

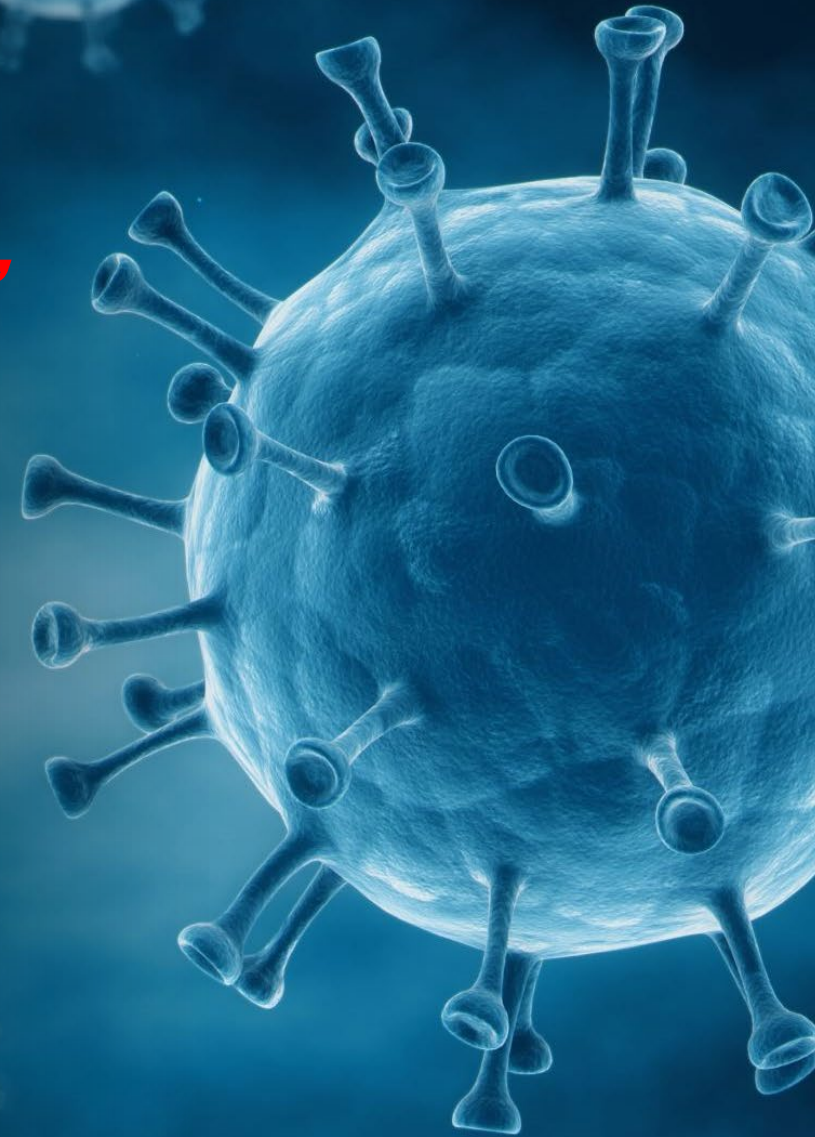


VirusKiller

Safety in Transportation
“To Live Safely With Viruses!”

More than ever we need AirShield

- **To Protect People at High-Risk**
 - **To Protect People in High-Risk Environments**
 - ***AirShield* provides full time 24/7/365 protection from transmission of infections without social restriction**
-



Live Picture



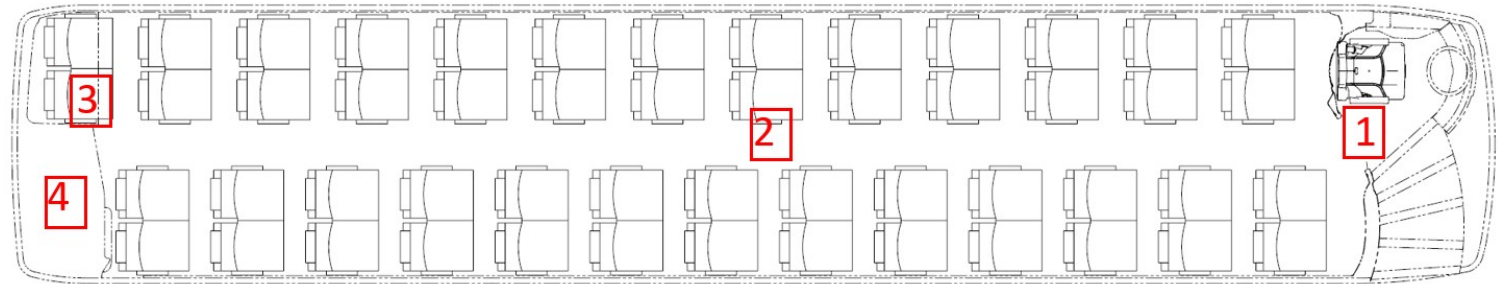
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Test Setup



