



AeroClave, LLC

Our mission is to combat the spread of infectious diseases through a family of comprehensive, cost-effective, and environmentally safe solutions.



Hospitals / Healthcare



Public Safety / First Responders



RDS 3110

Parts and Pieces





RDS 3110

Control Panel





RDS 3110

Control Panel





RDS 3110

Fixed Heads





RDS 3110

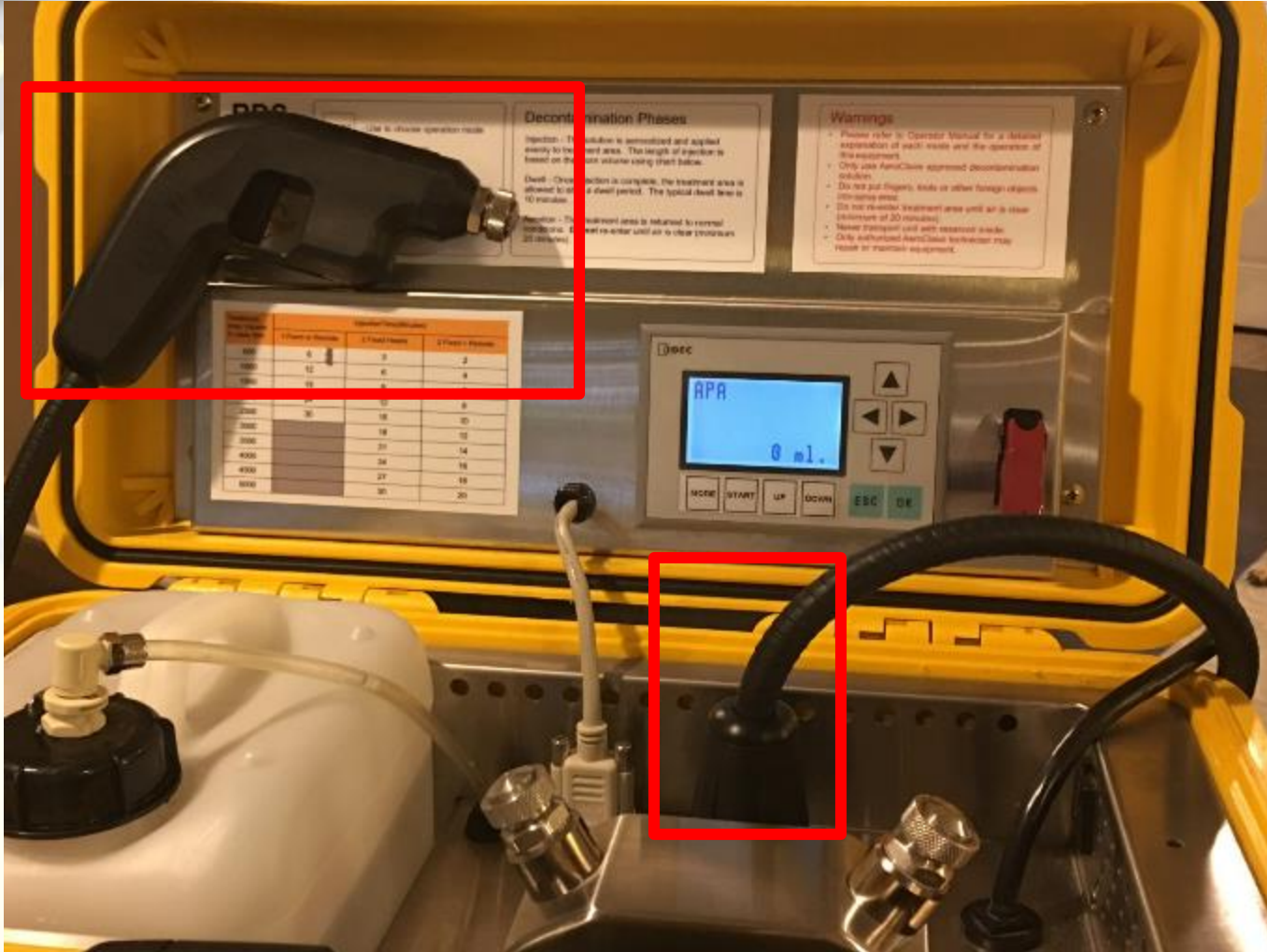
Smart Port





RDS 3110

AeroClave Portable Applicator (APA)





