

Validation Process for PCS Process A Cleaning To Protect Public Health

PCS Process Cleaning Solutions has developed PCS **Process A** which prescribes the cleaning of environmental surfaces with PCS micro fibre cloths and warm water only (no chemicals). **Process A** also uses a conditioning process to remove contaminants from the micro fibre cloths without traditional laundering processes.

This paper describes the method for validation of cleaning efficacy using PCS **Process A**, as measured by ATP monitors.

ATP is adenosine triphosphate and is present in all living cells. It is a key component in the “energy transfer system” within cells. The presence of high ATP levels is a good indicator of poor hygiene and measurement of low ATP levels is an excellent indicator of good hygiene.

Method

One third of a very used Stryker Jasmine M3 mattress surface was coated with 60 mls of 2% milk and allowed to air dry, then cleaned with PCS **Process A**.

RLU (relative light units) readings were taken before and after cleaning. Readings were also taken from the PCS micro fibre cleaning cloth after cleaning the mattress surface and after the PCS **Process A** conditioning of the cloths.

The procedure was repeated five times.



Process A Procedure

1. Cleaning

Two conditioned PCS micro fibre cloths that had been used thirty times with PCS **Process A**, without laundering, were placed in a PCS bucket with warm water. Each cloth was removed from the bucket, wrung out and folded so as to have eight clean sides of 6.5 inches x 6.5 inches each.

The surface was wiped, applying even pressure on all surfaces. The cloth was then flipped to the clean side and the surface was re-wiped, insuring removal of gross soil.

A second cloth was then used and the process was repeated. The cloths were not placed back in bucket (as is common practice in health care).

2. Conditioning

The soiled cloths were rinsed then placed in an empty PCS bucket and 250 mls / 8 ounces of diluted PCS Sodium Hypochlorite Disinfectant/Disinfectant cleaner per cloth was added. The cloths were left soaking in this solution for at least 2 minutes, then the PCS bucket was filled with warm water. The cloths were then wrung out twice, then the PCS bucket was emptied and refilled with water. The cloths were then rinsed in the bucket and removed.



The PCS bucket was then drained and refilled with warm water only. The cloths were placed back in the bucket for the next cleaning.

	Test Results in RLU† (relative light units)					Average
	Test 1	Test 2	Test 3	Test 4	Test 5	
Mattress surface before cleaning	390	262	188	193	336	273.8
Mattress surface after cleaning	3	1	6	3	0	2.6
Cleaning cloth after cleaning	121	78	87	98	89	94.6
Cleaning cloth after Process A conditioning	3	0	1	0	5	1.8

† Hygiene ATP monitors recommend RLU's as follows:

≤10 Pass
10-30 Caution
> 30 Fail

Discussion

The Stryker hospital mattress was chosen as it represents a common environmental surface in health care in addition the surface texture can pose unique cleaning challenges. The 60 mls of 2% milk soil load was extreme and visually evident on mattress surface. Milk was chosen because of previous studies with ATP meters providing base line data on ATP detection levels for soil. ATP studies of hospital cleaning practices have demonstrated that enhanced cleaning and reduced chemical exposures would be beneficial.

PCS *Process A* provides a simple reproducible cleaning process to lower environmental contamination to very low levels not normally achieved with one step cleaners or disinfectant cleaners.

Cleaning with PCS *Process A* is safe, environmentally responsible and provides confidence that subsequent application of a disinfectant, if needed, will be effective.

PCS *Process A* was developed to encourage reduced use of disinfectants and the use of less potent disinfectants where necessary.