- An *AirShield* VK-14 unit was installed on a J4500 coach (69697) to validate the performance and operation of the system. Air quality and surface bacteria samples were taken in the coach after exposing the coach interior to the following:
 - Foreign organic material for 24 hours (heat soak with HVAC turned off)
 - *AirShield* running for 24 hours (HVAC set to 60F and foreign organic material removed prior)

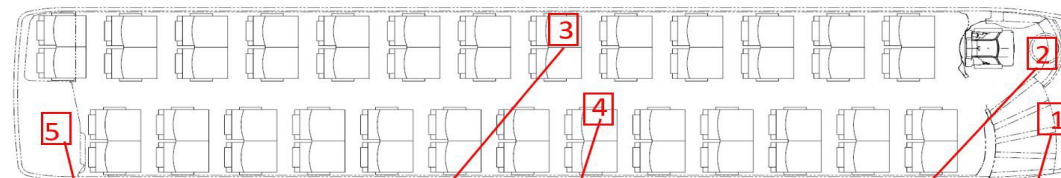
Air quality measurement locations



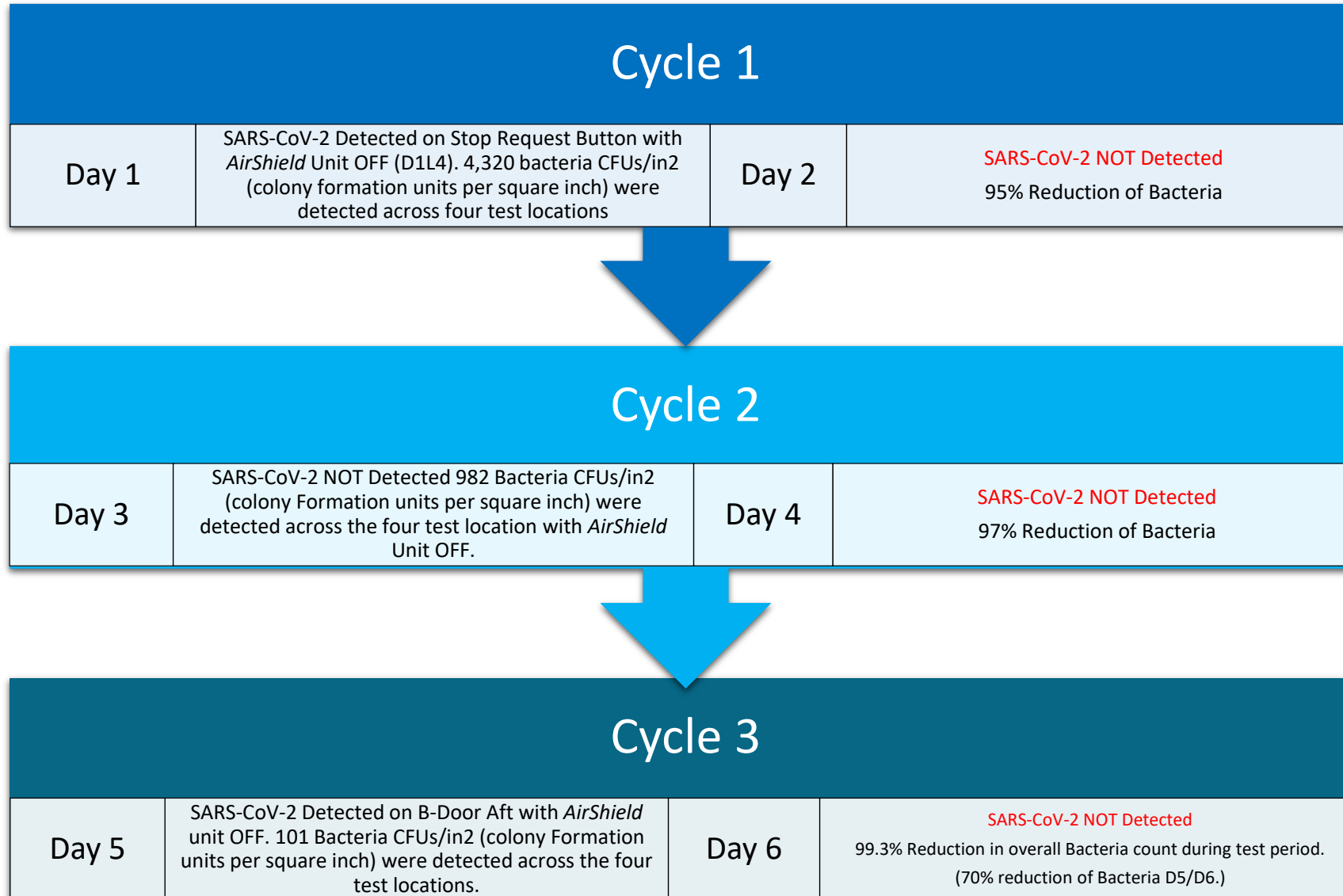
AirShield VK-14 unit on 69697



Surface decontamination measurement locations



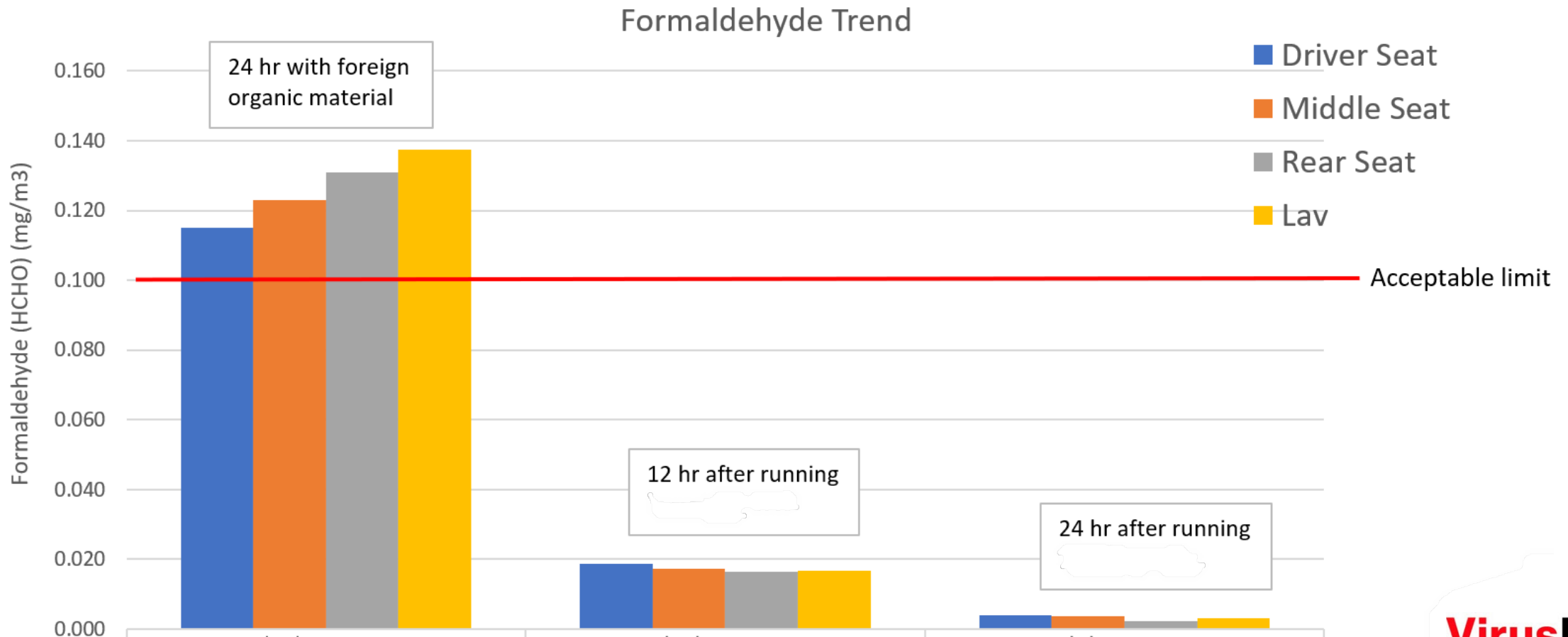
Proven Results



Air Quality Measurement- Formaldehyde



Formaldehyde is a colorless, strong-smelling gas used in making building materials and many household products. It is found in plywood, adhesives, and certain insulation materials. At concentrations above 0.1 ppm in air formaldehyde can irritate the eyes and mucous membranes, resulting in watery eyes