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RDS 3110

AeroClave Portable Applicator (APA)





RDS 3110

Solution Tank





RDS 3110

Remote Control





Treatment Solution

DISINFECTS AS IT CLEANS

Eliminates Odors • Fragrance Free

AREAS OF USE INCLUDE:

Homes, vehicles, schools & daycare, gyms & locker rooms, sports gear, hospitals, nursing homes, laundry rooms, veterinary, pharmacies, ambulances, barber shops, laboratories, restaurants, boats, ships, federally inspected meat & poultry processing plants, farms, animal pens and poultry houses, egg processing premises, hatcheries, swine premise sanitation, refrigerated storage units (empty & disconnected), airplanes, trains, trucks, buses & automobiles. Use as a mold & mildewstat on hard non-porous surfaces such as tile, and porous surfaces such as fabric.

VITAL OXIDE provides hospital disinfection, sanitization of food contact surfaces, mold & mildew prevention, broad spectrum cleaner & odor elimination.

DIRECTIONS FOR USE: It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Test fabric for color fastness. Contains a dilute oxidizing agent. Do not mix with vinegar or acidic cleaners.

PRE-CLEANING INSTRUCTIONS: Remove gross filth and heavy soil by clearing. Spray **VITAL OXIDE** straight onto soils, scrub and wipe clean with a dry paper towel or cloth. For cleaning floors add one cup **VITAL OXIDE** per gallon of water in bucket and clean with sponge, mop or pad.

TO DISINFECT HARD NON-POROUS SURFACES: For disinfecting pre-cleaned hard non-porous surfaces such as glass, plastic, painted wood, laminates, chrome, stainless steel, polyethylene coated hardwood floors, glazed ceramic tile, sealed concrete & linoleum floors. Types of items include: appliances, bed frames, cabinet handles, wheelchairs, child car seats, counters, cribs, diaper/chair tables, tubs, exterior toilet surfaces, faucet handles, handrails, lounge chairs, keyboards, light switch covers, patio furniture, showers, sinks, stoves/tops, telephones, toys, walls, waste containers. Apply **VITAL OXIDE** full strength to pre-cleaned hard non-porous surfaces, wetting thoroughly with sponge, mop, or by immersion in solution. Allow surfaces to remain wet for 5 minutes for virus inactivation - 10 minutes for bacteria disinfection. For immersion replace solution daily, or more frequently if it becomes significantly soiled or diluted. For machine application, use the Manufacturer's Bulletin specific for that equipment when using **VITAL OXIDE**. **FOGGING AND MISTING:** **VITAL OXIDE** can be applied by fogging or misting to disinfect hard, nonporous surfaces as an adjunct to regular manual cleaning and disinfecting. **VITAL OXIDE** is recommended for use in fogging operations as a supplemental measure either before or after regular cleaning and disinfecting procedures. Apply by fogging or misting until surface is moist using equipment manufacturer's directions for use. Remove or carefully protect all food and food packaging materials prior to treatment. Vacuate treatment area and do not reenter treated area until air is clear (minimum 10 minutes to reentry).

TO PREVENT MOLD OR MILDEW ON FLOORS, WALLS, CEILING & FABRIC: Remove as much surface dirt, mold, or mildew as possible by cleaning. Then spray on **VITAL OXIDE** from a distance of 12 inches until evenly wet and let air dry.

