MA 6223A 09019-OH001</u>
	<u>Waxie "Swish" Phenolic Disinfectant</u>		<u>A6355 0708 251-20 R2 GA</u>

#### Parameters

Microorganism(s):	<u><i>A. niger</i>, <i>C. albicans</i>, <i>P. aeruginosa</i>, <i>S. marcescens</i>, <i>E. coli</i>, <i>S. aureus</i></u>		
Contact Time:	<u>Approx 10 Seconds w/Wiping</u>	Incubation Temp.:	<u>35.0 (+/- 1) C</u>
Dilutions (If Applicable):	<u>Clorox = 6 oz/gal; Lysol = 1:256</u>	Diluent:	<u>Pleasanton Municipal Tap Water</u>
Organic Soil Type	<u>H.I. Horse Serum, 5%</u>	Agars Used:	<u>D/E, Letheen + NaThio, Potato Dextrose</u>

#### Controls

Neutralized:	<u>Yes (Visual Obs. Of Growth)</u>	Negative Control:	<u>Agar Sterility Passed</u>
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#### Test Results

See Photos, Below:	<u>See chart, Page 2</u>	Confirmation:	<u>N/A</u>
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**Notes:** This study was designed to demonstrate visually the differences in efficacy that have been established by previous tests using the Steam Vapor System w/TANCS and traditional liquid chemical disinfectants. Store-bought Clorox Germicidal Bleach, Lysol I.C. Quaternary Disinfectant and Waxie "Swish" Disinfectant were chosen as representative EPA-registered sodium hypochlorite, quaternary ammonium, and phenolic-based products. Contact times were all 10 seconds and each product was applied in a fashion thought to be representative of how it is applied in "real-life," including 2 mL application and wiping with a paper towel (which was not analyzed) for all the liquid chemical disinfectants. 12 x 12 inch tiles of stainless steel, vinyl, and polished granite were used. Just after treatment tiles were covered with 1 of 3 molten agars and incubated. Lab contact information amended 3/31/08.

Tests Completed:	<u>9/5/2007</u>	Report Sent:	<u>9/10/07</u>
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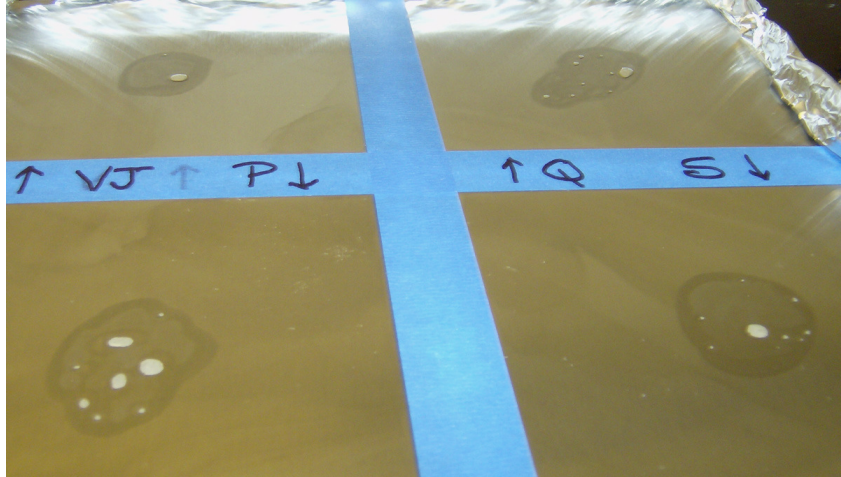
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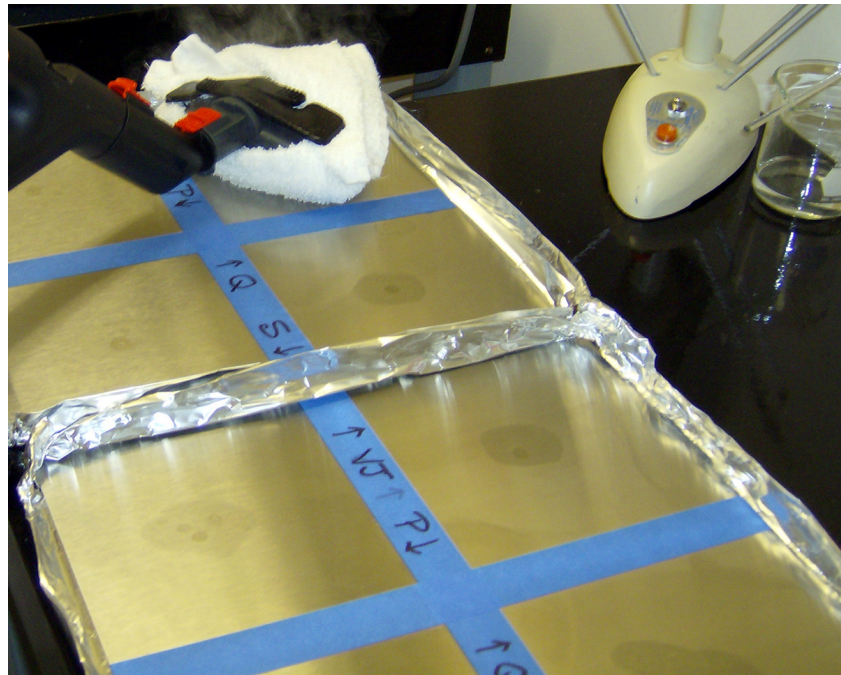
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### **Additional Study Information**