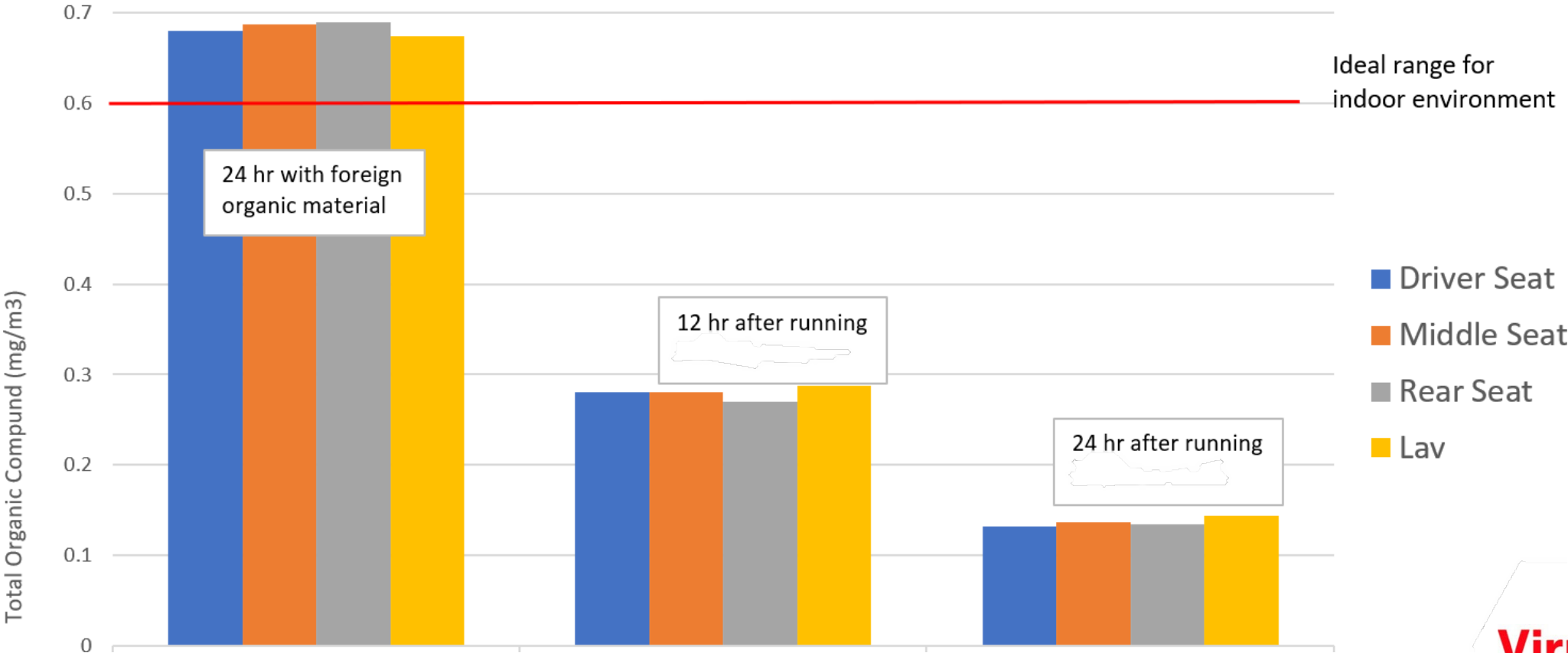
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Air Quality Measurement- Volatile Organic Compounds(VOC)



VOCs are released from burning fuel such as gasoline, wood, coal, or natural gas. They are also released from paint, adhesives, wood preservatives etc. Ideal range in indoor environment is < 0.6 mg/m³.

Total Volatile Organic Compounds Trend



Surface Decontamination



Bacteria samples were collected before and after running *AirShield* for 24 hours. The swabs were then sent to EMSL Analytical which provides environmental testing services.

