CleanTransit™

GETTING THERE SAFER.

Automated Infection Control

CLEANER SPACES, CONTINUOUS PROTECTION.

CleanSpray Tec, LLC
140 E. Main Street #200
Lewisville, TX 75057

(469) 240-5544
www.cleansprayUSA.com
roger@cleansprayUSA.com

CleanSpray TECHNOLOGIES, LLC

CLEANTRANSIT™ GETTING THERE SAFER.

10 gallon tank with cover

CleanTransit ™ Automated Infection Control System

ACTIVATE AND WALK AWAY!
NO WIPE DOWN!

The Clean*TRANSIT*™ Automated Infection Control system is a patent pending on-demand misting system combined with plant-based disinfectant that allows a proven and consistent method of disinfecting transit vehicles. The automation dramatically decreases labor costs and eliminates the chance for human error in disinfecting, providing economical, thorough and continuous protection for your drivers and passengers.

Highlights

- **Mounting**: Under a Seat or Rear of vehicle
- **Design**: Self-Contained System with Nozzles Installed in Existing Light Bar/Wire Channel, 5 or 10 Gallon Reservoir

Disinfectant Solution

CleanTransit™ is designed for use with Bioesque® botanical Disinfectant:

- EPA Registered
- Kills 99.99% of Viruses, Bacteria, Fungi & Molds Within Minutes
- Laboratory-Tested for Efficacy
- Disinfect, Sanitize, Clean and Deodorize in ONE Step
- Non-Combustible Liquid
- Non-Abrasive and Non-Corrosive
- Botanically Derived Active Ingredient
- Kills 99.99% of Viruses in 1 Min.
- Kills 99.99% of Bacteria in 2 Min.
- Kills 99.99% of Fungi/Molds in 3 Min.
- Kills Mycobacterium Tuberculosis in 3 Min.
- **Approved by the U.S. EPA for use on hard non-porous surfaces against the SARS-CoV-2 virus (COVID-19) in just 55 seconds**

Design

Self-contained system is permanently mounted under a seat with connections to nozzles mounted in existing light/ wire bar.

- 12 Volt Powered
- Up to 40 Days of Disinfectant On-Board
- Constructed of Aircraft Aluminum for a Long Lifespan and Rugged Durability
- Custom Designed to Fit Any Size Vehicle

Benefits

- A Fleet of Vehciles can be Disinfected in as Little as 25 Seconds, No Wipe Down Needed
- Specialty Design for Transit Vehicles Layout, All Sizes Including Special Needs
- On-Board Automation with Control Panel Above Driver

3 YEAR WARRANTY

5 Gallon Reservoir Mounted Under a Seat

Easy to Operate Controller

Disinfects Air and Surfaces

CleanSpray USA, LLC
140 E. Main Street #200
Lewisville, TX 75057

(469) 240-5544
www.cleansprayUSA.com
roger@cleansprayUSA.com

CleanTransit™
GETTING THERE SAFER.
Automated Infection Control

System Specifications

- Patent pending
- Onboard spray/fogging infection control system designed to disinfect air and high touch surfaces
- 3-year parts warranty; optional lifetime warranty (life of vehicle)
- Custom designed electronics for transportation industry – school buses, transit vehicles and trains
    - Extremely low stand-by current draw – will not drain batteries when off
    - 2-step activation procedure to prevent accidental operation
    - 30 second start delay allowing operator time to exit the vehicle
    - Configurable spray time from 10 to 60 seconds, custom times are available
    - System monitoring with short circuit protection and system shutdown
    - (Configurable) Ignition on or cut-off operation
        - System will operate with ignition signal
        - System will cut-off with ignition signal
    - (Optional) Event tracking with date and time stamp to track operation
- Simple and intuitive operator control panel
    - Low profile membrane switch panel with > 1,000,000 button activations
    - LED lights indicate system and operational status
        - Simple error codes to help technician troubleshoot system operation
        - Low fluid level indicator
        - Low operating pressure indicator
- Reservoir tank made from air-craft aluminum for rugged durability – 5-gallon and 10-gallon options
- Cover and optional kick plate to prevent tampering with equipment while allowing access to fill neck
- (Optional) Arctic package which allows system to operate in extreme cold environments
- Maintenance Free 12 Volt DC 200 PSI pump
    - Diaphragm pump with Santoprene construction
    - Self-priming pump with dry run protection
    - Made in the USA
- Electronic fluid level sensor built into tank
- Easy fill vented cap
- Limited drip stainless steel spray nozzles
- Proprietary nozzle holders designed to hold nozzle in fixed position for optimal spray
- ¼ inch high pressure flexible tubing with push connect fittings
- Installed in existing wire/light bar for clean, easy installation and service; factory installed appearance
- Uses specially formulated botanical disinfectant
    - Will not harm driver or passengers
    - Requires no wipe down
    - No residue
    - Disinfects in as little as 30 seconds with a maximum kill time of 4 minutes
    - Non-flammable liquid