Stainless steel  
tile just after  
swab application  
of mixed culture



Application of  
steam vapor to  
surface (10 seconds)



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### **Additional Study Information**

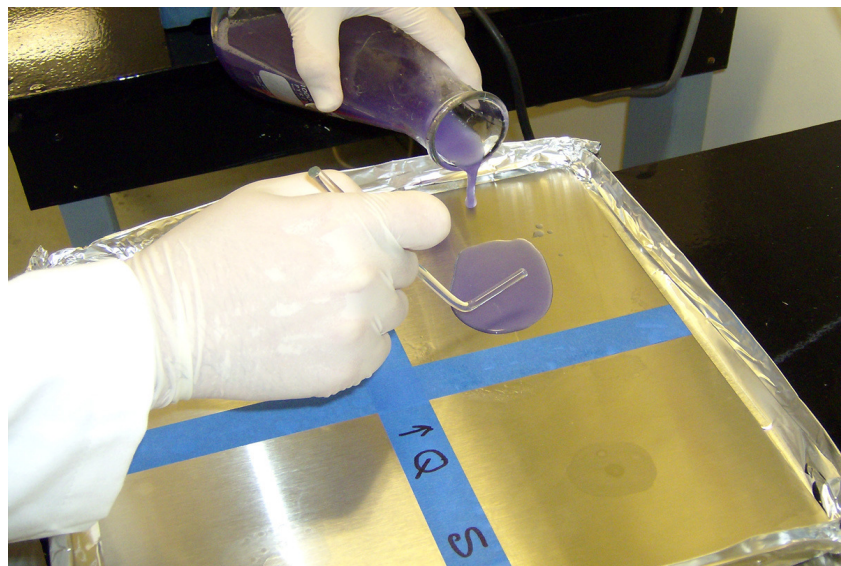
Wiping phenol-based disinfectant over surface after spray application using shield

