LETTERS TO THE EDITOR

The Role of ATP Luminometers in Infection Control

To the Editor—I would like to caution readers on the interpretation of the article by Whitely et al[1] in this issue. This study, like many before, makes the mistake of assessing ATP luminometers as bacterial detection systems. Studies have demonstrated,[2] and responsible manufacturers will confirm, that there is not a 100% direct correlation between ATP and plate counts, so evaluating an ATP system's performance based on bacterial detection is an impractical assessment of the tool. For hospitals seeking to monitor microbial cleanliness, the necessary testing method is conventional microbiology plating. ATP testing is not a substitute for microbiology testing, and responsible ATP manufacturers do not make that claim. Furthermore, the author makes a hasty judgment on the value of ATP systems: "The original suggestion to use rapid adenosine triphosphate (ATP) bioluminometers to monitor surface hygiene has yet to see practical fulfillment among healthcare infection control and prevention practitioners."

In reply, I direct readers to the abundant published evidence to the contrary.[3–8] ATP testing is designed to demonstrate whether cleaning regiments are working correctly and whether cleaning agents and techniques are working properly to remove biological contaminants such as blood, protein tissues, skin cells, etc., which can facilitate microbial growth. ATP testing plays a key role in training, process improvement, and ongoing monitoring of overall hospital cleanliness. There is undeniable and plentiful evidence that monitoring cleaning with an objective tool like ATP testing improves cleaning thoroughness, improves staff training, and optimizes cleaning regiments. In fact, ATP testing has been proposed as an acceptable method by the Centers for Disease Control and Prevention (CDC) in the United States and accepted as a national standard by Danish government. The benefits of ATP are also recognized in the UK *National Health Service Healthcare Cleaning Manual* (2009).

ATP testing has proven effective as an intervention tool over and over. In comparison to other proposed methods such as fluorescent gel black light or visual inspection, ATP testing is the best available option to monitor cleanliness other than microorganism testing, which is impractical for the determination of room cleanliness.[9–11] ATP testing systems are the best available option for improving cleaning regiments, training employees, demonstrating effectiveness of cleaning agents, and improving hygiene in the environment with the end goal of reducing the spread of infection. ATP systems play a very important and valuable role in overall efforts to improve cleaning. Considering the purpose of the ATP systems and additional studies cited, there is overwhelming evidence that ATP testing is a very valuable aspect of cleaning monitoring and improvement within healthcare industry.

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REFERENCES

1. Whiteley GS, Derry C, Glasbey T, Fahey P. The perennial problem of variability in adenosine triphosphate (ATP) tests for hygiene monitoring within healthcare settings. *Infect Control Hosp Epidemiol* 2015;36:658–663.
2. Ayclcek H, Oguz U, Karci K. Comparison of results of ATP bioluminescence and traditional hygiene swabbing methods for the determination of surface cleanliness at a hospital kitchen. *Int J Hyg Environ Health* 2006;209:203–206.
3. Branch-Elliman W, Robillard E, McCarthy G Jr, Gupta K. Direct feedback with the ATP luminometer as a process improvement tool for terminal cleaning of patient rooms. *Am J Infect Control* 2014;42:195–197.
4. Heathcote R, Stadelmann B. Measuring of ATP Bioluminescence as a means of assessing washer disinfector performance and potentially as a means of validating the decontamination process. *Healthcare Infect* 2009;14:147–151.
5. Bruno-Murtha LA, Fridman A, Osgood R. A quantitative assessment of cleanliness in the operating room. *Am J Infect Control* 2014;42:S36.
6. Smith PW, Beam E, Sayles H, Rupp ME, Cavalieri RJ, Gibbs S, Hewlett A. Impact of adenosine triphosphate detection and feedback on hospital room cleaning. *Infect Control Hosp Epidemiol* 2014;35:564–569.
7. Malik R, Cooper R, Griffith C. Use of audit tools to evaluate the efficacy of cleaning systems in hospitals. *Am J Infect Control* 2003;31:181–187.
8. Willis C, Morley R, Westbury J, Greenwood M, Pallett A. Evaluation of ATP bioluminescence swabbing as a monitoring and training tool for effective hospital cleaning. *J Infect Prev* 2007;8:17–21.
9. Boyce JM, Havill NL, Havill HL, Mangione E, Dumigan DG, Moore BA. Comparison of fluorescent marker systems with two quantitative methods of assessing terminal cleaning practices. *Infect Control Hosp Epidemiol* 2011;32:1187–1193.
10. Carling P, Bartley J. Evaluating hygienic cleaning in health care settings: what you do not know can harm your patients. *Am J Infect Control* 2010;38:S41–S50.
11. Mulvey D, Redding P, Robertson C, Woodall C, Kingsmore P, Bedwell D. Finding a benchmark for monitoring hospital cleanliness. *J Hosp Infect* 2011;77:25–30.