



AIRCRAFT CLEANERS & DISINFECTANTS

CALLA® 1452 RTU



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Product description: NEUTRAL DISINFECTANT CLEANER

FEATURES:

- ▶ Calla® 1452 RTU eliminates **99.9%[^]** of the virus that causes **COVID-19^{***}** on hard non-porous surfaces in **1 minute!**

[^]when used according to disinfection directions

*****SARS-Related Coronavirus 2**

- ▶ Disinfectant
- ▶ Cleaner
- ▶ Deodorizer
- ▶ Fungicide (*Pathogenic Fungi*)
- ▶ Virucide
- ▶ Detergent
- ▶ Same as Calla® 1452 but in pre-metered packaging
- ▶ Mildewstat (hard, non-porous, and inanimate surfaces)

KEY BENEFITS:

- ▶ Does not stain aircraft interiors and plastics
- ▶ **Spray bottle** can be reused for many applications, saving time and money
- ▶ No flash point
- ▶ Provides effective cleaning, deodorizing, and disinfecting
- ▶ Phosphate Free



Rev: 20069H
02-09-2022

 For more information contact us :
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Product description: NEUTRAL DISINFECTANT CLEANER

KEY BENEFITS:

- ▶ Disinfects hard, non-porous, and inanimate environmental surfaces, such as glazed ceramic tile, plastic surfaces, floors, walls, metal surfaces, windows, toilets and sinks, mirrors, sealed granite, doorknobs, sealed fiberglass, chairs, desks, stainless steel surfaces, and glazed porcelain (**when used as directed**)

Calla® 1452 RTU qualifies for emerging viral pathogen claims per the EPA's 'Guidance to Registrants: Process for Making Claims Against Emerging Viral Pathogens not on EPA-Registered Disinfectant Labels' when used in accordance with the appropriate use directions indicated below:

Calla® 1452 RTU meets the criteria to make claims against certain emerging viral pathogens from the following viral categories:

- Enveloped viruses

SPECS:

- AMS 1452 (Disinfectant Aircraft, General Purpose) (Meets requirements)
- AMS 1453 (Disinfectant Cleaner For Aircraft Interior) (Meets requirements)
- AMS 1530B (Wipe-Off Cleaner) (Meets requirements)
- AMS 1550B (Cleaner for Interior) (Meets requirements)
- Boeing D6-7127 (Meets requirements)
- Boeing D6-17487 (Meets requirements)
- NAVAIR: 01-1A-509-2
- NSN: 6840-01-561-3126 (Starter Kit)
- NSN: 6840-01-687-1371 (Refill Cartridges)
- TM 1-1500-344-23-2
- T.O.: 1-1-691, 1C-130A-23, and 1C-5A-23-1

APPLICATIONS:

- ✓ To disinfect inanimate, hard, and non-porous surfaces, fill the **bottle** to the water fill line.
- ✓ Do not overfill the **bottle** because the **cartridge** will not empty if the **bottle** is overfilled



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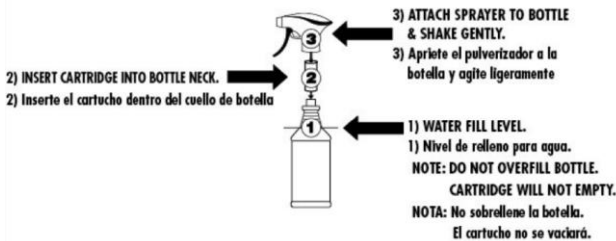
Product description: **NEUTRAL DISINFECTANT CLEANER**

APPLICATIONS:

- ✓ Insert the **0.25 fl oz (7.3 ml) cartridge** into the **bottle neck**.
- ✓ Attach the **sprayer** to the **bottle** and shake gently
- ✓ See visual demonstration below to see how it works.

Using the Calla 1452 RTU kit, you can re-use the spray bottle for many applications, saving money and time.

