## ANTIMICROBIAL COPPER: AN INNOVATIVE WEAPON IN THE FIGHT TO IMPROVE HYGIENE IN HEALTHCARE



Contraction of the second seco

"Antimicrobial Copper is the only touch material to have efficasy data independently verified through the US Environmental Protection Agency /EPA/ registration which supports the claim to continuously kill more than 99,9% of the bacteria that cause HCAIs within 2 hours of contact"

"Health Protection Agency"

CU+ Antimicrobial Copper is a global brand, which gives the opportunity to the producers to prove that their products are capable to kill pathogens and to control the Healthcare-associated infections( HCAIs).

**S** onico Ltd. is a company, which has been proven a leader in the production of locking systems and hardwere.Sonico Ltd and Hellenic Copper Development Institute, Athens, Greece has started their cooperation at the end of 2012. Sonico Ltd is the only one certified company for the production of finished products of Antimicrobial Copper alloys in Bulgaria. The special Antimicrobial Copper surfaces can be applied in the area of Healthcare, Public Buildings, Schools, Kindergartens, Public Transport and others. Sonico Ltd has one aim: to obtain pure bacterialenvironment in hospitals, our offices and in our homes.

T he company has started a project for a change and installment of Antimicrobial Copper components in hospitals. Sonico Ltd has already equipped an insulator in the Department of Anesthesiology and Intensive Care In Tokuda Hospital, Sofia.14 basis points were created and additional 8 in order the so called "Antimicrobial Copper cloud" to be created, which destroyed the bacterial infection. Medline Hospital, Plovdiv and Central Hospital, Plovdiv were also equipped, 6 departments in each-Surgery, Urology, ICUs, Endocrinology,

Emergency Care.The next selected components: namely work surfaces, drip stands, bed rails, bedside tables, door furniture, grab rails, dressing troyllers, table tops, lever handles, pull handles, door push plates were upgraded to Antimicrobial Copper surfaces in the rooms and samples were collected before placing and after four months.

W ith the cooperation of the Microbiology Lab, part of The Hellenic Copper Institute in Athens, Greece was observed a reduction in environmental bioburds of 96% across the copper surfaces analyzed (p<0,02). 33% decrease of risk of appearance of HCAIs and was also noticed a reduction of 26% of the costs for treating the HCAIs for a four month period.

T here is an ongoing process for applying the Antimicrobial Copper surfaces in a public project - commercial and residental building in Sofia.

N ow, a new category of touch surface materials for cleaning and good hygienic practices aiming to reduce and control HCAIs and safety of patients has become available: Anitmicrobial Copper.









PR954 issued 12 January 2016

## **Copper Helps Protect the Most Vulnerable Patients**

Joint US-Chile research has confirmed copper as an additional weapon in the fight against healthcareassociated infections, demonstrating its efficacy in a major paediatric hospital where it contributed to a safer environment for vulnerable patients.

The spread of infections via frequently-touched surfaces surrounding patients is a serious concern in modern healthcare. Whilst cleaning can remove pathogens from hard surfaces, they can be recontaminated within minutes. Touch surfaces made from copper offer a complement to cleaning and disinfection – thanks to the metal's inherent and continuous antimicrobial properties – and they were put to the test by Dr von Dessauer and her team in Santiago, Chile.<sup>1</sup>

The new research was conducted at the city's oldest paediatric facility: the 249-bed Roberto del Rio Hospital. 16 rooms in Paediatric Intensive Care and Paediatric Intermediate Care were involved in the study, with the first step being to determine a base level of bacteria on frequently-touched surfaces. The team found contamination levels exceeded the proposed safe threshold of 500 colony-forming units (cfu) per 100 cm<sup>2</sup>, convincing them these surfaces posed the same risk level as that reported in adult ICUs, where copper has been reported to reduce infections by more than half.<sup>2</sup>

The most highly-contaminated and frequently-touched surfaces were identified as bed rails and levers, IV poles, tap handles and healthcare workstations, so these were targeted for upgrade to copper. Bacterial levels on the copper surfaces, and corresponding non-copper surfaces in control rooms, were measured twice monthly for twelve months, and the results compared.

The copper surfaces were found to harbour, on average, 88% fewer bacteria than those in the control rooms, and 94% contained bacterial concentrations below those recommended for total aerobic cfu immediately after terminal cleaning (500 cfu per 100 cm<sup>2</sup>), regardless of when the room was last terminally cleaned. 58% of those copper surfaces also had concentrations below the limit of detection. In contrast, only 48% of the non-copper, control items were below this critical level, with only 3% of the control objects found to be below the limit of detection.

The researchers concluded that copper surfaces warrant serious consideration for facilities considering no-touch disinfection technologies to reduce the spread of healthcare-associated infections.

For more information on antimicrobial copper, visit www.antimicrobialcopper.org.

## References

<u>Copper Surfaces are Associated with Significantly Lower Concentrations of Bacteria on Selected</u> <u>Surfaces within a Pediatric Intensive Care Unit</u>

- Michael G. Schmidt PhD; Bettina von Dessauer MD; Carmen Benavente MD; Dona Benadof MD; Paulina Cifuentes RN; Alicia Elgueta RN; Claudia Duran MS; Maria S. Navarrete MD MPH. American Journal of Infection Control, Corrected proof. doi:10.1016/j.ajic.2015.09
- Copper Continuously Limits the Concentration of Bacteria Resident on Bed Rails within the Intensive Care Unit Michael G Schmidt, PhD; Hubert H Attaway III, MS; Sarah E Fairey, BS; Lisa L Steed, PhD; Harold T Michels, PhD; Cassandra D Salgado, MD, MS Infection Control and Hospital Epidemiology, Vol. 34, No. 5, Special Topic Issue: The Role of the Environment in Infection Prevention (May 2013), pp. 530-533.

## For further information, contact:

Bryony Samuel Communications Officer 01442 275705 bryony.samuel@copperalliance.org.uk www.antimicrobialcopper.org