Location	Initial Reading		After running <i>AirShield</i> unit for 24 hr	
	Bacteria	Colony Formation units/ swab	Bacteria	Colony Formation units/ swab
Entrance door grab handle	<i>Bacillus marisflavi</i>	100	None detected	N/A
	<i>Bacillus safensis/pumilus</i>	200		
Steering wheel	<i>Micrococcus yunnanensis</i>	100	None detected	N/A
	<i>Staphylococcus epidermidis</i>	400		
Parcel rack grab handle	<i>Curtobacterium flaccumfaciens pv poinsettiae</i>	1200	None detected	N/A
	<i>Staphylococcus lentus</i>	200		
Passenger seat arm rest	<i>Bacillus krulwichiae</i>	100	None detected	N/A
	<i>Kytococcus sedentarius</i>	100		
Lav grab handle	<i>Bacillus sonorensis</i>	100	None detected	N/A
	<i>Staphylococcus capitis ss capitis</i>	200		

*Refer to Appendix A for lab results and Appendix B for properties of identified bacteria

** Surface material is different at each test location.

Appendix A- Lab Results for Surface Decontamination



EMSL Analytical, Inc.
 5950 Fairbanks N. Houston Rd., Houston, TX 77040
 Phone/Fax: (713) 686-3635 / (713) 686-3645
<http://www.EMSL.com> houstonlab@emsl.com

EMSL Order: 152005260
 CustomerID: EDFG42
 CustomerPO:
 ProjectID:



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Test Report: Identification and Enumeration of Culturable Bacteria by Swab (Five Most Prominent Types (EMSL Method MICRO-SOP-132))

Sample Description	Location	Media	Temp (C)	Sample Measure (Swab)	Analytical Sensitivity (CFU/Swab)	Dilution	Bacteria Identification	Colony Count	CFUS (CFU/Swab)
Pre-Loc 1 152005260-0001	Grab Handle	TSAB	35	1	100	100	100 <i>Bacillus marisflavi</i>	1	100
							100 <i>Bacillus safensis/pumilus</i>	1	100
							Total	2	200
Pre-Loc 2 152005260-0002	Steering Wheel	TSAB	35	1	100	100	100 <i>Micrococcus yunnanensis</i>	1	100
							100 <i>Staphylococcus epidermidis</i>	4	400
							Total	5	500
Pre-Loc 3 152005260-0003	PR Grab Rail	TSAB	35	1	100	100	100 <i>Curtobacterium flaccumfaciens pv poinsettiae</i>	12	1,200
							100 <i>Staphylococcus lentus</i>	2	200
							Total	14	1,400
Pre-Loc 4 152005260-0004	Arm Rest	TSAB	35	1	100	100	100 <i>Bacillus krulwichiae</i>	1	100
							100 <i>Kytococcus sedentarius</i>	1	100
							Total	2	200
Pre-Loc 5 152005260-0005	Lav Grab Rail	TSAB	35	1	100	100	100 <i>Bacillus sonorensis</i>	1	100
							100 <i>Staphylococcus capitis ss capitis</i>	2	200
							Total	3	300
Post-Loc 1 152005260-0006	Grab Handle	TSAB	35	1	100	100	None Detected		

Analyst(s)

Terri Lawrence (10)

Terri Lawrence

Terri Lawrence, Lab Manager
 or other approved signatory

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Report Amended: 08/28/2020 15:44:43 Replaces the Initial Report 08/28/2020 09:32:15. Reason Code: Data Entry-Change to Sample ID

For information on the bacteria listed in this report please visit the Resources section at www.emsl.com

Test Report: Identification and Enumeration of Culturable Bacteria by Swab (Five Most Prominent Types (EMSL Method MICRO-SOP-132))

Sample Description	Location	Media	Temp (C)	Sample Measure (Swab)	Analytical Sensitivity (CFU/Swab)	Dilution	Bacteria Identification	Colony Count	CFUS (CFU/Swab)
Post-Loc 2 152005260-0007	Steering Wheel	TSAB	35	1	100	100	None Detected		
Post-Loc 3 152005260-0008	PR Grab Rail	TSAB	35	1	100	100	None Detected		
Post-Loc 4 152005260-0009	Arm Rest	TSAB	35	1	100	100	None Detected		
Post-Loc 5 152005260-0010	Lav Grab Rail	TSAB	35	1	100	100	None Detected		

No discernable blank was submitted with this group of samples

Analyst(s)

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Air Reductions Using *AirShield* Technology

