HAKUZO MEDICAL

DOUBLE BLOCK

SURFACE DISINFECTION WIPES

impregnated with
EPA-certified
Quaternary Ammonium Salt

environmental surface wipes
made in Japan

SUMMARY OF CONTENTS

ENVIRONMENTAL SURFACE WIPES

What are Environmental Surfaces?

What is WHO recommendation for cleaning and disinfection of Environmental Surfaces in context of COVID-19?*

What are the different disinfecting methods as per CDC?**

What is Hakuzo Double Block surface disinfection wipes?

*WHO World Health Organization
**CDC Center for Disease Control

WHAT ARE ENVIRONMENTAL SURFACES?

HEALTHCARE VS NON-HEALTHCARE

environmental surfaces in healthcare setting include furniture and other fixed items inside and outside patient rooms and bathrooms such as :

- tables, chairs, walls & light switches
- computer peripherals
- electronic equipment
- sinks and toilets
- surfaces of non-critical medical equipment, ie. blood pressure cuffs, stethoscopes, wheelchair, incubator

WHAT ARE ENVIRONMENTAL SURFACES?

HEALTHCARE VS **NON-HEALTHCARE**

environmental surfaces in non-healthcare setting include:

- sinks and toilets
- electronics (touch screens and controls)
- furniture and other fixed items such as countertops, stairway rails, floors and walls

WHAT ARE ENVIRONMENTAL SURFACES?

Cleaning and disinfection of environmental surfaces in the context of COVID-19

Interim guidance

15 May 2020

World Health Organization

Background

Coronavirus disease 2019 (COVID-19) is a respiratory infection caused by SARS-CoV-2 (COVID-19 virus). The COVID-19 virus is transmitted mainly through close physical contact and respiratory droplet[illegible] transmission is possible during aer[illegible]ures.[1] At time of publicati[illegible] in other coronavirus[illegible] had not been co[illegible] reduce any role that fomites [illegible] surfaces[illegible]ission of COVID-19 in health-care[3] and [illegible] docun[illegible]ttings.[4]

cont[illegible]

wi[illegible]ironmental surfaces in health-care settings inclu[illegible]

i[illegible]niture and other fixed items inside and outside of patien[illegible]

[illegible]ooms and bathrooms, such as tables, chairs, walls, light [illegible]witches and computer peripherals, electronic equipment, [illegible]inks, toilets as well as the surfaces of non-critical medical equipment, such as blood pressure cuffs, stethoscopes, wheelchairs and incubators.[5] In non-healthcare settings, [illegible]nvironmental surfaces include sinks and toilets, electronics [illegible]ouch screens and controls), furniture and other fixed items, [illegible]ch as counter tops, stairway rails, floors and walls.

w[illegible]

en[illegible]ironmental surfaces are more likely to be contaminate[illegible]

(tou[illegible] the COVID-19 virus in health-care settings wh[illegible]

such a[illegible]edical procedures are performed.[6-8] Therefore,[illegible]

Environm[illegible]pecially where patients with COVID-19 a[illegible]

with the CO[illegible]e properly cleaned and disinfecte[illegible]

certain medical pro[illegible] Similarly, this ad[illegible]se

surfaces, especially wher[illegible]ng

cared for, must be properly cleaned and disi[illegible]nt

further transmission. Similarly, this advice [illegible]o

alternative settings for isolation of persons with C[illegible]

experiencing uncomplicated and mild illness, [illegible]

households and non-traditional facilities.[9]

Transmission of the COVID-19 virus has been linked [illegible]

contact between individuals within closed settings, s[illegible]

households, health facilities, assisted living and reside[illegible]

institution environments.[10] In addition, community se[illegible]

outside of health-care settings have been found vulnera[illegible]

COVID-19 transmission events including publicly acces[illegible]

buildings, faith-based community centres, markets, transportation, and business settings.[10,11] Although the precise role of fomite transmission and necessity for disinfection practices outside of health-care environments is currently unknown, infection prevention and control principles designed to mitigate the spread of pathogens in health-care settings, including cleaning and disinfection practices, have been adapted in this guidance document so that they can be applied in non-health care setting environments.* In all settings, including those where cleaning and disinfection are [illegible]ot possible on a regular basis due to resource limitations, [illegible]quent hand washing and avoiding touching the face should [illegible]he primary prevention approaches to reduce any potential [illegible]mission associated with surface contamination.[21]