CleanSpray USA, LLC
140 E. Main Street #200
Lewisville, TX 75057

(469) 240-5544
www.cleansprayUSA.com
roger@cleansprayUSA.com

CleanSpray
TECHNOLOGIES, LLC

CleanTransit™
GETTING THERE SAFER.
Automated Infection Control

System Parts

10 gallon system

Easy to operate controller with built in safety features

Covered to prevent tampering

Fluid level sensor

Lockable access lid for easy refill

Custom built 12-volt diaphram pump

Proprietary nozzle holder ensures thorough coverage

Fuel style vented lid

CleanSpray USA, LLC
140 E. Main Street #200
Lewisville, TX 75057

(469) 240-5544
www.cleansprayUSA.com
roger@cleansprayUSA.com

CleanSpray TECHNOLOGIES, LLC

CLEANER SPACES, CONTINUOUS PROTECTION.

BIOESQUE PLANT-BASED DISINFECTANT

NON-TOXIC | NON-CORROSIVE | NON-FLAMMABLE | BIODEGRADABLE | VOC FREE

Capable of cleaning, sanitizing, disinfecting and deodorizing in a single step, Bioesque's Botanical Disinfectant Solution is the natural solution for a wide range of cleaning challenges. This innovative product: Features the patented Thymox technology and a botanically derived active ingredient.

- **Approved by the U.S. EPA for use on hard non-porous surfaces against the SARS-CoV-2 virus (COVID-19) in just 55 seconds**
- Is a one-step cleaner with bactericidal, virucidal, tuberculocidal and fungicidal claims.
- Is a broad-spectrum disinfectant registered with the Environmental Protection Agency.
- Cleans, disinfects, and deodorizes a wide array of surfaces.
- Eliminates malodors and features a fresh lemongrass-grapefruit scent.
- Is nonabrasive, environmentally friendly and ideal for everyday use,
- Contains no chlorine, phosphates or harsh chemicals.
- Does not require the use of personal protective equipment.
- Is effective in restoration and remediation situations.
- **Laboratory tested for effectiveness***

CleanSpray USA, LLC
140 E. Main Street #200
Lewisville, TX 75057

(469) 240-5544
www.cleansprayUSA.com
roger@cleansprayUSA.com

CleanSpray TECHNOLOGIES

CLEANER SPACES, CONTINUOUS PROTECTION.

With a formula that is free of bleach and other harsh chemicals, Bioesque's Botanical Disinfectant Solution is a great choice for hazard-conscious or environmentally sensitive settings. Powered by Thymox technology, it utilizes Thymol, a cutting-edge antimicrobial agent present as a component of Thyme Oil, to quickly power through grime and destroys the germs that it encounters. How efficiently does this professional-grade product work? This disinfectant:

- Kills 99.99 percent of viruses in one minute.
- Kills 99.99 percent of bacteria in two minutes.
- Kills 99.99 percent of fungi and molds in three minutes.
- Kills Mycobacterium tuberculosis in three minutes.

See test findings sheet attached

KILL TIMES

SANITIZING

Staphylococcus aureus
Enterobacter aerogenes

VIRUSES

Swine Influenza A (H1N1)
HIV-1 AIDS Virus
Human Coronavirus
Respiratory Syncytial Virus (RSV)

BACTERIA

Staphylococcus aureus (Staph)
Salmonella
Pseudomonas aeruginosa (Pseudomonas)
Listeria monocytogenes
Escherichia coli (E. coli)
Streptococcus suis (Strep)
Vancomycin-Resistant Enterococcus (VRE)
MRSA
Klebsiella pneumoniae
3 Minute Kill Time:
TB; Tuberculosis

