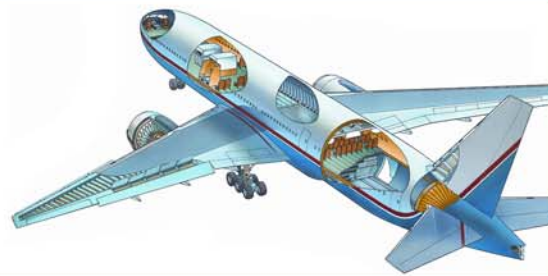


# Aviation Disinfectant Cleaner Options



## General Purpose: (Ready For Use)

**EnviroTru 1453** is a multi-purpose, ready-to-use, effective limited disinfectant cleaner deodorizer for use on hard, non-porous, precleaned surfaces. EnviroTru™1453 will disinfect precleaned surface, when used as directed on counter tops, walls, tables, chairs, exterior toilet surfaces, sinks, tubs, showers, floors, hand rails, door knobs, cabinets, faucets, appliances, and telephones. It can also be used on aircraft, trains, automotive transportation ships and boats, whether commercial or military. EnviroTru™1453 has passed AMS 1453, AMS 1452A and Boeing D6-7127 specifications for non-corrosion and materials compatibility. EnviroTru™1453 also meets EPA Requirements for Toxicity Category IV. It has EPA Reg No. 70791-2.

## General Purpose: (Concentrate)

**Calla 1452** Neutral Disinfectant Cleaner is a phosphate-free, pH neutral formulation designed to provide effective cleaning, deodorizing, and disinfection for food service establishments, transportation terminals, manufacturing facilities, where housekeeping is of prime importance in controlling cross-contamination from treated surfaces. To disinfect inanimate, hard non porous surfaces add 4 ounces of this product per gallon of water. Apply solution with a mop, cloth, sponge, hand-pump trigger sprayer, or low pressure coarse sprayer so as to wet all surfaces thoroughly. Allow to remain wet for 10 minutes, then remove excess liquid. For sprayer applications, spray 6-8 inches from surface, rub with brush, sponge or cloth. Calla 1452 meets the requirements of AMS 1452A, AMS 1453, and AMS 1530. It has EPA Reg. No. 1839-168-67026.

## Bird Strike: (Concentrate)

**Calla 7127** is called out in the Boeing instructions for *Avian Flu - External Cleaning Procedure Following a Bird Strike*. Calla 7127, when used on environmental, inanimate hard surfaces at 3.5 ounces of this product per 4.5 gallons of water exhibits effective virucidal activity against Influenza A<sub>2</sub>/Japan (representative of the common flu virus), Herpes Simplex Type 1 (causative agent of fever blisters), Herpes Simplex Type 2 (genital disease), Vaccinia virus (representative of the pox virus group), and Avian Influenza A/Turkey/Wisconsin (causative agent of an acute avian lower respiratory tract infection). Treated surfaces must remain wet for 10 minutes. Calla 7127 has passed Boeing D6-17487, Boeing D6-7127. It has EPA Reg. No. 1839-173-67026.

## Wide Range Efficacy: (Concentrate)

**Calla 1000** may be used as a disinfectant in airlines terminals, rest rooms, bathrooms, cafeterias, and airplanes. Calla 1000 can be used to disinfect the following inanimate, hard, non-porous nonfood environmental surfaces: walls, floors, sink tops, toilet bowls, table tops, counters, countertops, appliances, tables, chairs, chair arms, telephones, bed frames, cabinets, bathtubs, and urinals. Add two ounces CALLA 1000 per gallon of water. Remove gross filth or heavy soil. For heavily soiled areas, a pre-cleaning step is required. Apply solution with a cloth, mop, sponge, hand pump trigger sprayer or other mechanical sprayer devices such that all surfaces remain wet for 10 minutes. Let air dry. Calla 1000, at 2 ounces per gallon, is effective against 133 different items (see label for details). It has EPA Reg. No. 61178-1-67026.



