Dr. Germ

Scientific evidence

Effective disinfectant

Germicide within one minute

Are Super Bugs so Difficult to Kill?

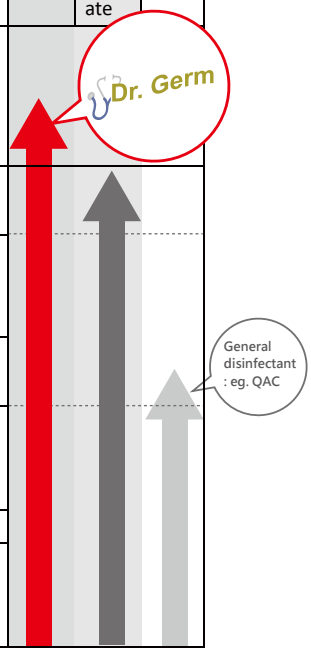
Paper published in "J Testing Quality Assurance"

2020; 9(2):55-65.

It was reported that "Dr. Germ: a Multi-function Cleaner with Moisturizer" can effectively kill methicillin-resistant *Staphylococcus aureus*, vancomycin-resistant enterococci, Pan-drug resistant *Acinetobacter baumannii*, Extended spectrum beta-lactamase-producing *Escherichia coli*, multidrug-resistant *Pseudomonas aeruginosa*, *Salmonella typhimurium*, *Neisseria gonorrhoeae*, *Mycobacterium tuberculosis*, *Candida albicans*, *Bacillus subtilis*, and *Clostridium perfringens*.

60 mL 4/Package

Category	Example	Disinfection		
		High	Intermediate	Low
Bacterial spores	*Clostridium*, *Bacillus*			
Mycobacterium	*Mycobacterium tuberculosis*			
Non-enveloped / lipid virus (hydrophilic)	Parvoviruses, Enterovirus, Norovirus			
Fungus	*Candida albicans*, *Aspergillus*			
Gram-negative bacteria	*E. coli*, *Pseudomonas aeruginosa*, *Acinetobacter baumannii*, *Neisseria gonorrhoeae*			
Gram-positive bacteria	*Enterococcus*, *Staphylococcus aureus*			
Envelope / lipid-containing virus (lipophilic)	Coronavirus (COVID-19), HIV, HSV, RSV, Influenza virus			



"Dr. Germ, a Multi-function Cleaner with Moisturizer" is a Highly Effective Disinfectant

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Abstract

The antimicrobial activity of "Dr. Germ, a multi-function cleaner with moisturizer" provided by the Creative LifeScience Co. (hereafter referred to as the test substance) was evaluated. The test was performed according to the guidelines of DGHM (German Society for Hygiene and Microbiology) on the following categories of microorganisms: (i) drug resistant species/strains, including methicillin-resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant *Enterococcus* (VRE), pandrug-resistant *Acinetobacter baumannii* (PDR-AB), *Escherichia coli* ESBLs strains, and multidrug-resistant *Pseudomonas aeruginosa* (MDR-PA); (ii) frank pathogens, including *Salmonella typhimurium*, *Neisseria gonorrhoeae*, and *Mycobacterium tuberculosis*; (iii) fungi, including *Candida albicans* and *Aspergillus brasiliensis*; and (iv) spore-forming bacteria, including *Bacillus subtilis* and *Clostridium perfringens*. During the test, 1 mL suspension (10^8 CFUs /mL) of each microorganism was mixed with 9 mL of the test substance and incubated for 1 minute, followed by culture. The results showed that the test substance had 100% antimicrobial activity against MRSA, VRE, PDR-AB, Escherichia coli ESBLs strains, MDR-PA, *Salmonella typhimurium*, *Neisseria gonorrhoeae*, *Mycobacterium tuberculosis*, and *Candida albicans*. It also had a bactericidal rate of more than 99% on spore-forming bacteria, *Bacillus subtilis* and *Clostridium perfringens* and an excellent disinfection effect on *Aspergillus brasiliensis*. Based on the Spaulding classification for device disinfection, the test substance was classified as a high-level disinfectant. The acute oral toxicity of the test substance was assessed by tube feeding each test rat (Sprague Dawley) with 5 mL/kg body weight of the test substance and then observing for 14 days. Results showed that all test rats survived without any abnormal clinical symptoms and loss of body weight. Taken together, we conclude that "Dr. Germ, a multi-function cleaner with moisturizer" is a highly effective disinfectant with no acute oral toxicity.

【From J Testing Auality Assurance 2020; 9(2):55-65.】

Scientific evidence

Evaluation paper published in the Journal of Testing and Quality Assurance 2020;9(2):55-65.