FUNGI & MOLDS

Athlete's Foot Fungus
Candida albicans

VIRUSES

Norovirus
SARS-CoV-2

CleanSpray USA, LLC
140 E. Main Street #200
Lewisville, TX 75057

(469) 240-5544
www.cleansprayUSA.com
roger@cleansprayUSA.com

CleanSpray TECHNOLOGIES, LLC

Sources of Funding

American Rescue Plan Act of 2021: Summary

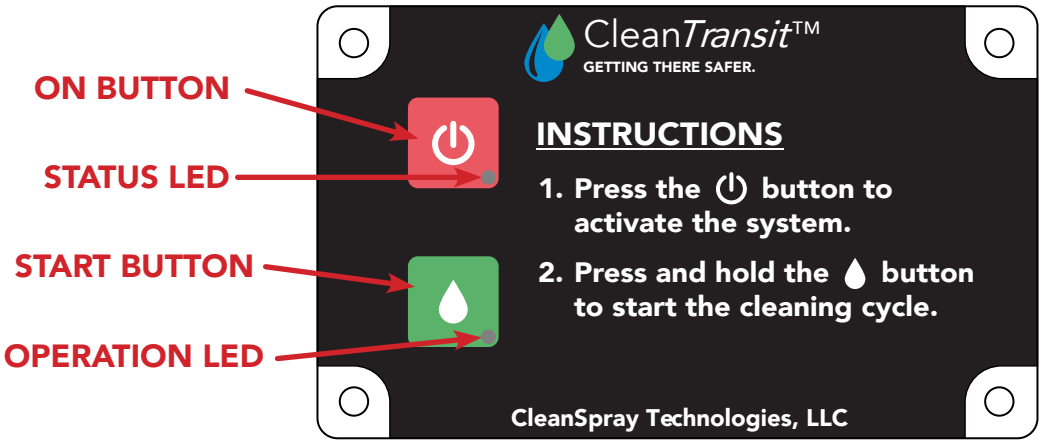
The U.S. House of Representatives on March 10, 2021, passed the Senate-amended H.R. 1319, the American Rescue Plan (ARP). The ARP provides $1.9 trillion in additional relief to respond to the novel coronavirus (COVID-19). This follows the enactment of nearly $4 trillion in COVID relief in 2020. President Joe Biden called for Congress to enact the ARP to provide relief for individuals and business struggling due to COVID-19, as well as to achieve other priorities of the Biden Administration and Congress. ARP includes provisions on aid to state and local governments, hard-hit industries and communities, tax changes affecting individuals and business, and other provisions.

The latest COVID relief legislation was enacted as part of Congress' fiscal year (FY) 2021 budget, and includes provisions impacting a wide variety of stakeholders. The following chart highlights some noteworthy provisions.

Key Provisions of American Rescue Plan	

Public Transportation	Federal Transit Administration Grants
	• $30.5 billion for transit
	  ○ $26.086 billion for Federal Transit Administration (FTA) Urbanized Area Formula Grants (Section 5307)
	  ▪ This amount, combined with CARES Act and Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA) grants, allows urbanized areas to receive 132 percent of their 2018 operating costs; for urbanized areas that received grants totaling 130 to 132 percent of operating costs from the CARES Act and CRRSAA, they receive an additional 10 percent of their 2018 operating costs
	  ○ $317 million for FTA Rural Area Formula Grants (Section 5311)
	  ○ $50 million for FTA Enhanced Mobility for Seniors and Individuals with Disabilities Grants (Section 5310)
	  ○ $100 million for non-urbanized intercity bus program recipients
	  ○ $25 million for Section 5307 planning grants to restore service
	• $2.21 billion for operating assistance grants to eligible recipients that require additional support for operations, personnel, **cleaning, sanitization** and debt payments costs incurred to maintain operations and avoid layoffs and furloughs due to COVID-19, with grants to be evaluated by the FTA based on the level of financial need demonstrated; the FTA is required to issue a Notice of Funding Opportunity (NOFO) for these grants within 180 days after the bill is signed into law
	• $1.675 billion for Capital Investment Grants (CIG)
	  ○ $1.425 billion for New Start and Core Capacity projects:
	  ▪ $1.25 billion for CIG project sponsors that have an existing Full Funding Grant Agreement (FFGA) and have received a FY 2019 or FY 2020 CIG allocation.
	  ▪ $175 million to CIG projects with an existing FFGA that received a CIG allocation prior to FY 2019
	  ○ $250 million for Small Start projects that are a recipient of a CIG allocation or an applicant in the project development phase

