

## Cleaning Efficacy of Instrument Washers (3/11)

Alfa MJ, Olson N, Al-Fadhaly A. Cleaning efficacy of medical device washers in North American healthcare facilities. *J Hosp Infect* 2010;74:168–177.

This study evaluated levels of protein, hemoglobin, carbohydrate and endotoxin found on surgical instruments before and after cleaning when using an automated instrument washer. Another objective was to determine whether a positive visual score for the TOSI™ test device (a rapid cleaning monitor for automated healthcare instrument washers) was reflective of the protein and/or hemoglobin levels found on the surgical instruments before and after cleaning when using an automated washer. After cleaning in an automated washer-disinfector, the authors found higher carbohydrate and endotoxin levels on some surgical instruments compared to pre-cleaning whereas the levels of protein and hemoglobin were both lower after cleaning compared to pre-cleaning. This suggests that there may have been specific washer-disinfector cycles where the final rinse water used in the unit contributed substantially higher carbohydrate and endotoxin levels. This raises concerns regarding residual organic material other than protein that may remain on surgical instruments after cleaning and also supports recommendations to monitor water quality used for cleaning and rinsing medical instruments. **The data support the need to monitor the water quality used in instrument washers and identifies an urgent need for establishment of standardized criteria for rapid cleaning indicators for instrument washers to ensure that they provide a clinically relevant method for monitoring washers used in health-care facilities.**



**DECS Comment: Cleaning is the most important step in instrument processing because it reduces bioburden and removes material that can act as a barrier to the sterilizing agent during the sterilization process. Therefore, to assess proper function, users should test automated cleaning equipment (e.g., ultrasonic cleaners, instrument washers, thermal disinfectors) upon initial installation, weekly during routine use, and after major repairs. This should be included as a component of your instrument processing quality assurance program. Commercially-available tests are available to evaluate variables such as water pressure, temperature, pH, and drying. It is very important to note that these tests do not replace the requirement to visually inspect instruments after cleaning. Also, users must continue to follow the cleaning equipment manufacturer operating and maintenance instructions, including instrument loading procedures, which is critical to the success of the cleaning process. For additional details on testing procedures for automated cleaning equipment in USAF facilities [click here](#). This is the first published report evaluating the TOSI™ test device and as the authors suggested instrument washer manufacturers need to ensure that there are rapid test methods for health-care users to accurately monitor the cleaning function of washers.**

### References

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- USAF Guidelines for Infection Control in Dentistry.