10 seconds + appl. time



Shield used to apply Phenolic Spray Disinfectant

Carefully spreading agar over a quadrant after treatment with a technology





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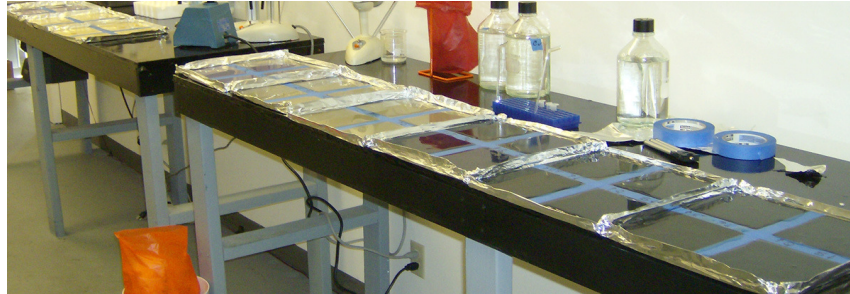
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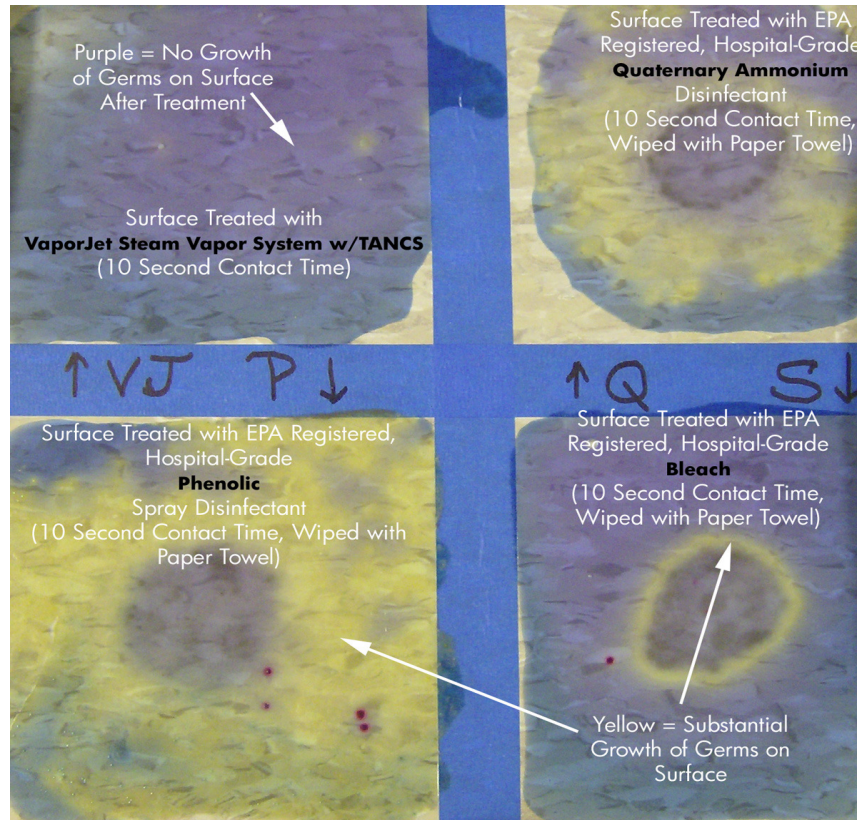
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### **Additional Study Information**

Overview of the experiment - three surfaces, four technologies, three neutralizing agars



Annotated photo showing drastic reduction in microbial load by steam vapor and showing viable microorganism growth after treatment with competing technologies



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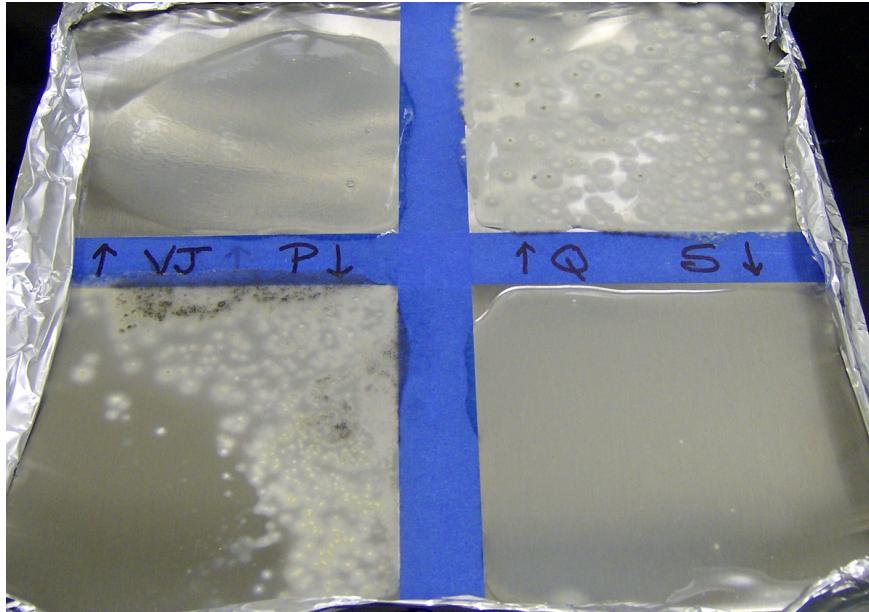
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### **Additional Study Information**

Stainless steel tile showing the growth of *A. niger* fungi that have survived various chemical treatments (10 second contact times)



Polished granite tile showing the growth of *A. niger* fungi that have survived various chemical treatments (10 second contact times)