Clean *Transit* ™ Operator Control Panel



STEP #1 - Press the ON button

STEP #2 - Check Status LED Code (Page 2)

STEP #3 - Press and hold START button

STEP #4 - Exit vehicle when LEDs flashing

STEP #5 - System automatically disinfects

STEP #6 - Check Operational LED Code (Page 2)

Clean *Transit* ™ Status LED Codes

- Solid Green - System Ready
- Solid Yellow - Tank Level less than half full
- Solid Red - Tank Level low (will not operate)
- Red Flash (1x) - Error, Motor disconnected
- Red Flash (2x) - Error, System needs prime
- Red Flash (3x) - Error, Motor failure
- Red Flash (4x) - Error, Level sensor disconnected
- Red Flash (5x) - Error, Level sensor shorted

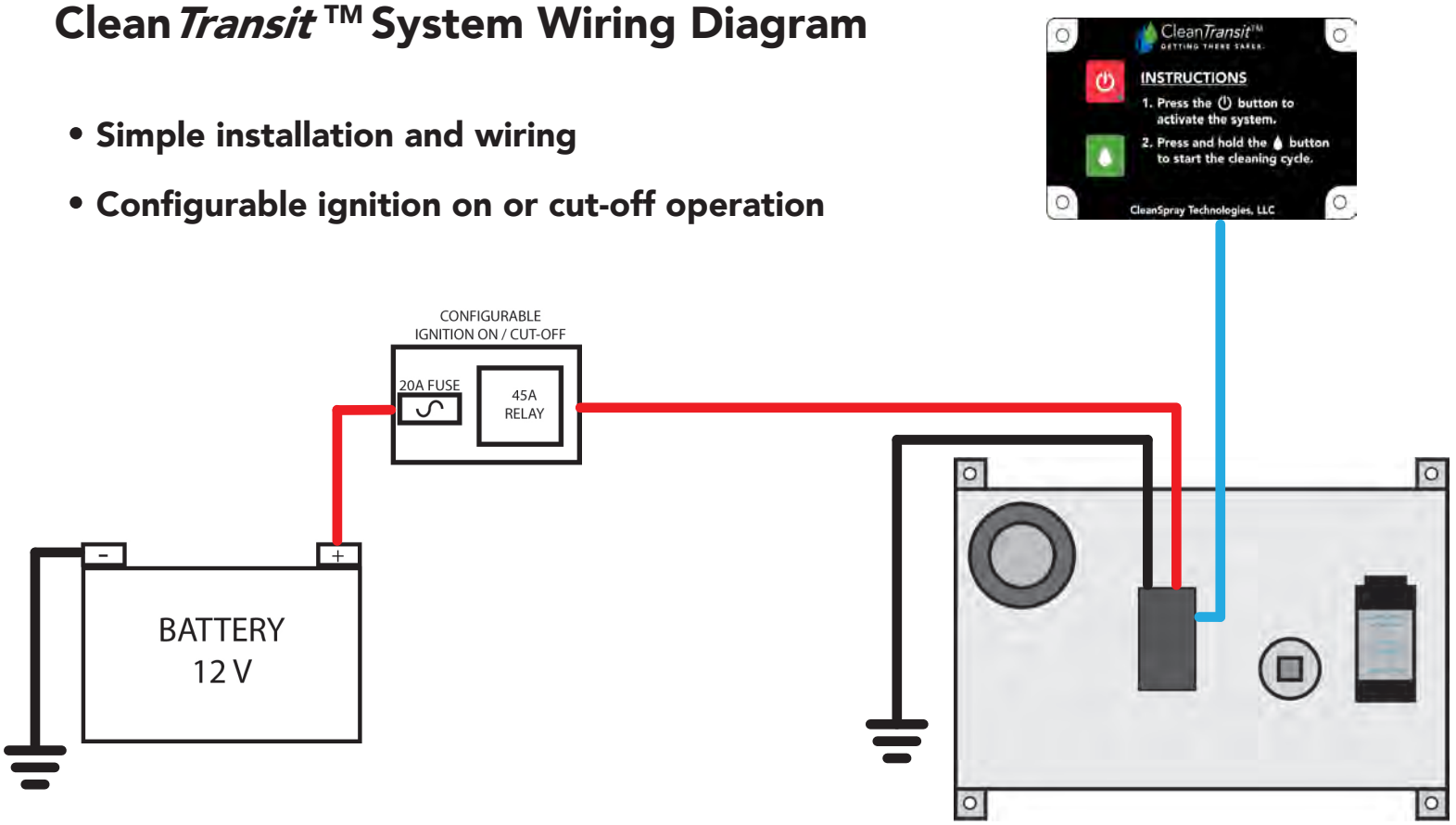
Clean *Transit* ™ Operational LED Codes

- Green Flash (1x) - Automated disinfecting running
- Solid Green - Automated disinfecting complete
- Solid Red - Automated disinfecting failure

  - See status LED flash codes for failure reasons

Clean *Transit* ™ System Wiring Diagram

- **Simple installation and wiring**
- **Configurable ignition on or cut-off operation**



CleanSpray TECHNOLOGIES
www.cleansprayUSA.com
469.240.5544
CleanSpray Technologies, LLC
140 E Main Street, Suite 200
Lewisville, Texas 75057

Clean*Transit* Air Precipitation Test

The Problem.
The most common pathogen transfer routes can be broken down into one of three methods: 1) mouth-to-hand-to-surface; 2) cough or sneeze to hand and/or surface, and 3) the fecal-oral route due to improper hygiene. The spread of pathogens via these routes to a surface and then to another person through touching the infected surface and then touching their face, eyes, mouth, or nose, is well documented. Hence, the emphasis on disinfection and decontamination of surfaces, especially in public spaces, and on proper hand washing.

However, there can also be airborne transmission of viral pathogens through inhalation of cough and sneeze droplets. In fact, COVID-19 has been shown to stay airborne for up to two hours and has been associated with infections from just breathing out or expelling air through singing as seen in disease transmission amongst choir members. Current technologies focus on manual wipe down of high-touch surfaces with a disinfectant or a variety of electrostatic sprayers and foggers (most are backpack versions) that are designed to target hard surfaces and surrounding areas. In fact, most advertisements show these sprayers and foggers being pointed at school desks, theater chairs, and other ground level structures. This type of application does very little to cover much above 6 feet and, even if sprayed into the air, will still not be effective in covering all areas of room atmosphere, especially in rooms with high ceilings like restaurants or gyms.

