

# Membership Q & A Session Summary

## Disinfection - Myths & Mist with Dr. Andrew Kemp PhD

DOCERE  
PURGARE



# BICSc

THE BRITISH INSTITUTE OF CLEANING SCIENCE

### 1. WHAT IS THE EXACT DIFFERENCE BETWEEN SANITISING, DISINFECTION AND STERILISING?

There is no strict definition for sanitising as it is a combination of more than one of the following;

Cleaning is the removal of visible soil (e.g. organic and inorganic material) from objects and surfaces.

Decontamination is a process subtly different from "cleaning", as it concentrates on removing pathogenic microorganisms from objects and surfaces, so they are safe to handle, use, or discard.

Disinfection describes a process that eliminates many or all pathogenic microorganisms, except bacterial spores, on inanimate objects.

Sterilisation describes a process that destroys or eliminates all forms of microbial life.

### 2. WHY SHOULDN'T WE USE A DISINFECTANT WHILST CLEANING AT ALL TIMES AS SOME DISINFECTANTS ARE NO MORE IN COST?

As long as the stewardship of the disinfectant used is correct, no reason at all. Stewardship being – correct concentration/dilution in the correct amount (if specified).

### 3. IS THE CLAIM THAT 30-DAY CHEMICALS STAY ON THE SURFACE CORRECT?

Some products do have up to 30 days efficacy; however, it is impossible to guarantee that as they will wear away over time, a bit like the heel on a shoe. So, whilst the chemistry allows continued efficacy, the physical use of the product may not.

### 4. WHAT HAPPENS WHEN THESE SURFACES ARE TOUCHED BY AN INFECTED PERSON?

When the skin comes into direct contact with surfaces, there is always the potential to leave oils on the surface. These oils will almost always get in the way of the active chemical on the surface, so whilst you may not need to use a disinfectant again for a period of time, you will need to use a detergent and regularly clean the surfaces touched. These types of chemicals are not the panacea that the marketing leaflets would have you believe, they are efficacious, but they do still need other interventions to remain so.

### 5. IS THERE A PRODUCT THAT WILL PROTECT SURFACES FOR UP TO 30 DAYS AND IF SO, IS THIS FULL PROTECTION FROM ANY VIRUS/BACTERIA?

Nothing that is available in the UK at the moment has ever been proven to kill for 30 days.

### 6. I HAVE BEEN OFFERED PRODUCTS THAT HAVE BEEN CLAIMED TO BE AN EFFECTIVE DISINFECTANT ON A SURFACE FOR UP TO 30 DAYS?

Clearly, this would offer a significant saving to clients on frequency disinfection of touchpoints, etc., but the question is what will affect this claim and how valid is it.

As per my previous answer, they will still need to pay for those surfaces to be cleaned during the 30 days, so I'm not entirely sure of the financial saving. There could well be an increase in efficacy over the 30 days though, dependent on the product used and the quality of the application, pre-treatment regime.

### 7. MY UNDERSTANDING IS THAT THERE ARE NO KNOWN PRODUCTS VALIDATED TO KILL COVID-19 AS IT IS A NOVEL VIRUS. HOWEVER, READING YOUR LATEST DOWNLOAD "THE NEW NORMAL" IT IMPLIES OTHERWISE. IF THAT IS THE CASE, WHAT ARE THE PRODUCTS? THERE IS A MENTION ON THE USE OF VIRUCIDES IN THE DOCUMENT THAT IS BEING REFERRED TO, THIS IS FROM A BEST PRACTICE POINT OF VIEW.

To date, there is nothing available in the UK or inside Europe that has been proven directly against COVID-19, so it is all just a best guess – would you bet your life on a best guess? There are products available outside the EU that have been proven to inactivate the COVID-19 virus in 10 seconds and completely destroy it in 60 seconds with a 100% kill. What that means is that all the damage is done in the first 10 seconds, it just takes the extra 50 seconds for the test to show complete destruction that started in the first 10 seconds.

### 8. IS FOGGING EFFECTIVE AGAINST COVID-19?

Fogging is simply a method of delivering chemicals to an area. It depends on the chemical as to whether it is effective or not.