TO DEODORIZE: **VITAL OXIDE** works by oxidation, not by masking of odors. Eliminates odors caused by fire smoke, tobacco smoke, musty odors, stale cooking odors. Simply spray, fog or wipe on full strength and let air dry to provide long lasting residual deodorizing action. When fogging apply 1 quart per 2000 cubic ft. following fogger manufacturer's directions for use. **VITAL OXIDE** must come into contact with the cause of the odor to be effective. For pet urine stains or carpet, blot urine as dry as possible then saturate stain with **VITAL OXIDE** through carpet pad.

TO SANITIZE FOOD CONTACT SURFACES: *Staphylococcus aureus* (ATCC 6020) and *Escherichia coli* (ATCC 12228) 99.99% sanitization of food contact surfaces. Mix 1 quart **VITAL OXIDE** to 7 parts water. For glassware, ceramic, cookware, and dishware: Scrub and pre-wash, then wash with a good detergent. Rinse with potable water, then sanitize by immersion in **VITAL OXIDE** for 1 minute (or longer if specified by government sanitary codes) Place on a rack or drain board to air dry. Do not rinse or wipe. Food Contact Immovable Surfaces: food processing equipment, counter tops, tables, appliances. Remove all gross food particles and soil by cleaning and rinse with potable water. Apply **VITAL OXIDE** by wetting thoroughly and let stand for 1 minute, or longer if specified by government sanitary codes. Let surfaces drain and air dry. Do not rinse or wipe.

TO SANITIZE CARPET: For synthetic carpet fibers such as nylon, olefin, or polypropylene - not intended for use on wool carpet. Test for color fastness in an inconspicuous area. Carpet should be clean or free of excessive soil before applying. Mix 1 quart **VITAL OXIDE** to 5 parts water. Apply by sprayer at a rate of 1.2 gallons per 10 sq. yards (approx. 22oz per sq. yd.). **VITAL OXIDE** must come into contact with contaminated work. Allow to dwell for 10 minutes. Do not rinse, use an extraction wand and dry stroke carpet to remove excess moisture. Carpet can air dry or fans may be used if carpet needs to dry faster.

99.999% SANITIZATION
OF FOOD CONTACT SURFACES

HOSPITAL DISINFECTANT

VitalOxide



NSF LISTED #141352
No rinse required sanitizer for food contact surfaces (D-2)

HEAVY DUTY ODOR ELIMINATOR

MOLD & MILDEW REMOVER - Prevents Mold & Mildew On Hard Surfaces & Fabric

VITAL OXIDE KILLS:

MRSA, *Pseudomonas aeruginosa*, *Escherichia coli*, *Salmonella enterica*, *Staphylococcus aureus*, *Legionella pneumophila*, *Aspergillus niger*, Norovirus (Feline Calicivirus as surrogate), Human Immunodeficiency virus type 1 (HIV-1), Enterobacter aerogenes, *Listeria monocytogenes*, *Acinetobacter baumannii*, Respiratory Syncytial Virus, Rotavirus, Influenza A (H1N1) Swine Flu, Hepatitis B, Hepatitis C

KEEP OUT OF REACH OF CHILDREN
CAUTION

See side panel for additional precautionary statements

ACTIVE INGREDIENTS:

Chlorine Dioxide	0.200%
Alky (88% C., 33% C., 5% C., 5% C.) dimethyl benzyl ammonium chloride	0.125%
Alky (88% C., 32% C.) dimethyl ethylbenzyl ammonium chloride	0.125%
OTHER INGREDIENTS	98.550%
Total	100.000%

NET CONTENTS: 128 FL. OZ. (3.78 L)

TO DISINFECT FARM PREMISES, POULTRY HOUSES, ANIMAL PENS & VEHICLES: Remove all animals and feed from premises, vehicles, and enclosures. Remove all litter and manure from floors, walls and surfaces of barns, pens, stalls, chutes, and other facilities and fixtures occupied or traversed by animals. Empty all troughs, racks, and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate all surfaces with **VITAL OXIDE** for a period of 10 minutes. Remove all hatters, ropes, and other types of equipment used in handling and restraining animals, as well as forks, shovels, and scrapers used for removing litter and manure. Allow to air dry. Ventilate buildings, cars, boats, and other closed spaces. Drain any pooled product and/or rinse standing product with potable water. Do not house livestock or employ equipment until treatment has been absorbed, or dried.