**ZIP-CHEM® AVIATION PRODUCTS**  
A DIVISION OF ANDPAK INC.

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Rev: 7226  
08/14/07

# Efficacy Comparison of the Zip-Chem Disinfectants

<b>Calla 1000</b>	<b>Calla 1452</b>	<b>Calla 7127</b>	<b>EnviroTru 1453</b>
<b>Dilution: 2 oz/gallon (15.625 ml/L)</b>	<b>4 oz/gallon (31.25 ml/L)</b>	<b>0.78 oz/gallon (6.09 ml/L)</b>	<b>As Received</b>
<b>Contact Time: 10 minutes (unless noted otherwise)</b>	<b>10 minutes</b>	<b>10 minutes</b>	<b>10 minutes (unless otherwise noted)</b>
Acinetobacter calcoaceticus var. anitratus (clinical isolate)			
Acinetobacter calcoaceticus var. lwoffii (clinical isolate)			
Actinobacillus pleuropneumoniae			
Actinomyces pyogenes			
Adenovirus Type 2			
Aspergillus candidus			
Aspergillus niger	Aspergillus niger		
Avian Influenza/Turkey/Wisconsin Virus		Avian Influenza/Turkey/Wisconsin Virus	
Bacillus cereus			
Bacteroides fragilis			
Bordetella bronchiseptica	Bordetella bronchiseptica		
	Bovine Rhinotracheitis		
Bovine Viral Diarrhea Virus (BVDV)			
Brevundimonas dimunita			
Burkholderia cepacia			
Burkholderia picketti			
Campylobacter jejuni			Campylobacter jejuni
Candida albicans	Candida albicans		
Canine Coronavirus			
Canine Distemper	Canine Distemper		
Canine Herpesvirus			
Chryseomonas luteola			
Corynebacterium ammoniagenes (Brevibacterium ammoniagenes)	Corynebacterium ammoniagenes		
Corynebacterium pseudotuberculosis			
Cryptococcus neoformans			
Cytomegalovirus			
Enterobacter aerogenes	Enterobacter aerogenes		
Enterobacter agglomerans (clinical isolate)			
Enterobacter agglomerans (Ampicillin and Sulfanilimide Resistant)			
	Enterobacter cloacae		
Enterobacter cloacae (clinical isolate)	Enterobacter cloacae (clinical isolate)		
Enterococcus faecalis	Enterococcus faecalis		
Enterococcus faecalis (clinical isolate)	Enterococcus faecalis (clinical isolate)		
Enterococcus faecalis (Vancomycin Resistant - VRE)			
Enterococcus faecium			
Enterobacter gergoviae			
Enterobacter liquefaciens			
Equine Herpesvirus			
Equine Influenza			

# Efficacy Comparison of the Zip-Chem Disinfectants

Calla 1000	Calla 1452	Calla 7127	EnviroTru 1453
Escherichia coli	Escherichia coli		Escherichia coli (5 minute contact time)
Escherichia coli (Urinary)			
Escherichia coli (Wound)	Escherichia coli (clinical isolate)		
Escherichia coli strain 0157:H7			Escherichia coli strain 0157:H7 (5 minute contact time)
Escherichia coli (Sulfa, Tetracycline, Ampicillin and Penicillin Resistant)			
Escherichia vulneris			
Feline Calicivirus			
Feline Infectious Peritonitis			
	Feline Leukemia		
	Feline Picornavirus		
Flavobacterium meningosepticum (clinical isolate)			
	Fusobacterium necrophorum		
Hafnia alvei (clinical isolate)			
Haemophilus influenzae			
Hepatitis B virus (HBV)	Hepatitis B virus (HBV)		
Hepatitis C virus (HCV)	Hepatitis C virus (HCV)		
Herpes Simplex Type 1	Herpes Simplex Type 1 (causative agent of fever blisters)	Herpes Simplex Type 1 (causative agent of fever blisters)	
Herpes Simplex Type 2	Herpes Simplex Type 2 (genital)	Herpes Simplex Type 2 (genital)	
HIV-1 (30 second contact time)	HIV-1		
	HIV-2		
Human Coronavirus			
Infectious Bovine Rhinotracheitis (IBR)			
Influenza A/Brazil Virus			
Influenza A /Victoria (H3N2) Virus			
Influenza A2-Asian Virus	Influenza A2/Hong Kong	Influenza A2/Japan	
Influenza B Virus (Allen strain)			
Influenza C Virus (Taylor strain)			
Klebsiella oxytoca			
Klebsiella oxytoca (Sulfanilimide and Tetracycline Resistant)			Klebsiella pneumonia
Klebsiella pneumoniae (clinical isolate)	Klebsiella pneumoniae subsp. pneumoniae		
Klebsiella pneumoniae			
Klebsiella pneumoniae type 1 (Cephalothin, Ampicillin, Sula and Tetracycline Resistant)			
	Lactobacillus casei subsp. rhamnosus		
			Legionella pneumophila
Listeria monocytogenes	Listeria monocytogenes		
Malassezia pachydermatis			
Measles Virus			
	Methicillin resistant Staphylococcus aureus (MRSA)		
Micrococcus luteus			
Morganella morganii (clinical isolate)			