[illegible]ther coronaviruses, SARS-CoV-2 is an enveloped virus [illegible]a fragile outer lipid envelope that makes it more [illegible]ptible to disinfectants compared to non-enveloped [illegible]s such as rotavirus, norovirus and poliovirus.[22] Studies [illegible] evaluated the persistence of the COVID-19 virus on [illegible]rent surfaces. One study found that the COVID-19 virus [illegible]ained viable up to 1 day on cloth and wood, up to 2 days [illegible] glass, 4 days on stainless steel and plastic, and up to 7 days [illegible] the outer layer of a medical mask.[23] Another study found that the COVID-19 virus survived 4 hours on copper, 24 hours on cardboard and up to 72 hours on plastic and stainless steel.[24] The COVID-19 virus also survives in a wide range of pH values and ambient temperatures but is susceptible to heat and standard disinfection methods.[23] These studies, however, were conducted under laboratory conditions in absence of cleaning and disinfection practices and should be interpreted with caution in the real-world environment.

The purpose of this document is to provide guidance on the cleaning and disinfection of environmental surfaces in the context of COVID-19.

This guidance is intended for health-care professionals, public health professionals and health authorities that are developing and implementing policies and standard operating [illegible]rocedures (SOP) on the cleaning and disinfection of [illegible]vironmental surfaces in the context of COVID-19. †

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WHAT IS WHO RECOMMENDATION FOR CLEANING AND DINSFECTION OF ENVIRONMENTAL SURFACES IN CONTEXT OF COVID-19?

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Spraying Disinfectants and Other No-Touch Methods

What is effective way of cleaning and disinfecting environmental surfaces?

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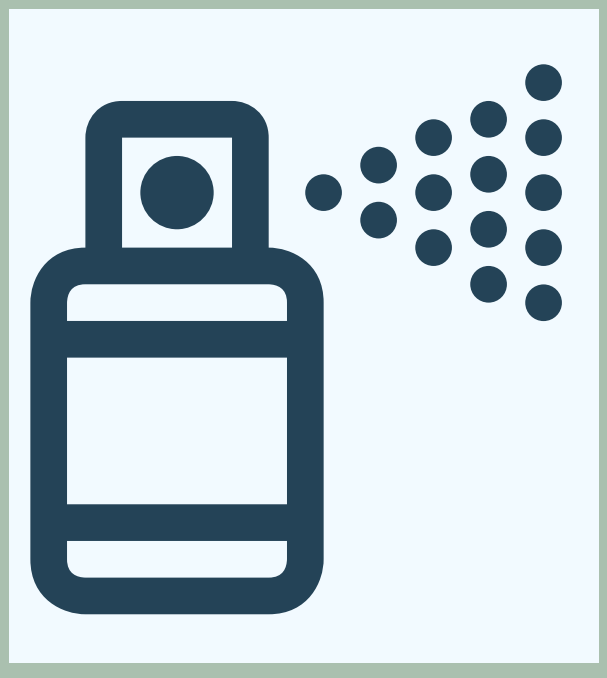
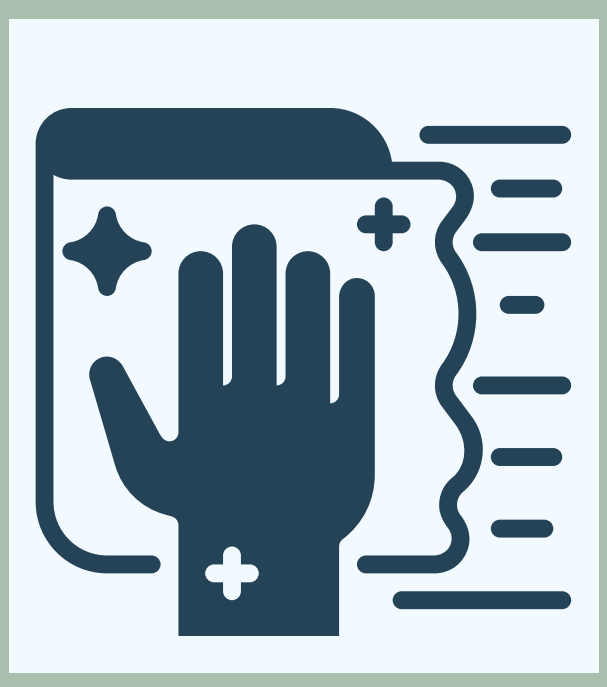
SPRAYING VS WIPING

WHAT IS MORE EFFECTIVE?