This product may be used to pre-clean or decontaminate critical or semi-critical medical devices prior to sterilization of high level disinfection. **This product is not to be used as a terminal (sterilization) level disinfectant on any surface of instrument that (1) is introduced directly into the human body, either into or in contact with the bloodstream or normally sterile areas of the body, or (2) contacts intact mucous membranes but which does not normally penetrate the blood barrier or otherwise enter normally sterile areas of the body. **KILLS HIV-1, HBV AND HCV ON PRE-CLEANED ENVIRONMENTAL SURFACES/OBJECTS PREVIOUSLY SOILED WITH BLOOD/BODY FLUIDS** in health care settings or other settings in which there is an expected likelihood of soiling of inanimate surfaces /objects with blood or body fluids and surfaces/objects likely to be soiled with blood or body fluids can be associated with the potential for transmission of Human Immunodeficiency virus type1 (HIV-1) associated with AIDS, Human Hepatitis B virus, and Human Hepatitis C virus.

SPECIAL INSTRUCTIONS FOR CLEANING AND DECONTAMINATION AGAINST HIV-1, HBV, AND HCV ON SURFACES/OBJECTS SOILED WITH BLOOD/BODY FLUIDS

PERSONAL PROTECTION: When handling items soiled with blood or body fluids use disposable latex gloves, gowns, mask, or eye coverings.

CLEANING PROCEDURES: Blood and other body fluids must be thoroughly cleaned from surfaces and objects before application of this product.

DISPOSAL OF INFECTIOUS MATERIALS: Blood and other body fluids should be autoclaved and disposed of according to Federal, State and local regulations for infectious waste disposal. **CONTACT TIME:** Allow surfaces to remain wet for 5 minutes. This contact time will not control bacteria.

STORAGE AND DISPOSAL: Store in original closed container in a cool, dry place away from heat and open flame. Non-refillable. Do not reuse or refill the container unless the directions for use allow a different concentration product to be diluted in the container. Container Disposal: Rinse and offer empty container for recycling. If recycling is not available discard container in trash. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Discard excess or unused **VITAL OXIDE** solution in drain with running water.

PRECAUTIONARY STATEMENTS: HAZARDOUS TO HUMANS & DOMESTIC ANIMALS Causes moderate eye irritation. Avoid contact with eyes.

FIRST AID

IF IN EYES

Hold eye open and rinse slowly with water 15-20 minutes. Remove contact lenses after first 5 minutes and continue rinsing. Call a Poison Control Center or doctor for treatment advice. Have product container or label with you when calling a Poison Control Center or doctor, or when going for treatment.

EPA Reg. No. 82072-1 EPA Est. No. 85504-NC-1 EPA Est. No. 29809-CA-1

(See batch code for actual establishment number.)

NOTICE: Seller expressly warrants that the product conforms to its chemical description. There are no other warranties associated with sale of the product.

Manufactured by:

VitalSolutions, LLC

P.O. Box 9932, West Palm Beach, FL 33419

Customer Service: 1-800-303-5405

www.vitaloxidex.com



- Chlorine-dioxide based
- USEPA Registered
- Hospital-grade Disinfectant

Biodefense for the 21st Century.