### 9. CAN DISINFECTANTS GET THE REQUIRED KILL RATE BY JUST SPRAYING WITHOUT CLEANING BEFORE?

It is possible, but less likely to do so, as oils fats, dust, lint and other soiling could get in the way.

### 10. DOES THE MICRON SIZE OF THE SPRAY AFFECT THE DRYING TIME/EFFICACY OF THE PRODUCT?

In short yes, the smaller the micron size droplet, the shorter the drying time. However, the constituents of the chemistry chosen is also a big factor. Different chemicals will dry at different rates.

# Membership Q & A Session Summary

## Disinfection - Myths & Mist

### with Dr. Andrew Kemp PhD

DOCERE  
PURGARE



# BICSc

THE BRITISH INSTITUTE OF CLEANING SCIENCE

#### 11. WHAT DOES THE EN14476 ACCREDITATION REALLY MEAN?

In my view, not a lot. EN standard tests are in effect a set recipe for testing efficacy against microbes. The different numbers of the test refer to the test methodology. Most are over 30 years old and are no longer relevant with much more accurate tests being available. They need updating radically and to use the latest most sensitive test methods. Even those that have been updated have been done in the simplest ways, almost as if someone asked "what is the least we can do to this to say we have updated it" and then they have done that. EN 14476 is a viricidal test methodology using a highly inaccurate test method; you simply choose the virus you wish to test your disinfectant against. It is not done on skin, so it is not appropriate as a test for hand sanitisers, although many will make claims using it.

#### 12. DOES EN1276 APPLY IN ANY WAY TO COVID-19?

No, this is a test for bacteria.

#### 13. WHAT IS THE EN THAT BRINGS TOTAL DISINFECTION AGAINST COVID-19?

There isn't one. The most appropriate test for COVID-19 is the Kemp-Hirschman test (yes, that is me, I had to get my name on something!).

#### 14. WHO ACCREDITS PRODUCTS TO EN CLASSIFICATIONS SUCH AS EN 1276 AND EN 14476?

Only commercial labs do these types of tests, they are simply not done by clinical or academic labs because they are seen to be of low value.

#### 15. WHAT IS THE BEST WAY TO APPLY DISINFECTANT, SHOULD YOU SPRAY AND LEAVE TO DRY, OR WIPE AFTER APPLICATION? WHEN DISINFECTING TOUCHPOINTS, IS IT BEST TO SPRAY THE CLOTH FIRST?

It depends on the disinfectant chemistry, follow the manufacturer's recommendations (they should have tested).

#### 16. IS 2 STAGE CLEANING AND DISINFECTION STILL THE STANDARD? OR IS THERE A 1 STEP PROCESS?

2 stage cleaning is currently best practice. I am under NDA with a company whose products I tested recently, which will make a 1 stage process more acceptable in future if/when they launch. Until then, it has to be 2 stages.

#### 17. WHAT'S THE BEST PRACTICE? CHEMICAL DISINFECTION? THERMAL DISINFECTION? OTHER? OR A MIX?

There are lots of factors affecting this answer. It depends what you are trying to disinfect, for how long you want the effect to last, how long you have to clean/disinfect (time restraints on access to areas can be key). It all boils down to the risk assessment.

#### 18. WHAT IS THE DEFINITION OF "DEEP CLEANING" AND IS THERE A METHODOLOGY?

Take a look at the BICSc guide, it's all in there. This is available on the Newsfeed.

#### 19. IF A PRODUCT IS SAID TO HAVE RESIDUAL KILL PROPERTIES, WHAT DOES THIS ACTUALLY MEAN? IS THERE A % OF KILL THAT IT HAS TO REACH TO HAVE THIS LABEL?

Unfortunately, there is no legal requirement for this claim at the moment. Residual can be 10 seconds after application or 30 days. Does it stay on and effective after subsequent cleaning? That is the real question for products claiming more than a few minutes.

#### 20. SHOULD DISINFECTANT BE RINSED/WIPED OFF A SURFACE ONCE IT HAS BEEN GIVEN ITS APPROPRIATE DWELL TIME (CONTACT WITH THE SURFACE TIME)?