# Efficacy Comparison of the Zip-Chem Disinfectants

Calla 1000	Calla 1452	Calla 7127	EnviroTru 1453
Morganella morganii (Penicillin and Tetracycline Resistant)			
Newcastle Disease Virus			
Parainfluenza type 1			
Pasteurella haemolytica			
	Pasteurella multocida		
Penicillium chermesinum			
Penicillium oxalicum			
Penicillium spinulosum			
Poliovirus Type 1 (Chat strain) 30 minutes contact time			
Porcine Parvovirus			
Porcine Respiratory & Reproductive Syndrome Virus (PRRSV)			
Porcine Rotavirus			
Proteus mirabilis (clinical isolate)	Proteus mirabilis ATCC 25933		
	Proteus mirabilis ATCC 9921		
Proteus vulgaris (clinical isolate)	Proteus vulgaris		
			Pseudomonas aeruginosa (5 minute contact time)
Pseudomonas aeruginosa	Pseudomonas aeruginosa PRD-10		
Pseudomonas aeruginosa (clinical isolate)			
Pseudomonas aeruginosa (Sulfa, Cefatoxime, Nitrofurantoin, Tetracycline, Amikacin, Ampicillin, Cephalothin and Bactine Resistant)			
Pseudomonas fluorescens			
Pseudomonas pseudomallei			
Pseudomonas putida			
Pseudomonas stutzeri			
Pseudorabies Virus	Pseudorabies Virus		
Respiratory Syncytial Virus			
Rhodococcus equi			
Rotavirus	Rotavirus		
Salmonella choleraesuis	Salmonella choleraesuis	Salmonella choleraesuis	
Salmonella choleraesuis (Antibiotic Resistant)			
	Salmonella choleraesuis subsp. choleraesuis serotype paratyphi B		
	Salmonella choleraesuis subsp. choleraesuis serotype pullorum		
Staphylococcus aureus (Toxic shock)	Salmonella choleraesuis subsp. choleraesuis serotype typhi		
	Salmonella choleraesuis subsp. choleraesuis serotype typhimurium		
			Salmonella enterica (5 minute contact time)
Salmonella schottmuelleri			
Salmonella typhi			Salmonella typhi (5 minute contact time)
Serratia marcescens	Serratia marcescens		

# Efficacy Comparison of the Zip-Chem Disinfectants

Calla 1000	Calla 1452	Calla 7127	EnviroTru 1453
Shigella dysenteriae	Shigella dysenteriae		
	Shigella flexneri Type 2b		
	Shigella sonnei		Shigella sonnei (5 minute contact time)
Sphingomonas paucimobilis			
Staphylococcus aureus	Staphylococcus aureus	Staphylococcus aureus	Staphylococcus aureus (Sanitizes in 5 minutes)
Staphylococcus aureus (clinical isolate)	Staphylococcus aureus (clinical isolate)		
	Staphylococcus aureus subsp. aureus		
Staphylococcus aureus (Methicillin-MRSA), Penicillin G, Ampicillin, Cefaeolin, Cefatoxime, Chloramphenicol, Ciprofloxacin, Clindimycin, Erythromycin, Oxacillin, Rifampin and Tetracycline Resistant, Vancomycin Resistant Intermediate- VISA)			
Staphylococcus auricularis			
Staphylococcus capitis			
	Staphylococcus epidermidis		
Staphylococcus epidermidis (clinical isolate)	Staphylococcus epidermidis (clinical isolate)		
Staphylococcus epidermidis (Drug Resistant)			
Staphylococcus hominis			
Staphylococcus saprophyticus			
Staphylococcus simulans			
Stenotrophomonas maltophilia			
Streptococcus equi var. equi			
Streptococcus equi var. zooepidermicus			
Streptococcus pneumoniae	Streptococcus pyogenes (Clinical - Flesh Eating Strain BIRD M3)		
Streptococcus haemolyticus			
Streptococcus pneumoniae (PRSP)			
Streptococcus pyogenes	Streptococcus pyogenes Group A		
Streptococcus salivarius			
Transmissible Gastroenteritis (TGE)			
T1 bacteriophage			
T4 bacteriophage			
Trichophyton mentagrophytes	Trichophyton mentagrophytes (Athlete's foot fungus)	Trichophyton mentagrophytes (Athlete's foot fungus)	
Ulocladium sp.			
Vaccinia Virus	Vaccinia Virus	Vaccinia Virus	
	Vancomycin intermediate resistant Staphylococcus aureus (VISA)		
	Vancomycin resistant Enterococcus faecalis (VRE)		
Vesicular Stomatitis Virus (VSV)			
	Xanthamomas maltophilia (clinical isolate)		
Yersinia enterocolitica			