The Solution
The CleanTransit Automated Infection Control System is different. Our fixed mounted system is designed to clean the entire air column within a room, bus, or train. The fine mist and placement of nozzles is designed to cover all surfaces within the space, including the air column. The theory is that anything in the air will be bound to the disinfectant mist droplets and precipitated from the air. A thorough investigation of available particle sizes revealed that carbon black is approximately the same size as COVID viral particles, and hence chosen for our test.

The Proof
In order to prove our theory, a sealed test chamber was constructed and fitted with the same nozzles used with the CleanTransit system. Test sprays were conducted to insure nozzle placement and length of spray time mimicked that seen with systems installed on a bus or in a room. On one end of the chamber, a 4” duct was installed to which a 4” high velocity dispersion fan was fitted. A 90^0 elbow was attached to the fan intake so carbon black could be easily added to the system. With the system ready and fan running, one teaspoon of carbon black was poured into the fan intake and immediately dispersed throughout the test chamber. One teaspoon of carbon black created a thick, dark cloud throughout the chamber. The spray system was immediately activated and a timer started; within 25 seconds, the air within the chamber was clear and carbon black residue was observed in the bottom of the test chamber. What can be stated unequivocally is that in under 30 seconds, particle cloud thick enough to block visibility within the chamber was cleared with the activation of the CleanTransit system. *Had these been actual viral particles, they would have been removed from the breathable air, bound by the disinfectant, and killed within 2 minutes to prevent the spread of infection.*

Dr. Richard Cooper, PHD, Microbiologist
Chief Science Officer
CleanSpray Technologies, LLC

CleanSpray TECHNOLOGIES

TESTING PROCEDURE AND FINDINGS

Initial Disinfectant Kill Test

To assess the advertise features of four commercially available disinfectants, an experiment was designed to determine the ability of each to kill Salmonella.