In indoor spaces, routine application of disinfectants to environmental surfaces by spraying or fogging (fumigation or misting) is NOT recommended for COVID-19

Spraying may not be effective in removing organic material; may miss surfaces shielded by objects, folded fabrics or surfaces with intricate design



If disinfectants are to be applied, this should be done with cloth or wipe that has been soaked in disinfectant

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SPRAYING VS WIPING

ommendation of 0.1% (1000 ppm) in the context of -19 is a conservative concentration that will inactivate majority of other pathogens that may be present in th-care setting. However, for blood and body fluids ills (i.e. more than about 10mL) a concentration of 000 ppm) is recommended.[26]

lorite is rapidly inactivated in the presence of organic ; therefore, regardless of the concentration used, it is nt to first clean surfaces thoroughly with soap and detergent using mechanical action such as scrubbing on. High concentrations of chlorine can lead to n of metal and irritation of skin or mucous membrane, on to potential side-effects related to chlorine smell erable people such as people with asthma.[32]

cial sodium hypochlorite products with different concentration may be readily available for use in a of settings. In Europe and North America chlorine ations in commercially available products vary 4% and 6%.[34] Concentration may also vary according nal regulations and manufacturers' formulations. To the desired concentration, it is necessary to prepare hypochlorite by diluting the basic aqueous soluti iven proportion of clean, non-turbid water to prod desired concentration (Table 1).[34]

1. Calculation of sodium hypoc rations

rine in liquid sodium hypochlorite / % − 1 = Total parts of water for each part orite.
% in liquid sodium hypochlorite/ 0.5% cl -1 = 9 parts of water for each part so orite

mulations of hypochlorite (powder or granules) may vailable in a variety of settings. Solid formulations are as concentrated, high-test hypochlorite (HTH) (65- l as chlorine or calcium hypochlorite powder (35%). To the final desired concentration, the weight (in grams) of hypochlorite that should be added per litre of water can mined based on the calculation in Table 2.

. Calculation of chlorine solutions from calcium orite

rine desired / % chlorine in hypochlorite powder or] × 1 000 = grams of calcium hypochlorite powder litre of water.
% chlorine desired / 35% in hypochlorite powder] × 0.0143 × 1 000 = 14.3
e, you must dissolve 14.3 grams of calcium

solutions are most stable at high pH (>9) but the disinfectant properties of chlorine are stronger at lower pH (<8). Solutions of 0.5% and 0.05% chlorine have been shown to be stable for more than 30 days at temperatures of 25-35°C when the pH is above 9. However, chlorine solutions at lower pH have much shorter shelf lives.[36] Thus, ideally chlorine solutions should be freshly prepared every day. If this is not possible and the chlorine solution must be used for several days, they should be tested daily to ensure that the chlorine concentration is maintained. Several tests can be used to gauge chlorine strength, and these include chemical titration, chemical spectrometry or colorimetry, colour wheels and test strips, in order of decreasing accuracy.[37]

Spraying disinfectants and other no-touch methods

In indo tion of disinfectants to en result in risks to the eyes, ging (also known and the resulting health effects. for COVID- g of certain chemicals, such as formaldehyo primary d agents or quaternary ammonium compounds minants commended due to adverse health effects on worker aying facilities where these methods have been utilized.[4] kin or Spraying environmental surfaces in both health-care and non health care settings such as patient households with disinfectants may not be effective in removing organic material and may miss surfaces shielded by objects, folded fabrics or surfaces with intricate designs. If disinfectants are to be applied, this should be done with a cloth or wipe that has been soaked in disinfectant.

