

SPRAY-"WAIT"-WIPE[®]

The Appropriate Method to Apply Liquid Disinfectants to Medical & Surgical Surfaces - by Jack Wagner

There is an old saying, "Anything worth doing, is worth doing right".

Too many advertisements and even journal articles regarding the use of disinfection products on medical and surgical equipment surfaces inappropriately refer to following a "spray-wipe-spray" method of application as opposed to the more appropriate "spray-wait-wipe" method.

Why anybody would want to leave a chemical, whose very purpose is to kill living cells, on a surface that will come into direct contact with the skin and clothing of both patients and staff is certainly a mystery. Some have been led to believe there is some magical residual antimicrobial action left on surfaces when the liquid is left to air dry. Actually, there is no known, or reported residual antimicrobial action of disinfectants when left to dry on surfaces. In fact, some disinfectants cause deleterious effects to surfaces and materials especially when left to dry on surfaces. In addition, certain chemicals such as chlorine bleach solutions have been found to impregnate themselves into plastic ophthalmic devices only to reconstitute when in contact with wet eye tissue causing chemical burns to the cornea. The effects of residual chemical have also been known to cause damage to surfaces including the clouding or crazing of plastics and the rusting and corrosion of certain metals. Once the chemical disinfection process is completed, the solution should be thoroughly removed leaving no residue. While some disinfectants require thorough rinsing, others may be simply wiped off using a dry clean absorbent paper or cloth towel. Always follow label instructions.

The Method and Rationale

SPRAY

The disinfection process mandates thoroughly wetting the target surface. Application of the disinfectant from a spray bottle provides the best method, bar none, of applying the disinfectant for several reasons. First, it always provides fresh, unadulterated solution to the target area. Second, it forces the solution to seep into the cracks, crevices and corners where soil and microorganisms can hide and flush them out in to the open. Third, spraying can provide as much solution as one needs to thoroughly drench the area with a sufficient amount of the solution to keep the surface wet long enough to do the job. Pre-moistened, commercially available wipes may be suited for damp dusting and low-level sanitation, but certainly not for the stringent cleaning and disinfection required of medical and surgical surfaces and equipment simply because they do not and cannot penetrate into areas that a pressurized spray from a spray-bottle can reach. Not to mention, their inability to keep the surface wet long enough to provide adequate disinfection of the surface. The use of bucket prepared solutions with rags and sponges present the same problems as the pre-moistened wipes. In addition to not knowing when the solution has expended itself as the rag or sponge introduces soil into the bucket this presents an additional problem by adding foreign matter, whether solid or liquid, into the solution. This results in a compromised solution that reduces the potency of the disinfecting solution with each ensuing immersion.

WAIT

The next step after thoroughly wetting the surface is to wait. Keep in mind that all disinfectant formulas have a specified

waiting time before the solution can be rinsed or removed from the surface. The specified waiting time is important because it takes time for the solution to soak through and penetrate the cell wall of the microorganisms. Killing living microorganisms with a chemical disinfectant takes time. Actual contact times can require anywhere from 3 minutes to 10 minutes depending on the individual product. The appropriate wait time for any disinfectant is the longest time listed on its label for any one of the listed microorganisms. For example; if a particular product label states that it kills mycobacterium tuberculosis (tb) in 5 minutes and requires 10 minutes to kill staphylococcus, then the minimum required contact time for that particular disinfect is the full 10 minutes! Always look for the longest time listed on the label and use that time as the minimum required contact time for disinfection to take place.

WIPE

At the end of the waiting time, the solution along with all of the newly killed microorganisms should be thoroughly wiped off of the surface with a clean cloth or paper towel. Never leave chemical disinfectants on surfaces to air dry; wipe them off.

CONCLUSION: Reading and following the EPA registered label of the disinfectant and using the Spray-Wait-Wipe method is the best way to guarantee the germicide will accomplish your objective in providing a clean and disinfected surface and one that will not harbor disease-causing microorganisms that can be spread to patients, staff members and carried home to family members.

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