VitalOxide

EPA Registration No. 82972-1

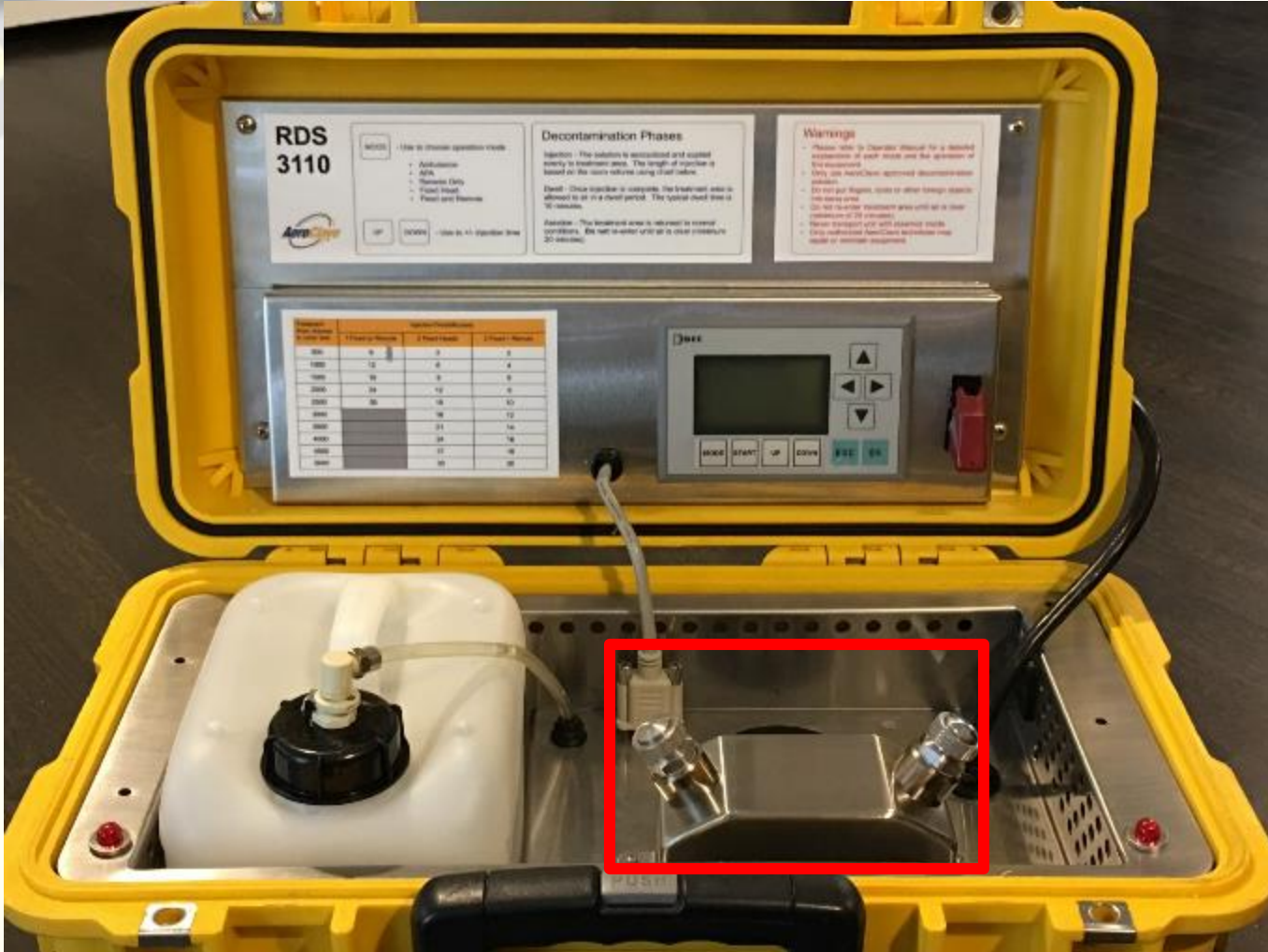
Complete Independent Lab Testing Summary 01-28-2014

