



## IMPERVIOUS, ANTIMICROBIAL, DISPOSABLE TABLE SHEETS PROVIDE THE WIDEST RANGE OF PROTECTION AGAINST COVID-19



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Debbie is a certified infection prevention professional (ICP) with many years of experience in the acute care setting. She currently works as an infection preventionist at Boston Medical Center, a large teaching facility located in downtown Boston. Debbie has been on the frontlines of the COVID-19 battle and has seen firsthand how important collaboration, teamwork, and communication is in creating a safe and protective environment for both patients and staff.

## BACKGROUND

As an ICP working on the front line during the COVID-19 pandemic, infection control priorities have heightened the need for effective procedures in patient safety and protection, including surface cleaning and use of disposable products whenever possible. Operating room tables, mattresses, stretchers, and other similar surfaces can allow penetration and absorption of pathogenic organisms, blood and body fluids, and a variety of other contaminants through undetected holes or tears which can be trapped and resurface during future use.<sup>1</sup> This poses cross-contamination and infection risk for subsequent patients. Infection control professionals and healthcare providers across the globe are constantly looking for ways to reduce the risk of cross-contamination in surgery and patient care settings. The most common method to prevent the risk for cross-contamination is by using a disposable product. The Centers for Disease Control (CDC) recommends the use of disposable patient care equipment in acute care settings.<sup>2</sup>

When considering the use and cleaning of operating room tables, mattresses, stretchers and gurneys used for patient transport,

disposable sheets and covers provide a valid option. Impervious, disposable products provide additional protection by preventing strike-through contamination to the surface below. An expanded level of protection can also be provided by the addition of an antimicrobial layer bonded to the material, if available. If all three characteristics are combined, these features isolate the patient from potentially contaminated surfaces while actively inhibiting bacterial and viral organisms which gives an upper hand in protection. For this reason, the below testing was done on the only antimicrobial disposable table sheet available on the market today to determine if it could also provide barrier protection from SARS-CoV-2.

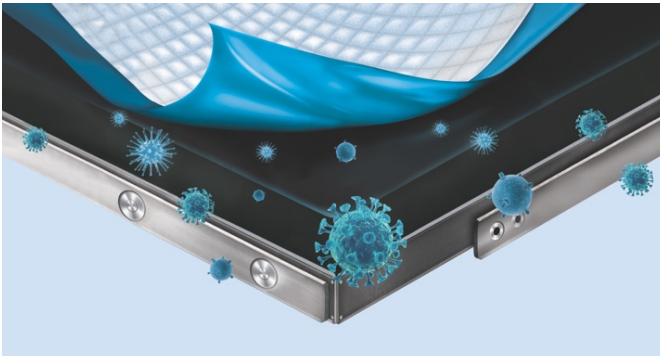
## TESTING

Testing was performed on STAT-BLOC™ disposable, antimicrobial, quilted, absorbent table sheets to evaluate virucidal activity compared to an untreated, disposable table sheet material when challenged with exposure to the Human Coronavirus strain 229E (ATCC #VR-740). This study was performed in order to establish its effectiveness against the family of lipid enveloped Coronaviruses, which includes the SARS-CoV-2, the cause of COVID-19.

Testing was conducted based on the International Organization for Standardization (ISO) method ISO 18184:2019(E), *Textiles – Determination of antiviral activity of textile products*, and was performed in accordance with Good Laboratory Practices, as specified in 21 CFR Part 58. Results showed that STAT-BLOC™ antimicrobial table sheets reduced potential infectivity of Coronavirus 229E by an average of 2.000 log<sub>10</sub> (99.00%), which is categorized as good antiviral effect in accordance with ISO18184<sup>3</sup> (See Figure 1).

The coronavirus virus family consists of 7 large RNA lipid enveloped viruses. The viral envelope of the coronavirus is the major target of surface-active biocidal formulation. Destruction of the lipid envelope which protects the fragile RNA material leads to virus inactivation and its inability to infect a susceptible host. The viral envelope structure and composition is very conserved within a family of viruses due to the cellular origin of envelopes. Biocidal formulations effective against one strain of an enveloped virus representing the virus family are effective against the whole family of viruses.

**Figure 1**



## CONCLUSION

Knowing that the STAT-BLOC™ antimicrobial table sheet can help reduce transmission of COVID-19 should provide confidence in reducing risk within the facility during these trying times. The 2.0 log reduction demonstrated by STAT-BLOC™ antimicrobial table sheets is a prudent and logical next step to further improve the patient experience and their safety. In areas where environmental cleaning may be challenging, where rapid turnover of patient care areas is common, it makes sense to isolate the patient from potential surface exposures while also providing a material that targets the lipid envelopes of epidemiologically highly contagious viral pathogens. STAT-BLOC™ antimicrobial table sheets have been demonstrated to provide the three key features that healthcare facilities should demand of their surface protection products. They are disposable, impervious and antimicrobial. This unique combination provides a solution with the potential to reduce patient exposure risk.

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## REFERENCES

1. Food and Drug Administration (FDA). Covers for Hospital Bed Mattresses: Learn How to Keep Them Safe. Last Update November 20, 2017. <https://www.fda.gov/medical-devices/hospital-beds/covers-hospital-bed-mattresses-learn-how-keep-them-safe>. Accessed September 2, 2020.
2. Siegel JD, Rhinehart E, Jackson M, Chiarello L, and the Healthcare Infection Control Practices Advisory Committee. 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings. Last Update July 2019. <https://www.cdc.gov/infectioncontrol/pdf/guidelines/isolation-guidelines-H.pdf>. Accessed September 2, 2020.
3. Testing Data on File. Performed by an independent lab. Bioscience Laboratories, Inc. Laboratories, Inc. July 27, 2020.

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