Air Reductions



VOC	Reduction	Testing Organization
Acetaldehyde	96.00%	Hye-sung Environment Inc. Korea
Acetone	97.81%	Ministry of Healthcare of Ukraine
Acetone	89.75%	Atmospheric Analysis-Consulting
Ammonia	82.90%	Guangdong Detection Center of Microbiology
Ammonia	93.00%	Hye-sung Environment Inc. Korea
Ammonia	97.57%	Ministry of Healthcare of Ukraine
Bacteria	95.50%	Ultimate Labs
Benzene	80.00%	Guangdong Detection Center of Microbiology
Butanone	97.00%	Hye-sung Environment Inc. Korea
Butyraldehyde	87.00%	Hye-sung Environment Inc. Korea
Carbon Disulfide	99.99%	Atmospheric Analysis-Consulting
COVID 19 (BETA Variant)	98.70%	University of Florida College of Medicine
Dimethyl Disulfide	71.00%	Hye-sung Environment Inc. Korea
Dimethyl Sulfide	87.00%	Hye-sung Environment Inc. Korea
Formaldehyde	81.10%	Guangdong Detection Center of Microbiology
Hydrogen Sulfide	97.00%	Hye-sung Environment Inc. Korea
i-Valeric Acid	94.00%	Hye-sung Environment Inc. Korea
Methyl isobutyl ketone	99.99%	Hye-sung Environment Inc. Korea
Mold	99.99%	Ultimate Labs
n-Butyric Acid	98.00%	Hye-sung Environment Inc. Korea
n-Valeric Acid	69.00%	Hye-sung Environment Inc. Korea
Propanol (IPA)	60.69%	Atmospheric Analysis-Consulting
Propene	99.99%	Atmospheric Analysis-Consulting
Propionaldehyde	92.00%	Hye-sung Environment Inc. Korea
Propionic Acid	75.00%	Hye-sung Environment Inc. Korea
Styrene	86.00%	Hye-sung Environment Inc. Korea
Toluene	99.00%	Hye-sung Environment Inc. Korea
Toluene	99.99%	Atmospheric Analysis-Consulting
Total VOC	83.20%	Guangdong Detection Center of Microbiology
Trimethylamine	93.00%	Hye-sung Environment Inc. Korea
Xylene	95.00%	Hye-sung Environment Inc. Korea

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Surface Reductions Using *AirShield* Technology

Surface Reductions



Pathogen	Reduction	Testing Organization
Acinetobacter baumannii	98.22%	Ankara Oncology Hospital
Aspergillus brasiliensis	84.15%	UC Colorado Hospital
Bacillus atrophaeus	99.81%	Kansas State University Food Science Institute
Bacteria	99.45%	Institute Jantung Negara PICU Malaysia
Bacteria	99.98%	Quadrants Scientific Inc - Golds Gym
Bacteria	99.63%	Quadrants Scientific Inc - Nail Salon
C. Diff	99.53%	NSF international Lab
Candida albicans	99.99%	Kansas State University Food Science Institute
CRE	99.98%	Kansas State University Food Science Institute
Coronavirus 229E	99.00%	Central Michigan University College of Medicine
COVID 19 (SARS-CoV-2)	97.70%	University of Florida College of Medicine Australia
COVID 19 (DELTA Variant)	99.78%	Government Lab
Dengue virus type 2	99.00%	Central Michigan University College of Medicine
E. coli	99.59%	Kansas State University Food Science Institute
E. coli	99.99%	Ministry of Healthcare of Ukraine
E. coli O157:H7	99.41%	Kansas State University Food Science Institute
Enterococcus faecalis	99.99%	Ministry of Healthcare of Ukraine
Fungus	99.99%	Ministry of Healthcare of Ukraine
H1N1	99.60%	Guangdong Detection Center of Microbiology
Legionella	99.99%	Kansas State University Food Science Institute
Listeria monocytogenes	99.87%	Kansas State University Food Science Institute
Mold	89.00%	Ultimate Labs
MRSA	99.24%	Kansas State University Food Science Institute
Pseudomonas aeruginosa	74.88%	UC Colorado Hospital
Pseudomonas aeruginosa	99.54%	Kansas State University Food Science Institute
Stachybotrys chartarum	99.99%	Kansas State University Food Science Institute
Staphylococcus aureus	99.99%	Ankara Cancer Education and Research Clinic
Staphylococcus aureus	99.15%	Turkey Kansas State University Food Science
Staphylococcus aureus	99.90%	Institute Pontiac General Hospital
Staphylococcus aureus	74.88%	UC Colorado Hospital
Staphylococcus epidermidis	99.99%	Ministry of Healthcare of Ukraine
Streptococcus pneumoniae	98.83%	Kansas State University Food Science Institute
Total Aerobic Count	66.49%	Meat Production Plant
Total Coliforms	93.88%	Meat Production Plant
VRE	98.22%	Ankara Oncology Hospital