Visual Demonstration For Setting Up The Calla 1452 RTU Spray Bottle For Application:



<p>Step 1.) Fill Bottle To This Line With Water</p>	<p>Step 2.) Insert Cartridge Into Bottle Neck</p>	<p>Step 3.) Attach Sprayer To Bottle and Shake Gently</p>	<p>Step 4.) Spray Until Empty</p>	<p>Step 5.) Remove and Discard Empty Cartridge</p>	<p>Step 6.) Return To Step 1</p>

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Product description:

NEUTRAL DISINFECTANT CLEANER

APPLICATIONS:

- ✓ **Note:** Calla® 1452 RTU should not be used on food contact surfaces if food is expected to be served there immediately. If any surface needs to be disinfected prior to food being served there immediately, use AeroDis® 7127.

PHYSICAL PROPERTIES:

- ▶ **% Active:** 2.713%
- ▶ **Density:** 8.38 lbs/gal (1004 g/L)
- ▶ **Flash Point:** Not Flammable
- ▶ **pH:** 6.4

AVAILABLE PACK SIZES:

- ▶ Starter Kit (Comprised of 6 Calla® 1452 RTU 32 fl oz (946 ml) **Spray Bottles** and 6 **Pre-Metered Cartridges** Per Case)-103793
- ▶ Case of 24 Calla® 1452 RTU Refill Cartridges-103795
- ▶ Case of 4 each Gallon (4 each of 3.8L) Bottles (Calla® 1452 Concentrate)-009450
- ▶ 5 Gallon (18.9 L) Pails (Calla® 1452 Concentrate)-007247



Note: When you run out of Calla® 1452 RTU spray cartridges, purchase a new box of cartridges and keep the Calla® 1452 RTU Spray Bottles which can be reused continuously! Do not throw out the empty Calla® 1452 RTU Spray Bottles!



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VIRUCIDAL DATA:

Test Method: U.S. E.P.A. Pesticide Assessment Guidelines, Subdivision G: Product Performance, Section 91-2 (f), and Section 91-30, (d), (e), November 1982.

Protocols for Testing the Efficacy of Disinfectants against Hepatitis B Virus (HBV) (EPA, Federal Register, Vol. 65, No. 166, 8/25/2000, p. 51828).

Protocol for Testing Disinfectants against Hepatitis C Virus using Bovine Viral Diarrhea Virus as approved by the U.S. EPA on August 15, 2002.

Test Conditions: 10 minute contact time, 5% organic soil load, sterile glass petri dishes, 400 ppm hard water, 21-24°C (70°F-75°F) exposure temperature, and 4 fl oz/gal dilution (118 ml/3.8L).

Results:

Test Organism	Sample	Titer Reduction	Contact Time
*SARS-Related Coronavirus 2 [SARS-CoV-2] [USA-WA1/2020] [BEI NR-52281]	A B	-	1 minute
*Avian Influenza A Virus (H3N2) (Avian Ressortant) (ATCC VR-2072)	A B	≥4.25 log ₁₀ ≥4.25 log ₁₀	10 minutes
*Avian Influenza Virus, Type A (Turkey/WIS/66) (H9N2)	A B	≥4.0 log ₁₀ ≥4.0 log ₁₀	10 minutes
*Bovine Rhinotracheitis, strain LA (ATCC VR-188)	A B	≥5.0 log ₁₀ ≥5.0 log ₁₀	10 minutes
‡Bovine Viral Diarrhea Virus (BVDV)	A B	5.9 log ₁₀ 5.9 log ₁₀	10 minutes
*Canine Distemper Virus, strain Lederle (ATCC VR-128)	A B	≥6.25 log ₁₀ ≥6.25 log ₁₀	10 minutes
Feline Leukemia (VR-717)	-	-	10 minutes
*Feline Picornavirus, strain FRV (ATCC VR-649)	A B	≥4.25 log ₁₀ ≥4.25 log ₁₀	10 minutes
†Hepatitis B Virus (HBV) (Duck Hepatitis B Virus-DHBV)	A B	4.5 log ₁₀ 4.7 log ₁₀	10 minutes
‡Hepatitis C Virus (HCV) (Bovine Viral Diarrhea Virus-BVDV)	A B	5.9 log ₁₀ 5.9 log ₁₀	10 minutes
*Herpes Simplex Type 1 (ATCC VR-260)	A B	≥5.0 log ₁₀ ≥5.0 log ₁₀	10 minutes