Bacterial Culture

Salmonella javiana 312 is a highly virulent, antibiotic-resistant serovar that is known to infect horses, frequently resulting in death in younger animals. It can cause disease in humans and other animals and be difficult to treat due to the multi-drug resistance. For this experiment, a single colony was picked to 5 ml of Brain Heart Infusion broth, placed in a 37 C shaking incubator, and grown overnight. The culture was then precipitated by centrifugation at 4,510 x g in a benchtop Sorval ST 16R refrigerated centrifuge. Spent media was removed and the bacterial pellet resuspended in 10 ml sterile 1x phosphate buffered saline (PBS) to approximate a McFarland std of 0.5. The resuspended culture had approximately 5 x 10^7 CFU/ml and was stored in the refrigerator until needed.

Experimental Test and Design

Four disinfectants were tested in this experiment: A) Disinfectant 1 (D-1), B) Disinfectant 2 (D-2), C) Disinfectant 3 (D-3), and D) Disinfectant 4 (D-4). For each disinfectant, 15 ml tubes were labeled with the disinfectant name and dilution of the compound ranging from 100% to 0.5%. A total of 15 tubes were used per disinfectant (see Table 1). In order to stress the system, growth media was used as a diluent to encourage growth in the event of solution failure.

Once all dilutions were made, 100 µl of 5 x 10^7 CFU/ml Salmonella in PBS was added to each tube and all tubes placed in a 37 C shaking incubator overnight. After 20 h of incubation, a 10 µl aliquot from each tube was transferred to an SB/amp agar plate fitted with grid lines and a number corresponding to the tube number. Plates were incubated overnight at 37 C (20 h) and growth/no growth was recorded.

Table 1. The dilutions listed below were replicated for each disinfectant.

Compound	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Disinfectant	100	90	80	70	60	50	40	30	20	10	0	50	25	10	5
Media	0	10	20	30	40	50	60	70	80	90	100	950	975	990	995

Results

Of the compounds tested, only D-3 and D-4 yielded no growth through the first 10 dilutions. Tube 11 for each solution served as a positive control, while tubes 12 – 15 diluted the disinfectant beyond its capacity to kill the Salmonella. D-2 yielded inconsistent results by producing growth at some dilutions and not at others, even if the product was more concentrated. In addition, it is not believed to contain nanoparticle as verbally advertised. Some of this growth could be due to a precipitant occurring in dilutions with higher media concentrations, which may have removed the substances needed for pathogen killing. The most surprising results were obtained with D-4, in that no growth inhibition was observed even in the most concentrated form of the product. Based on these results, we made the decision to remove D-4 from future testing.

Table 2. Killing effect of disinfectants at different concentrations. + = growth, - = no growth, U = undetermined due to precipitation in the tube.

Compound	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
D-1	-	-	-	-	-	-	-	-	-		+	+	+	+	+
D-2	-	-	+	-	+	-	-	-	-	+	+	+	+	+	+
D-3	-	-	-	-	-	-	-	-	-	-	+		+		+
D-4	+	+	U	U	U	U	U	U	U	U	+	U	U	U	U

Bus Seat test using three disinfectants

In order to determine the killing ability of D-1, D-2, and D-3, an experiment was set up using *Salmonella javiana* as the test organism on a typical vinyl covered bus seat, the type found on school buses used for K-12 transportation. The experiment was designed to test the killing ability of disinfectants on the bus seat, when exposed to Salmonella, and Salmonella on the bus seat followed by disinfectant treatment.

Test organism

First, a 5 ml culture of *S. javiana* in brain-heart-infusion broth was grown at 37 C overnight in a shaking incubator. The culture was then precipitated by centrifugation at 4,510 x g in a benchtop Sorval ST 16R refrigerated centrifuge. Spent media was removed and the bacterial pellet resuspended in sterile 1x phosphate buffered saline (PBS). The resuspended culture had approximately 5 x 10^7 CFU/ml and was stored in the refrigerator until needed.

Experimental Test and Design

A vinyl covered bus seat was divided into two, 12 grid sections, with each section measuring approximately 2" x 2". Each section was labeled either P (positive control), D-1, D-2, or D-3. The first 12 grids were treated as follows: three untreated control sections, three sections swabbed until wet with either Dil, D-2, or D-3. The grid was allowed to air dry for approximately 30 minutes.

The second grid was laid out identically to the first grid, but swabbed until wet with *S. javiana* suspended in PBS. The grid was allowed to air dry for approximately 30 minutes.