Some countries have approved no-touch technologies for t applying chemical disinfectants (e.g. vaporized hydroge eroxide) in health-care settings such as fogging-ty lications.[42] Furthermore, devices using UV irradia for been designed for health-care settings. However, s rogen ng-type may affect the efficacy of UV irradiation, irradiation m the UV device; irradiation dose owever, several factor : lamp placement; lamp ation, including distance fro ose, wavelength and exposure time; lamp place e; and duration of use. Other factors include dire t line of sight from the device; room size and tensity; and reflection.[5] Notably, these technologi d for use in health-care settings are used durin l cleaning (cleaning a room after a patient has harged or transferred), when rooms are unoccupi afety of staff and patients. These technologies sup not replace the need for manual cleaning proce g a no-touch disinfection technology, envi es must be cleaned manually first by brushi o remove organic matter.[44]

NO-TOUCH METHODS

FOGGING AND UV IRRADIATION

Some countries have approved no-touch technologies for applying chemical disinfectants in healthcare settings such as fogging-type applications

Factors affecting efficacy of UV radiation: distance from UV device, irradiation dose, wavelength and exposure, lamp placement, lamp age, duration of use

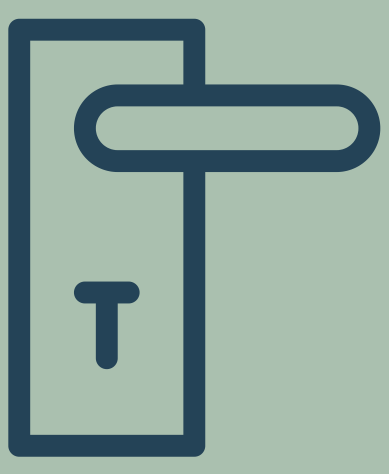
Above supplement but do not replace need for manual cleaning procedures. If using no-touch disinfection method, surfaces must be cleaned first by brushing or scrubbing to remove organic matter

Non-Healthcare Settings Environment

REDUCE POTENTIAL FOR CONTAMINATION

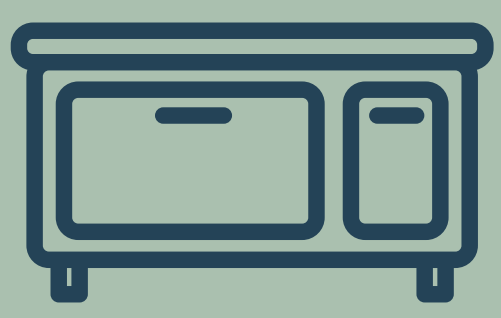
home
workplaces
schools
gyms
food sector
faith-based community
funerary services
accommodation sector
aviation sector
prison
other places of detention