Bacteria	Use Method	Contact Time	Study Conclusion
<i>Pseudomonas Aeruginosa</i> ATCC 15442	AOAC Use-Dilution	10 min.	Hospital Grade Disinfection
<i>Acinetobacter baumannii</i> ATCC 19606	AOAC Use-Dilution	10 min.	Hospital Grade Disinfection
<i>Escherichia Coli</i> ATCC 11229	AOAC Food Contact Sanitization	30 Sec.	99,999 kill (no rinse required)
<i>Staphylococcus aureus</i> ATCC 6538	AOAC Food Contact Sanitization	30 Sec.	99,999 kill (no rinse required)
<i>Pseudomonas Aeruginosa</i> ATCC 15442	DIS/TSS-8 Carpet Sanitizer	10 min.	99.9 Carpet Sanitizer
<i>Enterobacter aerogenes</i> ATCC 13048	DIS/TSS-8 Carpet Sanitizer	10 min.	99.9 Carpet Sanitizer
<i>Staphylococcus aureus</i> MRSA ATCC 33592	AOAC Use-Dilution	10 min.	Disinfection
<i>Listeria monocytogenes</i> ATCC 15213	AOAC Use-Dilution	10 min.	Disinfection
<i>Escherichia Coli</i> ATCC 11229	AOAC Use-Dilution	10 min.	Disinfection
<i>Legionella Pneumophila</i> ATCC 33153	AOAC Use-Dilution	10 min.	Disinfection
<i>Salmonella choleraesuis</i> ATCC 10708	AOAC Use-Dilution	10 min.	Disinfection
<i>Staphylococcus aureus</i> ATCC 6538	AOAC Use-Dilution	10 min.	Disinfection
<i>Klebsiella pneumoniae</i> (NDM-1)	AOAC Use-Dilution	10 min.	Disinfection
Fungi			
<i>Aspergillus Niger</i> ATCC 6275	Hard Surface Mildew Fungistatic	10 min.	>1 week protection
<i>Stachybotrys chartarum</i>	Sporicidal viability	10 min.	no germination of spores
<i>Aspergillus fumigatus</i>	Sporicidal viability	10 min.	no germination of spores
<i>Alternaria alternata</i>	Sporicidal viability	10 min.	no germination of spores
<i>Penicillium sp</i>	Sporicidal viability	10 min.	no germination of spores
<i>Aspergillus Niger</i> ATCC 6275	Hard Surface Mildew Fungistatic	10 min.	>4 week protection
Virus			
Rotavirus	Virucidal Efficacy	5 min.	complete inactivation
Hepatitis C Virus	Virucidal Efficacy	5 min.	complete inactivation
Hepatitis B Virus	Virucidal Efficacy	5 min.	complete inactivation
Norovirus Feline Calicivirus	Virucidal Efficacy	5 min.	complete inactivation
Murine Norovirus (MNV-1)	Virucidal Efficacy	5 min.	complete inactivation
Swine Influenza (H1N1) Virus	Virucidal Efficacy	5 min.	complete inactivation
Respiratory Syncytial Virus	Virucidal Efficacy	5 min.	complete inactivation
Human Immunodeficiency Virus (HIV Type 1)	Virucidal Efficacy	5 min.	complete inactivation
Toxicity Data		E.P.A. Toxicity Rating	
Dermal Irritation	Limit test	Category 4	
Dermal Sensitization	Buehler Method	Category 4	
Acute Inhalation Toxicity	Limit test	Category 4	LC50 is greater than 2.09mg/l
Acute Dermal Toxicity	Limit test	Category 4	LD50 is greater than 5000mg/kg
Acute Oral Toxicity	Limit test	Category 4	LD50 is greater than 5000mg/kg
Ocular Irritation	Limit test	Category 4	



RDS 3110

Fixed and Remote Head Operation





RDS 3110

Operation Options



- First screen anticipates connection between unit and Ambulance Port
- Shows “Error” if not connected
- Connect to ambulance before turning unit on
- Hit “Mode” to scroll to next screen(s)



RDS 3110

Fixed Head Operation



- Fixed Head mode can be operated with one or two heads
- Refer to the Injection Table for recommended injection times.



