

# WD chex™ Washer-Disinfecter Monitors

## Technical Data Sheet

### Introduction:

Propper WD chex washer-disinfecter monitors are designed to test the cleaning efficacy of medical and laboratory washer-disinfectors. WD chex provides an integrated result of the cleaning process parameters, which includes the mechanical action of water, efficacy of detergent, cycle time and temperature.

### Product description:

Each WD chex monitor features two black protein mixture stains adhered to a fibrous polyolefin substrate. These stains do not contain any natural blood and have no risk of contaminating the cleaning chamber and its contents. The stain mixture contains organic compounds representative of fluids and materials normally present on medical instruments and devices after use with patients.

The protein stains wash off completely from the substrate when exposed to a sufficient cleaning cycle. Both indicator stains have identical composition. WD chex is designed to be used with the Ultrasonic and Washer-Disinfecter Monitor Holder (26915300, 26965300) which has one open and one covered side. The holder acts as a process challenge device, which covers the stain on one side of the monitor while leaving the other stain spot fully exposed. The covered stain simulates conditions that are challenging for washer-disinfectors (such as instrument joints, locks, or devices with complicated shapes). The open stain area simulates full exposure to cleaning cycle parameters inside the washer basket where the WD chex monitor is placed.



FIGURE 1. PROPPER WD chex™ WASHER-DISINFECTOR. LEFT IMAGE SHOWS LOOSE MONITOR. RIGHT IMAGE SHOWS MONITOR IN DESIGNATED HOLDER.

## Performance:

WD chex has resistance characteristics conforming to the requirements of ISO 15883-5. Sufficient cleaning is a function of an adequate combination of all critical parameters: the mechanical action of water, efficacy of detergent, cycle time and temperature. If any of the parameters are insufficient to maintain cleaning efficacy, WD chex will show a fail. The need of all parameters to obtain “full clean” result with WD chex was demonstrated in experiments when monitors were exposed to individual parameters. For example, the stains will become lighter, but will remain on the monitors when WD chex is exposed to circulating water with no presence of detergent or still water with detergent for the typical wash cycle time.

## Interpretation of results:

After exposure to a cleaning cycle, the monitor should be examined for the presence of any remaining black protein stains (Fig.2). The monitor should be examined after it is dry. The presence of residual black stains on the monitor after exposure means that the efficacy of the cleaning process in the area where the monitor was placed is insufficient.

Any remaining black stain in the open area of the monitor indicates failure of the wash cycle to fully clean instrument surfaces. Any remaining black stain on the covered part of the monitor indicates inability of the washer to fully clean under challenging conditions.

Failure of a cleaning cycle to remove stains from the monitor may be due to one or multiple causes.

Entire wash cycle failure may happen due to inadequate wash cycle parameters, deterioration or the wrong dose of detergent, suboptimal for a specific enzymatic detergent temperature, short cycle time and other reasons.

Fail results in particular baskets could be also observed when the washer cycle is adequate. It may happen if the chamber is overloaded, too many instruments are placed in a particular basket or if a basket is not suitable for specific instruments, and other reasons.

All failures should be investigated and remedied. In case of repeated failures, the washer-disinfector cycle parameters for specific loads need to be re-validated with Proper Washer-Disinfector Test Soil Kit (26100400)<sup>1</sup>. After completion of successful cycles, use ProExpose™ Protein Detection Test<sup>2</sup> for cleaning verification.

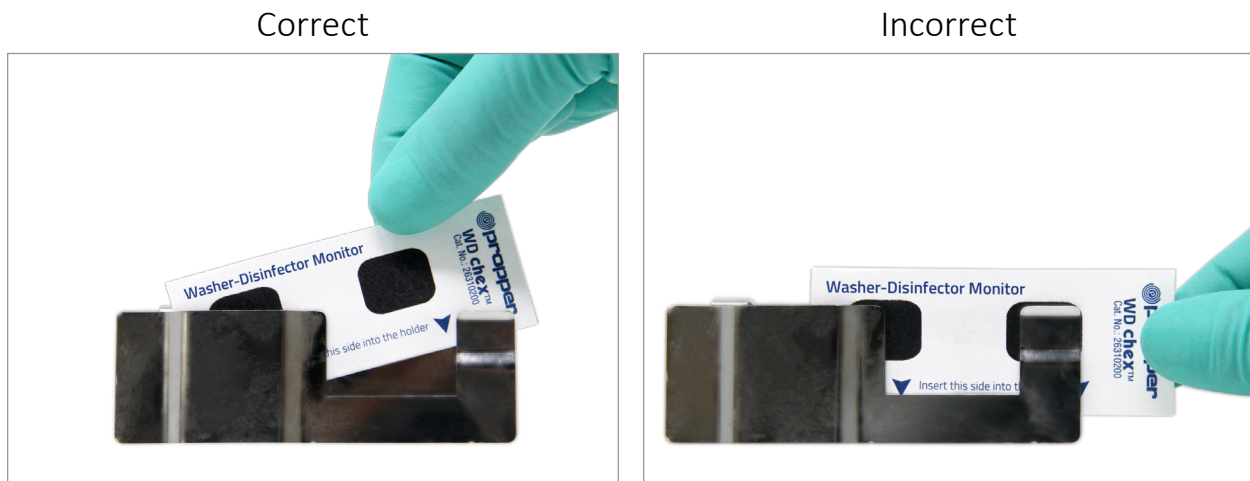


FIGURE 2. UNPROCESSED, PASS, AND FAIL RESULTS OF WD chex™.

## Instructions for use and handling:

WD chex should be inserted into the holder from the top down, into the covered part first (Fig. 3). Make sure that the monitor is fully inserted and held firmly in place by the metal clamp on the side of the open area. The metal clamp should not be bent or pulled. The holder can be placed horizontally or hung vertically in a basket, allowing for cleaning to be tested in different positions in various areas of the washer. For washer-disinfectors that employ multi-level racks, it is recommended that one monitor be used per rack to ensure that all rack levels receive proper cleaning.

When removing the monitor from the holder, the monitor should be pulled out straight from the top. Monitors should not be pulled from the side to prevent stain from rubbing off against the metal holder during removal.



**FIGURE 3. DEMONSTRATION OF CORRECT AND INCORRECT INSERTION AND REMOVAL OF WD chex™ MONITOR FROM HOLDER.**

## Shelf-life and storage conditions:

- Shelf Life: 24 months based on real-time shelf-life study.
- Storage conditions: 46°F-86°F (8°C-30°C) and 30-70% relative humidity. Avoid exposure to direct light, excessive heat and excessive humidity.

*WD chex monitors are stable after processing, and can be stored for record keeping.*

## Product Order Information:

- Reorder No.: 26310200 – Pouch of 250 WD chex™ Washer-Disinfectant Monitors
- Reorder No.: 26965300 – Box of 6 Ultrasonic and Washer-Disinfectant Monitor Holder
- Reorder No.: 26915300 – Box of 1 Ultrasonic and Washer-Disinfectant Monitor Holder

1. *Propper Washer-Disinfectant Test Soil Kit, 6 tests, Reorder No.: 26100400*
2. *ProExpose™ Protein Detection Test, 30 vials, Reorder No.: 26923300*