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VIRUCIDAL DATA:

Test Organism	Sample	Titer Reduction	Contact Time
*Herpes Simplex Type 2 (ATCC VR-734)	A B	≥6.0 log ₁₀ ≥6.0 log ₁₀	10 minutes
*Human Immunodeficiency Virus, HTLV-IIIRF, strain of HIV-1 (associated with AIDS)	A B	≥3.5 log ₁₀ ≥3.5 log ₁₀	10 minutes
*Human Immunodeficiency Virus type 2 (HIV-2), strain CBL-20	A B	≥3.25 log ₁₀ ≥3.25 log ₁₀	10 minutes
*Human Coronavirus (ATCC VR-740, strain 229E)	A B	≥3.0 log ₁₀ ≥3.0 log ₁₀	10 minutes
*Influenza A2, strain Hong Kong (ATCC VR-544)	A B	≥4.25 log ₁₀ ≥4.25 log ₁₀	10 minutes
*Paramyxovirus (Mumps) (ATCC VR-1438)	A B	≥3.0 log ₁₀ ≥3.0 log ₁₀	10 minutes
*Porcine Respiratory & Reproductive Syndrome Virus (PRRSV), strain NVSL	A B	≥5.0 log ₁₀ ≥5.0 log ₁₀	10 minutes
*Pseudorabies, strain Aujeszky (ATCC VR-135)	A B	≥5.25 log ₁₀ ≥5.25 log ₁₀	10 minutes
*Rabies Virus (attenuated CDC ERA strain)	A B	3.0 log ₁₀ 3.0 log ₁₀	10 minutes
*Rotavirus, strain SA-11 (ATCC VR-899)	A B	4.5 log ₁₀ 4.5 log ₁₀	10 minutes
*SARS Associated Coronavirus (ZeptoMetrix)	A B	3.03 log ₁₀ 3.03 log ₁₀	10 minutes
*Vaccinia, strain WR (ATCC VR-119)	A B	≥5.5 log ₁₀ ≥5.5 log ₁₀	10 minutes

Conclusions: Under the conditions of this investigation, **Calla® 1452 RTU** demonstrated virucidal activity against *SARS-Related Coronavirus 2 (SARS-CoV-2)*, *Avian Influenza A Virus (H3N2)*, *Avian Influenza Virus, Type A (H9N2)*, *Bovine Rhinotracheitis*, *Bovine Viral Diarrhea Virus (BVDV)*, *Canine Distemper Virus*, *Feline Leukemia (VR-717)*, *Feline Picornavirus*, *Hepatitis B Virus (HBV)*, *Hepatitis C Virus (HCV)*, *Herpes Simplex Type 1*, *Herpes Simplex Type 2*, *Human Coronavirus*, *Human Immunodeficiency Virus (HIV-1)*, *Human Immunodeficiency Virus Type 2 (HIV-2)*, *Influenza A2*, *Paramyxovirus (Mumps)*, *Porcine Respiratory & Reproductive Syndrome Virus (PRRSV)*, *Pseudorabies*, *Rabies Virus*, *Rotavirus*, *SARS Associated Coronavirus*, and *Vaccinia*, according to criteria established by the U.S. Environmental Protection Agency for registration and labeling of a disinfectant product as a virucide.



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DISINFECTION DATA:

Test Method: AOAC Use Dilution

Test Conditions: 5% organic soil load, 10 minute contact time, stainless steel carrier substrates, 400 ppm hard water, 20°C (68°F) exposure temperature, and 4 fl oz/gal (118 ml/3.8L) dilution.