Non-Healthcare Settings Environment

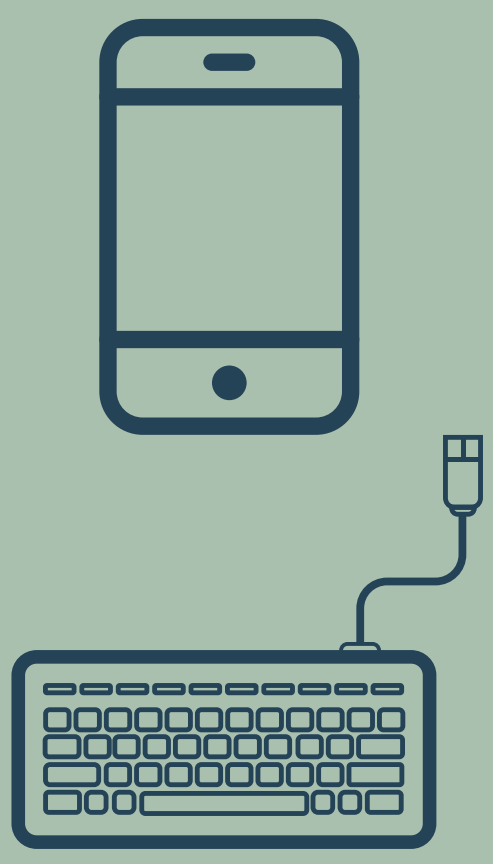


IDENTIFY HIGH-TOUCH SURFACES

for priority disinfection



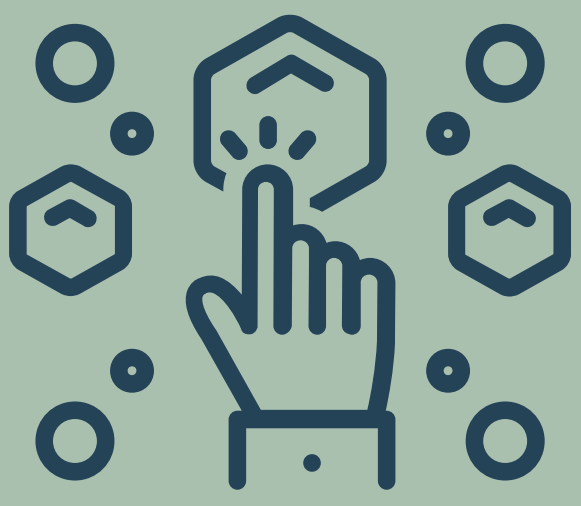
door and window handles
kitchen
food preparation areas
countertops
bathroom surfaces
toilets and taps
work surfaces



touchscreen personal devices

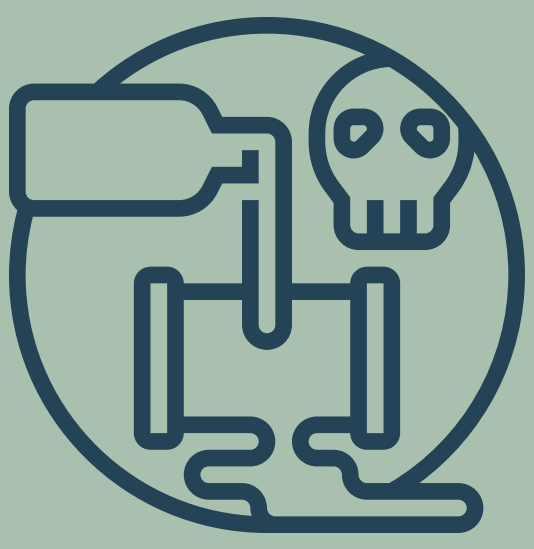
personal computer keyboards

Non-Healthcare Settings Environment



CAREFUL SELECTION

disinfectant and its concentration must be carefully selected to:



avoid damaging surfaces

avoid or minimize toxic effects on household members or users of public space

NON-HEALTHCARE SETTINGS ENVIRONMENT

Contact time of a minimum of 1 minute is recommended for these disinfectants[21] or as recommended by the manufacturers. Other disinfectants can be considered, provided the manufacturers recommend them for the targeted microorganisms, especially enveloped viruses. Manufacturers' r... of chemical ... well as for avoiding m... sidered when preparing, dilutin... hould always ... a disi... ant.

Non-health care settings environment

There is no evidence for equating the risk of fomite transmission of the COVID-19 virus in the hospital setting to any environment outside of hospitals. However, it is still important to reduce potential for COVID-19 virus contamination in non-healthcare settings, such as in the home, office, schools, gyms or restaurants. High-touch surfaces in these non-health care settings should be identified for priority disinfection. These include door and window handles, kitchen and food preparation areas, counter tops, bathroom surfaces, toilets and taps, touchscreen personal devices, personal computer keyboards, and work surfaces. The disinfectant and its concentration should be carefully selected to avoid damaging surfaces and to avoid or minimize toxic effects on ...ousehold members or users of public spaces.

F... environmental cleaning techniques and cle... sh... to rei... s should be followed as far as possible. S... non-healt... s be cleaned with soap and water o... ay be used at a ... matter first, followed h... 000 ppm).[5] Alternatively, alcohol with 70%-90% concentration may be used for surface disinfection.

Personal safety when preparing and using disinfectants

Cleaners should wear adequate personal protective equipment (PPE) and be trained to use it safely. When working in places where suspected or confirmed COVID-19 patients are present, or where screening, triage and clinical consultations are carried out, cleaners should wear the following PPE: gown, heavy duty gloves, medical mask, eye protection (if ...isk of splash from organic material or chemicals), and boots ... closed work shoes.[48]

...nfectant solutions should always be prepared in well-...lated areas. Avoid combining disinfectants, both during ...ration and usage, as such mixtures cause respiratory ...on and can release potentially fatal gases, in particular ...combined with hypochlorite solutions.