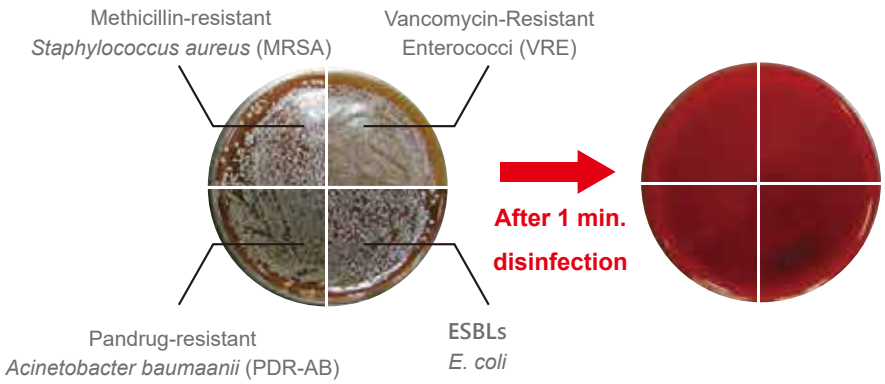
Effective disinfectant

Germicidal rate :

Methicillin-resistant ***Staphylococcus aureus*** reaches 100%
Vancomycin-resistant ***Enterococcus*** reaches 100%
Pandrug-resistant ***Acinetobacter baumannii*** reaches 100%
Multidrug-resistant ***Pseudomonas aeruginosa*** reaches 100%
Escherichia coli ESBLs strains reaches 100%
Salmonella typhimurium reaches 100%
Neisseria gonorrhoeae reaches 100%
Mycobacterium tuberculosis reaches 100%
Candida albicans reaches 100%
Bacillus subtilis reaches 99.2%
Clostridium perfringens reaches 99.4%

Germicide within one minute

It will be effective in one minute after spraying (see Table 1).

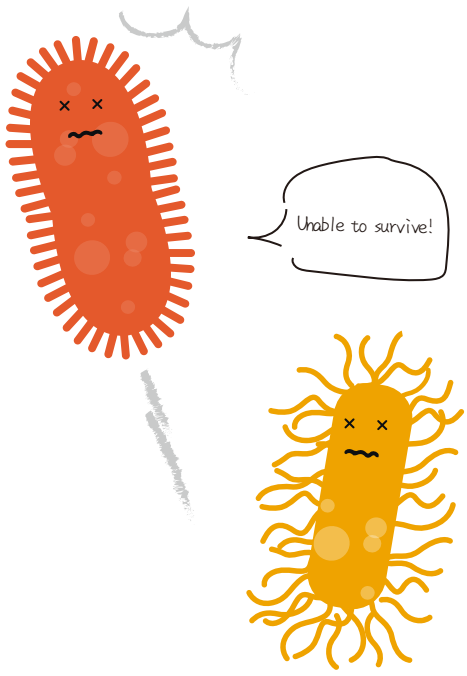


Multiple application

Table 1: Germicidal results of "Dr. Germ" after 1 minute of action with different drug-resistant and pathogenic microorganisms*

Test strain	Inoculation amount (CFU/ml)	Experimental group		Control group
		Bacterial residue (CFU/ml)	Sterilization rate %	Bacterial residue (CFU/ml)
Methicillin-resistant *Staphylococcus aureus* (MRSA)	1.2×10^4	0	100 %	1.3×10^4
Vancomycin-Resistant Enterococci (VRE)	7.7×10^4	0	100 %	7.5×10^4
Pandrug-resistant *Acinetobacter baumaanii* (PDR-AB)	3.1×10^4	0	100 %	3.0×10^4
ESBLs *Escherichia coli*	1.2×10^4	0	100 %	1.2×10^4
multidrug-resistant *Pseudomonas aeruginosa* (MDR-PA)	4.5×10^4	0	100 %	4.6×10^4
Salmonella typhimurium	6.8×10^4	0	100 %	6.3×10^4
Neisseria gonorrhoeae	approximately 1.8×10^5	0	100 %	1.2×10^5
Mycobacterium tuberculosis	1.5×10^8	0	100 %	TNTC
Candida albicans	2.1×10^4	0	100 %	1.9×10^4
Bacillus subtilis	4.7×10^4	540	99.2 %	6.8×10^4
Clostridium perfringens	2.5×10^4	40	99.4 %	6.9×10^4

*In addition, it also exhibits excellent bactericidal activity against mold (the test fungus is Aspergillus brasiliensis).
Taken from the Journal of Testing and Quality Assurance 2020; 9(2):55-65.



Manufacturer: Creative Microbiologicals, Ltd.
Address: No. 21, Wugong 5th Road, Xinzhuang District, New Taipei City
Phone: +886-2-22981823 Website: www.cmp-micro.com

*This product is a general product, suitable for environmental surface disinfection.