Results:

Test Organism	No. of Carriers			
	Sample	Exposed	Positive	Contact Time
Ampicillin resistant Acinetobacter baumannii (clinical isolate-Fairfax Hospital CI 02001)	A	10	0	10 minutes
	B	10	0	
Bactrim resistant Acinetobacter baumannii (clinical isolate-Fairfax Hospital CI 02001)	A	10	0	10 minutes
	B	10	0	
Bordetella bronchiseptica (ATCC 31437)	A	10	0	10 minutes
	B	10	0	
Cefazolin resistant Acinetobacter baumannii (clinical isolate-Fairfax Hospital CI 02001)	A	10	0	10 minutes
	B	10	0	
Ceftazdime resistant Acinetobacter baumannii (clinical isolate-Fairfax Hospital CI 02001)	A	10	0	10 minutes
	B	10	0	
Ceftriaxone resistant Acinetobacter baumannii (clinical isolate-Fairfax Hospital CI 02001)	A	10	0	10 minutes
	B	10	0	
Ciprofloxacin resistant Acinetobacter baumannii (clinical isolate-Fairfax Hospital CI 02001)	A	10	0	10 minutes
	B	10	0	
Community Associated Methicillin Resistant Staphylococcus aureus (CA-MRSA) (NRS 123, Genotype USA400)	A	10	0	10 minutes
	B	10	0	
	C	10	0	
Community Associated Methicillin Resistant Staphylococcus aureus (CA-MRSA) (NRS 384, Genotype USA300)	A	10	0	10 minutes
	B	10	0	
	C	10	0	
Corynebacterium ammoniagenes (ATCC 6871)	A	10	0	10 minutes
	B	10	0	
Enterobacter aerogenes (ATCC 13048)	A	10	0	10 minutes
	B	10	0	
Enterobacter cloacae (ATCC 23355)	A	10	0	10 minutes
	B	10	0	



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DISINFECTION DATA:

Test Organism	No. of Carriers			
	Sample	Exposed	Positive	Contact Time
Enterobacter cloacae (clinical isolate)	A	10	0	10 minutes
	B	10	0	
Enterococcus faecalis (ATCC 19433)	A	10	0	10 minutes
	B	10	0	
Enterococcus faecalis (clinical isolate)	A	10	0	10 minutes
	B	10	0	
Escherichia coli (ATCC 11229)	A	10	0	10 minutes
	B	10	0	
Escherichia coli (clinical isolate)	A	10	0	10 minutes
	B	10	0	
Escherichia coli O111:H8 (BAA-184)	-	-	-	10 minutes
Fusobacterium necrophorum (ATCC 27852)	A	10	0	10 minutes
	B	10	0	
Gentamicin resistant Acinetobacter baumannii (clinical isolate-Fairfax Hospital CI 02001)	A	10	0	10 minutes
	B	10	0	
Klebsiella pneumoniae subsp. pneumoniae (ATCC 13883)	A	10	0	10 minutes
	B	10	0	
Lactobacillus casei subsp. rhamnosus (ATCC 7469)	A	10	0	10 minutes
	B	10	0	
Levofloxacin resistant Acinetobacter baumannii (clinical isolate-Fairfax Hospital CI 02001)	A	10	0	10 minutes
	B	10	0	
Listeria monocytogenes (ATCC 35152)	A	10	0	10 minutes
	B	10	0	
Methicillin Resistant Staphylococcus aureus (MRSA) (ATCC 33592)	A	10	0	10 minutes
	B	10	0	
Pasteurella multocida (ATCC 7707)	A	10	0	10 minutes
	B	10	0	
Proteus mirabilis (ATCC 9921)	A	10	0	10 minutes
	B	10	0	
Proteus mirabilis (ATCC 25933)	A	10	0	10 minutes
	B	10	0	
Proteus vulgaris (ATCC 13315)	A	10	0	10 minutes
	B	10	0	