Product Application

The grid to which disinfectant was applied first was swabbed with *S. javiana* until wet, whereas the second grid was swabbed with the disinfectant appropriate to the section until wet. A separate, sterile, cotton tipped applicator was used for each grid section in order to avoid cross-contamination. Each grid was allowed 15 minutes of contact time to allow the disinfectant to kill on *S. javiana*.

Culture method

Each grid section was swabbed with a separate, sterile, cotton tipped applicator, which was then used to inoculate a superbroth agar plate supplemented with 100 mcg/ml ampicillin. Each plate was divided into 4 sections, and each ¼ was labeled with P, D-1, D-2, orD-3. The ¼ labeled with the corresponding test section was swabbed to check for Salmonella growth. Once plates were inoculated, they were placed in a stationary 37 C incubator overnight.

P	D-1	D-2	D-1
D-3	D-2	P	D-3
D-2	D-3	D-1	P

Results

Of the three disinfectants tested, D-1 did the best job of evenly wetting the vinyl; the other two tended to bead-up on the surface making even distribution difficult and likely resulted in "hot spots" of killing activity vs areas without killing activity. Based on the nature of the grid system,

it was not possible to use a spray method of application without overspray getting on the surrounding area. There is also a question of whether or not the swab removed too much of the Salmonella or disinfectant (depending on the grid being swabbed).
In spite of these issues, consistent data was obtained between the replicates for each treatment. Not surprisingly, applying the disinfectant over the Salmonella-contaminated seat yielded the best kill rate for all treatment groups. In the disinfectant-over-salmonella group, the D-1 and D-2 yielded the best kill rate after 15 minutes of exposure, with the D-3 performing the worst. D-1 still performed the best of the three, even in comparison to D-2, as measured by more numerous colonies in the D-2 quadrants. Each replicate (1/4 of a plate) was scored for growth or no growth. Growth was detected in the positive control (numerous colonies) and the D-3.
In the Salmonella over disinfectant treatments, D-1 significantly out-performed both D-2 and D-3, the latter two having numerous colonies in 2 of 3 replicates, similar to the positive control, after 15 minutes of exposure. Because of the experimental design and need to use sterile cotton-tipped swabs, an accurate, quantitative count could not be obtained as it could in the first experiment. In future experiments, this issue will be resolved and quantitative numbers obtained.

Discussion

The data presented above is preliminary in nature and designed to narrow the field of disinfectants to be tested; this objective was obtained with D-1 being chosen for further evaluation and formulation. This is a plant-derived, non-toxic formulation that does not have to be wiped off of a surface once applied. While the disinfectant-over-Salmonella provided the best kill rate as reported above, the Salmonella-over-disinfectant still performed very well with a 15 minutes of exposure time. This observation is significant due to the thick lipopolysaccharide capsule surrounding this highly virulent, multi-drug resistant *S. javiana*. If an organism this well protected from its environment can be killed so quickly, it is anticipated that most virues would be neutralized within seconds or no more than a few minutes after exposure.
Our theory is that improved application techniques (spray, instead of swab) will provide kill rates similar to the disinfectant-over-Salmonella. Future experiments are planned to determine how long the effective kill rate can be maintained using D-1 as a disinfectant; we will test grids daily for two weeks or until no kill efficacy is found when the D-1 is applied and challenged daily with Salomonella.

Testing performed by Dr. Richard Cooper on behalf of CleanSpray Technologies.

SAFETY DATA SHEET

SECTION 1 : PRODUCT IDENTIFICATION

Product Name : **Bioesque Botanical Disinfectant Solution**
Product Use : Surface Disinfectant
Scent: Lemongrass Grapefruit

Supplier: Natureal, LLC
Address: 150 East Palmetto Park Road, Suite 150, Boca Raton, FL 33432
Telephone: 800-921-4634
Emergency phone: (866) 898-0697
E-Mail: info@bioesquesolutions.com
Web site: www.bioesquesolutions.com

SECTION 2 : HAZARD INDENTIFICATION

WHMIS Class : Exempt
TSCA: All the ingredients are listed or exempt from listing on the Chemical Substance Inventory.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS#	Wt %	TLV	LC_{50}	LD_{50}
Thymol	89-83-8	0.23	N/A	N/A	980 mg/Kg (oral, rat)

SECTION 4 : FIRST AID MEASURES

Eye: Remove contact lenses. Rinse with plenty of water for several minutes, keeping eyelids open.