There are two critical times for any chemical disinfectant, "contact time" and "kill time", so I assume you mean one of these? If so, the simple answer is no, they shouldn't be wiped off as you will artificially reduce either the contact time or potentially not allow enough kill time.

**Contact time** - Time a disinfectant is active and in direct contact with the surface or item to be disinfected.

**Kill time** - Time a disinfectant takes to kill an organism including spores

Don't be fooled by marketing nonsense on any products. An example would be a claim such as "alcohol gel "X" kills virus "Y". Looking further into it, you discover that it is an EN14476 test, so it's not a test done on skin, plus that it takes more than a minute to achieve the required minimum kill (kill time). As the alcohol evaporates rapidly on the skin, its kill effect is usually for only around 35 to 40 seconds (contact time). Therefore, you would have to dip hands into alcohol for over a minute to get the required contact time to achieve the required kill time. As this is not possible, it would be considered an incorrect claim or blatant lie if you are politically incorrect as I am (although it is rarely ever challenged or put right by the regulators).

# Membership Q & A Session Summary

## Disinfection - Myths & Mist with Dr. Andrew Kemp PhD

DOCERE  
PURGARE



**BICS**  
THE BRITISH INSTITUTE OF CLEANING SCIENCE

### 21. HOW OFTEN SHOULD DISINFECTION TAKE PLACE?

That depends on the risk assessment and the chemicals used.

### 22. WE SEE A WEALTH OF “SPECIALISTS” APPEARING OFFERING DISINFECTANT FOGGING, MISTING AND ELECTROSTATIC SPRAYING. COVERAGE OFFERS A HUGE BENEFIT, BUT WHAT ARE THE OTHER BENEFITS OF USING SUCH SYSTEMS AND WHAT ARE THE PROS AND CONS OF EACH?

If you would like to bring your car to my home, I will be happy to fix your brakes for you. Mates rates cheapest in town. If you choose to do so, I'll have a good go, but make sure you have fully comprehensive insurance and an up to date life assurance policy.

### 23. I HAVE BEEN MADE AWARE OF SCHOOLS MAKING UP SPRAY BOTTLES OF SODIUM HYPOCHLORITE (BLEACH) FOR TEACHERS TO USE AS TERMINAL DISINFECTION, THERE APPEARS TO BE CONFLICTING ADVICE ON THIS, WHAT ARE YOUR THOUGHTS?

Unless the teachers in question have been trained adequately and signed off as being capable of working as a cleaning operative, I would suggest that whilst they are doing that, the cleaning operative can take a class or two.

### 24. HAND SANITISERS COME IN VARIOUS FORMATS, SOME WITH ALCOHOL AND SOME WITHOUT. IN AREAS WITH NO ACCESS TO ADEQUATE WASHING FACILITIES, WHAT IS THE PREFERRED OR MOST EFFECTIVE SANITISER TO BE USING?

This is a great question, and I hope we get to answering it. ANYONE applying an alcohol gel should make sure they wash their hands within 15 minutes. If you know you are not able to do so, don't use one, after approximately 15 minutes they will not only change the type of bacteria to a potentially more dangerous species, there will be a lot more of them on your skin to infect you. The other hand sanitiser chemistries on the market have varying levels of efficacy and over varying lengths of time. The only chemistry tested directly against COVID-19 is again not available for use in Europe.

### 25. A GENERIC QUESTION IN REGARD TO COVID-19, IN RESPONSE TO GOVERNMENT ADVICE WHY IT BECAME COMPULSORY TO WEAR FACE MASKS WHEN USING PUBLIC TRANSPORT FROM THE 15TH JUNE. WHAT IS SO SIGNIFICANT ABOUT THAT DATE THAN ANY OTHER SINCE THE END OF MARCH?

Another great question that I hope we get to. I am not privy to the data the government scientific advisors have. From EVERYTHING I have seen to date, there is no reason for that date, and no, they probably don't make any difference. Again, is it money talking (mask manufacturers money)?