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DISINFECTION DATA:

Test Organism	No. of Carriers			
	Sample	Exposed	Positive	Contact Time
Pseudomonas aeruginosa PRD-10 (ATCC 15442)	A	60	0	10 minutes
	B	60	0	
	C	60	1	
Salmonella enterica subsp. enterica serotype choleraesuis (ATCC 10708)	A	60	0	10 minutes
	B	60	0	
	C	60	1	
Salmonella enterica subsp. enterica serotype paratyphi B (ATCC 8759)	A	10	0	10 minutes
	B	10	0	
Salmonella enterica subsp. enterica serotype pullorum (ATCC 9120)	A	10	0	10 minutes
	B	10	0	
Salmonella enterica subsp. enterica serotype typhi (ATCC 6539)	A	10	0	10 minutes
	B	10	0	
Salmonella enterica subsp. enterica serotype typhimurium (ATCC 14028)	A	10	0	10 minutes
	B	10	0	
Salmonella enteritidis subsp. Enterica serotype enteritidis (ATCC 13076)	A	10	0	10 minutes
	B	10	0	
Serratia marcescens (ATCC 8100)	A	10	0	10 minutes
	B	10	0	
Shigella dysenteriae (ATCC 12180)	A	10	0	10 minutes
	B	10	0	
Shigella flexneri Type 2b (ATCC 12022)	A	10	0	10 minutes
	B	10	0	
Shigella sonnei (ATCC 25931)	A	10	0	10 minutes
	B	10	0	
Staphylococcus aureus (ATCC 6538)	A	60	1	10 minutes
	B	60	1	
	C	60	1	
Staphylococcus aureus subsp. aureus (ATCC 33592)	A	10	0	10 minutes
	B	10	0	
Staphylococcus aureus (clinical isolate)	A	10	0	10 minutes
	B	10	0	
Staphylococcus epidermidis (ATCC 29641)	A	10	0	10 minutes
	B	10	0	



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DISINFECTION DATA:

Test Organism	No. of Carriers			
	Sample	Exposed	Positive	Contact Time
Staphylococcus epidermidis (clinical isolate)	A B	10 10	0 0	10 minutes
Streptococcus pyogenes Group A (ATCC 19615)	A B	10 10	0 0	10 minutes
Streptococcus pyogenes (clinical-flesh eating strain, BIRD M3)	A B	10 10	0 0	10 minutes
Tobramycin resistant Acinetobacter baumannii (clinical isolate-Fairfax Hospital CI 02001)	A B	10 10	0 0	10 minutes
Vancomycin Resistant Enterococcus faecalis (VRE) (ATCC 51575)	A B	10 10	0 0	10 minutes
Vancomycin Intermediate Resistant Staphylococcus aureus (VISA) (HIP-5836)	A B	10 10	0 0	10 minutes
Xanthomonas maltophilia (clinical isolate)	A B	10 10	0 0	10 minutes
Xanthomonas axonopodis pathovar citri @ a dilution ratio of 1:13.5 (2000 ppm active quaternary)	A B	10 10	0 0	-