Skin: Rinse with water. Remove spoiled clothes and wash before wearing.

Inhalation : N/A

Ingestion: Seek medical attention if large quantities are ingested.

SECTION 5 : FIRE FIGHTING MEASURES

Flammability : No

Flash Point (ASTM D-93, °C) : >100

Hazardous Combustion Products: Carbon oxides, sulfur oxides.

Suitable extinguishing media: As per surrounding fire.

Special Fire Fighting Procedure: As per surrounding fire.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedure: Stop leak, Rinse to drain or absorb with non-reactive adsorbent and dispose according to existing federal, state, provincial and municipal regulations. Resume cleaning by rinsing with water.

SECTION 7 : HANDLING AND STORAGE

Handling: Follow standard safe handling of materials. Keep out of reach of children.

Storage Requirements: Keep in original tightly closed containers, in a room below 30 °C.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

For use with mechanical, manual, or battery/power operated sprayers, follow standard safe handling of materials. For ULV Fogger applications, wear safety glasses with side shields or goggles to protect eyes. Face mask (N95) is also recommended for ULV Fogger applications.

SECTION 9 : PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point (°C) : 100
Vapor Pressure (mm Hg) : N/A
Vapor Density (Air = 1) : N/A
Solubility in water : complete
Physical State : liquid
Appearance: transparent to translucent
Odour: spicy scent

Density (g/mL): 0.999 at 23 °C
VOC (Wt %) : calculated approx. <1%
Evaporation Rate (Water + 1) : water like
pH (as supplied) : 4.0 – 6.0
Viscosity : water like
Odour Threshold (ppm) : N/A

SECTION 10 : STABILITY AND REACTIVITY DATA

Conditions for Chemical Instability: This product is stable under normal conditions. It does not polymerize.

Conditions to Avoid: Excessive heat.

Incompatible Materials: Strong oxidizing agents, strong alkalis, strong acids.

Hazardous Decomposition Products: The thermal decomposition can produce carbon and sulfur oxides and other organic substances.

SECTION 11 : TOXICOLOGICAL INFORMATION

Routes of Entry: Eyes, skin, ingestion, inhalation.

EFFECTS OF ACUTE EXPOSURE :
Acute Oral Toxicity: LD50:>5000 mg/Kg (EPA Category IV).
Acute Dermal Toxicity: LD50:>5000 mg/Kg (EPA Category IV).
Acute Inhalation Toxicity: LC50:>2.01 mg/L (EPA Category IV).
Acute Eye Irritation: Minimal, all effects cleared in 24 hours (EPA Category IV).
Acute Dermal Irritation: Slight, no erythema or edema at 72 hours (EPA Category IV).
Skin Sensitization: Not a sensitizer (EPA Category IV).

Classified as a Category IV by the U.S. Environmental Protection Agency (EPA) per toxicity profile Review for all routes of exposure: no signal words, no precautionary statements or first aid statements required on product label.

EFFECTS OF CHRONIC EXPOSURE :
Irritancy: Frequent prolonged contact may result in dry skin, redness and dermatitis.
Carcinogenicity/Mutagenicity: No, not predictable.

SECTION 12 : ECOLOGICAL INFORMATION

Biodegradability: Readily Biodegradable (OECD 301E)

Aquatic toxicity: Not toxic to aquatic life (IC50 > 100 mg/L, report EPS 1 / RM / 24)
Method: Microtox® Acute Toxicity Test
Test organism: *Vibrio fischeri*
Results: CI 50-5 min 560mg/l
IC 95 %-5 min 500-600 mg/L
CI 50-15 min 660 mg/L
IC 95 %-15 min 540-780 mg/L

SECTION 13 : DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose according to existing federal, state/provincial and municipal regulations. This product is biodegradable.

SECTION 14 : TRANSPORT INFORMATION

D.O.T. Not regulated as dangerous goods.
Not regulated for **IATA.**

SECTION 15 : REGULATORY INFORMATION

U.S. EPA registration: 87742-1-92595
Health Canada: DIN 02486857
California Proposition 65: No chemicals in this material are subject to the reporting requirements.
NSF Registration No. 157263

SECTION 16 : OTHER INFORMATION

SDS Date of preparation/revision: 2020-03-31
Prepared by: LABORATOIRE M2 Inc.
Phone : 1-866-898-0697

THYMOX TECHNOLOGY