...nel preparing or using disinfectants in health care ...s require specific PPE, due to the high concentration of ...ectants used in these facilities and the longer exposure ...o the disinfectants during the workday.[49] Thus, PPE for ...aring or using disinfectants in health care settings ...udes uniforms with long-sleeves, closed work shoes, ...wns and/or impermeable aprons, rubber gloves, medical ...ask, and eye protection (preferably face shield)[5].

In non-health care settings, resource limitations permitting, where disinfectants are being prepared and used, the minimum recommended PPE is rubber gloves, impermeable aprons and closed shoes.[34] Eye protection and medical masks may also be needed to protect against chemicals in use or if there is a risk of splashing.

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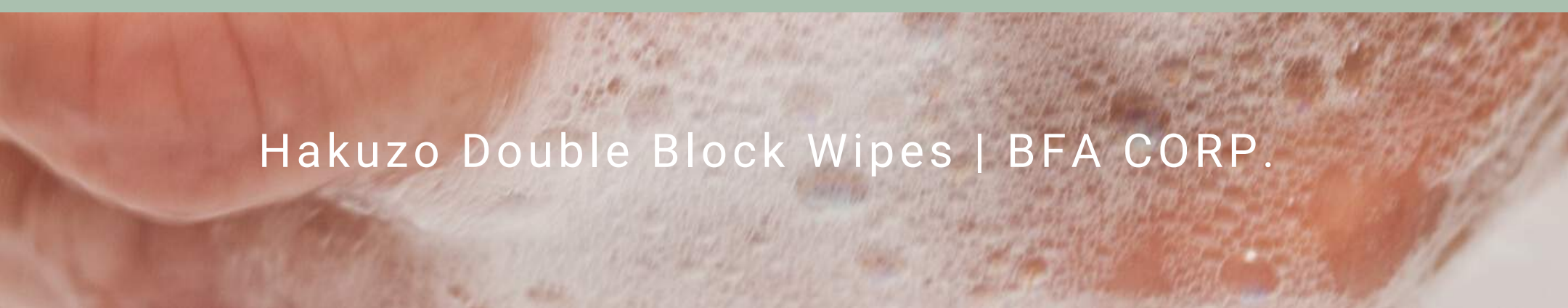
INFECTION CONTROL AND PREVENTION PRINCIPLES

HEALTHCARE AND NON-HEALTHCARE ENVIRONMENT

In all settings, including those where cleaning and disinfection are not possible on a regular basis due to resource limitations, **frequent hand washing and avoiding touching the face** should be the primary prevention approaches to reduce any potential transmission associated with surface contamination



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WHAT ARE THE DIFFERENT DISINFECTING METHODS PER CDC?

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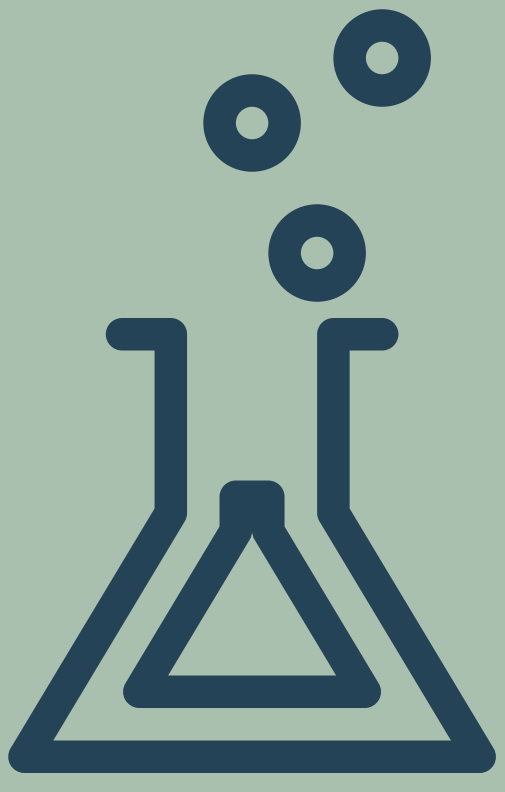
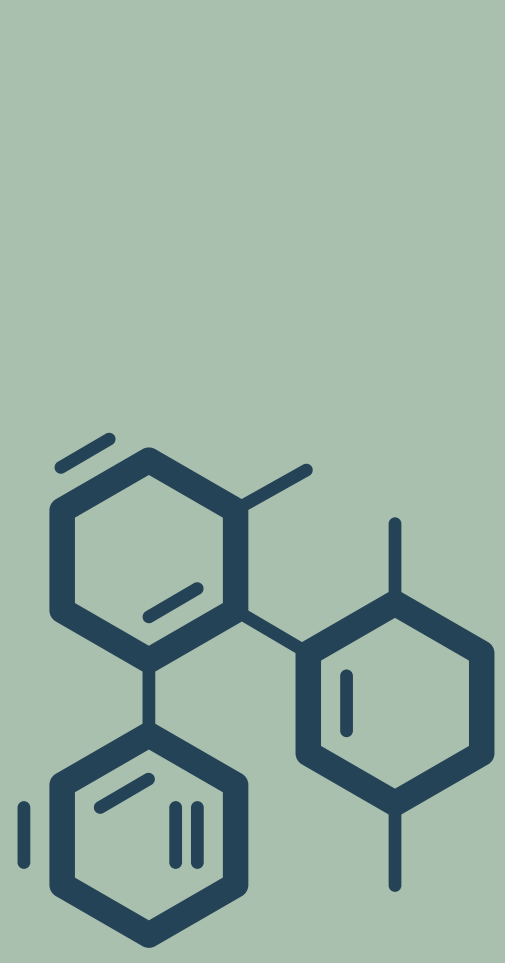
Methods of Disinfection