Conclusions: Under the conditions of this investigation, **Calla® 1452 RTU** demonstrated disinfectant activity against *Staphylococcus aureus*, *Salmonella (choleraesuis) enterica*, *Pseudomonas aeruginosa PRD-10*, *Ampicillin resistant Acinetobacter baumannii*, *Bactrim resistant Acinetobacter baumannii*, *Bordetella bronchiseptica*, *Cefazolin resistant Acinetobacter baumannii*, *Ceftazidime resistant Acinetobacter baumannii*, *Ceftriaxone resistant Acinetobacter baumannii*, *Ciprofloxacin resistant Acinetobacter baumannii*, *Community Associated Methicillin Resistant Staphylococcus aureus (CAMRSA) (NRS 123, Genotype USA400)*, *Community Associated Methicillin Resistant Staphylococcus aureus (CA-MRSA) (NRS384, Genotype USA300)*, *Corynebacterium ammoniagenes*, *Enterobacter aerogenes*, *Enterobacter cloacae*, *Enterococcus faecalis*, *Escherichia coli*, *Fusobacterium necrophorum*, *Gentamicin resistant Acinetobacter baumannii*, *Levofloxacin resistant Acinetobacter baumannii*, *Klebsiella pneumonia subsp. pneumoniae*, *Lactobacillus casei subsp. rhamnosus*, *Listeria monocytogenes*, *Methicillin Resistant Staphylococcus aureus (MRSA)*, *Pasteurella multocida*, *Proteus mirabilis (ATCC 9921)*, *Proteus mirabilis (ATCC 25933)*, *Proteus vulgaris*, *Salmonella (paratyphi B) enterica*, *Salmonella (pullorum) enterica*, *Salmonella (typhi) enterica*, *Salmonella (typhimurium) enterica*, *Salmonella (enteritidis) enterica*, *Serratia marcescens*, *Shigella dysenteriae*, *Shigella flexneri Type 2b*, *Shigella sonnei*, *Staphylococcus aureus subsp. aureus*, *Staphylococcus epidermidis*, *Streptococcus pyogenes Group A*, *Streptococcus pyogenes (clinical flesh eating strain, BIRD M3)*, *Tobramycin resistant Acinetobacter baumannii*, *Vancomycin Resistant Enterococcus faecalis (VRE)*, *Vancomycin Intermediate Resistant Staphylococcus aureus (VISA)*, and *Xanthomonas maltophilia* according to criteria established by the U.S. Environmental Protection Agency for registration and labeling of a disinfectant product as a bactericide. At a dilution ratio of **1:13.5 (2000 ppm active quaternary)**, **Calla® 1452 RTU** demonstrated disinfectant activity against *Xanthomonas axonopodis pathovar citri (Citrus Canker Disease)*.



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Product description: NEUTRAL DISINFECTANT CLEANER

FUNGICIDAL DATA:

Test Method: AOAC Fungicidal Activity of Disinfectants

Test Conditions: 5% organic soil load, 20°C (68°F) exposure temperature, 200 ppm hard water, and 4 fl oz/gal (118 ml/3.8L) dilution.

Results:

Test Organism	Sample	Exposure Time (min.) vs. Growth			
		5 Min	10 Min	15 Min	Contact Time
Trichophyton interdigitale (formerly mentagrophytes Trichophyton) (ATCC 9533) (Athletes Foot Fungus) (a cause of ringworm) (a cause of ringworm of the foot)	A	+	0	0	10 minutes
	B	+	0	0	
Candida albicans (ATCC 10231)	A	0	0	0	10 minutes
	B	0	0	0	

Conclusions: Under the conditions of this investigation, Calla® 1452 RTU demonstrated fungicidal activity against *Trichophyton mentagrophytes* and *Candida albicans*, according to criteria established by the U.S. Environmental Protection Agency for registration and labeling of a disinfectant product as a fungicide.

MILDEW FUNGISTATIC DATA:

Test Method: Hard Surface Mildew Fungistatic Test

Test Organism: *Aspergillus niger* (ATCC 6275)

Test Conditions: 400 ppm hard water, ceramic tile carriers, and 4 fl oz/gal (118 ml/3.8L) dilution.

Contact Time For *Aspergillus niger* (ATCC 6275): 10 minutes

Results:

Sample	No. of Exposed Tiles	No. of Tiles Showing Growth
A	10	0
B	10	0
Control	10	10

Conclusion: Under the conditions of this investigation, Calla® 1452 RTU demonstrated fungistatic activity against *Aspergillus niger*, according to criteria established by the U.S. Environmental Protection Agency for registration and labeling of a disinfectant product as a fungistat.