RDS 3110

Injection Table

Treatment Area Volume in cubic feet	Injection Time (Minutes)		
	1 Fixed or Remote	2 Fixed Heads	2 Fixed + Remote
500	6	3	2
1000	12	6	4
1500	18	9	6
2000	24	12	8
2500	30	15	10
3000		18	12
3500		21	14
4000		24	16
4500		27	18
5000		30	20



RDS 3110

Fixed Head Operation



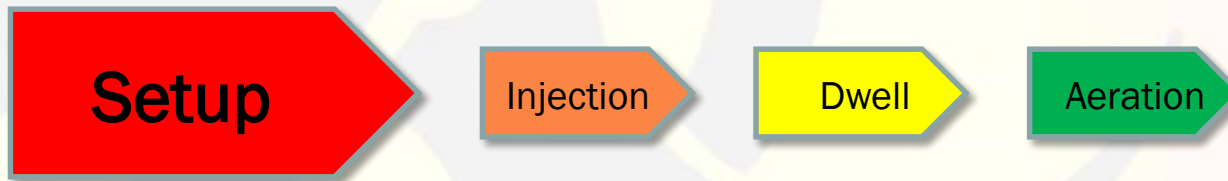
Press UP to increase the injection time.



Press DOWN to decrease the injection time.



Typical AeroClave Decontamination Cycle



- Preclean treatment area of all gross contaminants.
- Prep surfaces in the treatment area for decontamination (opening/closing cabinets, clearing off surfaces, etc.)
- Shut off and/or isolate HVAC, exhaust, ventilation, etc.
- Remove food, drinks, or anything used to consume food or drinks.
- Ensure all personnel have vacated treatment area.



Typical AeroClave Decontamination Cycle



- Place RDS 3110 unit in desired location.
- Plug RDS 3110 unit into 110V power source.
- If needed, attach appropriate accessory (ADP port or APA)
- Select appropriate mode for decontamination on the touchscreen.
- Flip up red arming switch to engage mode.
- Set injection time based on time chart



RDS 3110

Fixed Head Operation



Once time has been set, flip the red arming switch



Typical AeroClave Decontamination Cycle



- Ensure all setup steps have been met and secure treatment area.
- Activate decontamination cycle by pressing “START” on the touchscreen or the button on the remote control.
- Indicator lights on the front of the unit will begin to flash and the unit will activate.
- The unit will dispense disinfectant for the length of time that was input during setup.
- If necessary, during injection, the unit can be shut off by pressing “START” on the touchscreen or the button on the remote control.



Typical AeroClave Decontamination Cycle



- Once the Injection phase has completed, the unit will cease dispensing and the treatment area is placed in a Dwell period.
- This Dwell period gives the disinfectant an opportunity to contact every exposed surface in the treatment area.
- Dwell period lasts for a *minimum* of 10 minutes.
- During the Dwell period, the indicator lights on the front of the unit will continue to flash.



Typical AeroClave Decontamination Cycle



- Once the 10-minute Dwell period has completed, the indicator lights on the front of the unit will cease flashing.
- You can now begin returning the treatment area to normal by:
 - Opening doors or windows
 - Activating HVAC, exhaust, or ventilation
- Allow any remaining fog/haze to clear before reentering treatment area.
- Unplug RDS 3110 unit from power and remove from the treatment area.



RDS 3110

APA Operation





RDS 3110

Operation Options



- Second mode “Hand Applicator” is for AeroClave Portable Applicator
- Hand-held manual operation



RDS 3110

APA Operation

- Slow, spray painting motion
- Keep APA 32-36" from surface
- Ideal spray pattern is the size of a basketball
- Avoid excessive wetting of surface



Do Not Over Spray!!!

If necessary, allow surface to dry for a few seconds before re-spraying!



RDS 3110

Remote Operation



- Can operate with Remote only or in conjunction two Fixed Heads
- When Remote is properly connected, screen will show injection time
- Refer to the Injection Table for recommended injection times



RDS 3110

Remote Operation



- To use APA as Remote – tripod must be affixed
- Standard photographic tripod thread



Product Line

AeroClave Distribution Port (ADP)



Biodefense for the 21st Century.