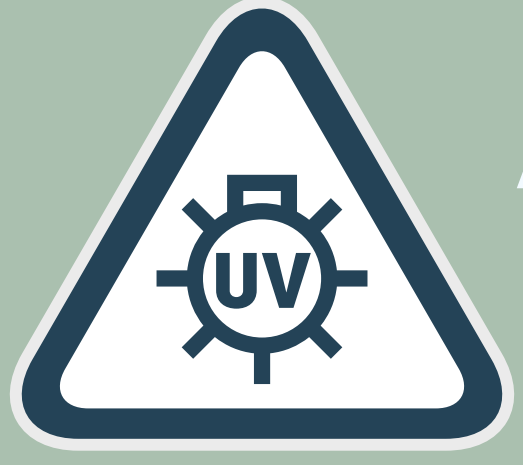


CHEMICAL DISINFECTANTS

- Alcohol
- Chlorine and chlorine compounds
- Formaldehyde
- Glutaraldehyde
- Hydrogen peroxide
- Iodophors
- Ortho-phthalaldehyde (OPA)
- Peracetic acid
- Peracetic acid and hydrogen peroxide
- Phenolics
- Quaternary ammonium compounds

www.cdc.gov/infectioncontrol/guidelines/disinfection/disinfection-methods/index.html

Methods of Disinfection



MISCELLANEOUS INACTIVATING AGENTS

- Other germicides
- Metals as microbicides
- Ultraviolet radiation
- Pasteurization
- Flushing- and washer-disinfectors

www.cdc.gov/infectioncontrol/guidelines/disinfection/disinfection-methods/index.html

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Wipe surfaces to clean and disinfect.

Contaminated Surfaces

- Seal back after use, finish using as soon as possible after opening
- Do not use on human body
- Do not flush
- Do not use on leather goods
- Stop using immediately if symptoms persist
- Before using on a machine, read the machine cleaning manual

- Please keep out of children's reach.
- Please keep out of hot and humid environment.
- Avoid direct sunlight and store in clean environment.

GS1-128

(01)04958286064154

MADE IN JAPAN

Hakuzo Double Block Wipes | BFA CORP.

HAKUZO DOUBLE BLOCK WIPES

SURFACE DISINFECTANT WIPES

EFFECTIVE DISINFECTANT

Active Ingredient: Dialkyl Dimethyl Ammonium Chloride (Quaternary Ammonium Salt), Benzalkonium Chloride (Quaternary Ammonium Salt)

EFFECTIVE IN CLEANING

EPA-certified disinfectant with high disinfection effect for environmental maintenance and cleaning

SAFE FOR USERS

solution is neutral at pH7.7 and does not damage environmental surface

EFFECTIVE AGAINST BACTERIA + VIRUSES

VIABLE BACTERIA

Staphylococcus aureus, Staphylococcus epidermidis, MRSA, Escherichia coli, Serratia bacteria, enterococci, VRE bacteria, Legionella, Salmonella, multi-drug resistant Klebsiella pneumoniae, etc.

FUNGUS

Aspergillus, Trichophyton, Candida albicans

VIRUSES

Hepatitis B virus, C type hepatitis virus, adenovirus, AIDS virus, RS virus, rotavirus, avian influenza virus (H5N1), influenza virus (A HK type), etc.

CLEANING EFFECT

JOINT RESEARCH WITH OSAKA UNIVERSITY HOSPITAL

Experiment on deproteinization degree of Ethanol disinfectant soaked wipes and cationic surfactant soaked wipes

Osaka University Hospital Central Supply Department:
Atsushi Saito, Ryo Fushimi, Masaki Takashina

Hakuzo Medical Corporation:
Shunji Hitotsubashi, Yasuhito Nakamura

{Purpose} In the previous experiment, we concluded that surfactant can remove protein effectively. As for this time, a wet cloth impregnated with nonionic surfactant that can reduce surface tension and wet cloth impregnated with cationic surfactant dialkyl dimethyl ammonium chloride have been used to test the deproteinization degree.
{Materials and method} Apply blood on a stainless steel test piece (75 x 25mm), wipe with different force and calculate the degree of deproteinization with the wet cloths that are impregnated with different solutions.
{Results} Wet cloth impregnated with nonionic surfactant that can reduce surface tension could wipe off the blood stain completely after 10 wipes. Wet cloth impregnated with cationic surfactant dialkyl dimethyl ammonium chloride could get rid of the blod stain within 5 wipes. When the force is reduced to one quarter (200g), blood stains can be got rid after 6 to 10 wipes.
{Summary} Although alcohol can denature protein, by adding nonionic surfactant that can reduce surface tension can help to get rid of protein. wet cloth impregnated with cationic surfactant dialkyl dimethyl ammonium chloride can clean protein easily. From now on we will study on the effectiveness on cleaning microorganism.

CONCLUSION: SUPERIOR CLEANING EFFECT

as presented during 28th Annual Meeting
of Japanese Society of Environmental Infections

COMPARATIVE NOTES

HAKUZO DOUBLE BLOCK WIPES VS LEADING DISINFECTANT WIPES

	Hakuzo Double Block	Leading Brand
active ingredient	Dialkyl Dimethyl Ammonium Chloride, Benzalkonium Chloride	Ethylene glycol monohexyl ether, dimethyl ethylbenzyl ammonium chloride, dimethyl benzyl ammonium chloride
material	rayon non-woven	non-woven
size	6 x 12 inches 150 x 300 mm	6 x 7 inches 150 x 160 mm
country manufactured	JAPAN	USA

Instructions For Use (IFU)

WIPE SURFACES TO CLEAN AND DISINFECT

tables, door knobs, bed frames, etc.
contaminated surfaces

Hakuzo Double Block Wipes | BFA CORP.

PRECAUTIONS

USE PRODUCT ACCORDING TO IFU

Seal back after use. Finish using as soon as possible after opening

Do not use on human body

Do not flush

Do not use on leather goods

Stop using immediately if symptoms persist

Before using on a machine, read the machine cleaning manual

size and material	15cm x 30cm | 30 pulls rayon non-woven fabric
active ingredient	Quaternary Ammonium Salt
order quantity	per piece per case of 36

QUESTIONS?
COMMENTS?

LET US KNOW!

EMAIL

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sales@bfacorp.co

PHONE

0917 574 0878

WEBSITE

www.cottontailnook.com

www.bfacorp.co

“

LIKE OTHER CORONAVIRUSES

SARS-CoV-2 is an enveloped virus with a fragile outer lipid envelope that makes it more susceptible to disinfectants compared to non-enveloped viruses such as rotavirus, norovirus and poliovirus.

Rutala, W.A., Weber, D.J., 2019. Best practices for disinfection of noncritical environmental surfaces and equipment in healthcare facilities: A bundle approach. Am J Infect Control 47, A96-A105.

what's in your bag?