



# Features of WD and the optimal cycle

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In your experience, what would be the optimal cycle configuration?  
What features of design are key to an efficient wash?

## 1. Optimal cycle configuration.

Unfortunately there is no magic formula that wipes the test soil off the instruments in every machine every time. Every validated cleaning cycle is specific to the machine itself, the chemical used and, most importantly, the load. Load means not only the amount of instruments but the type and proportions in which different instruments are reprocessed. Interestingly the load will include the additional accessories like trays, baskets and cassettes that complicate the matter even more.

For this reason the cycle configuration should consider the type of instruments first and then use the full potential of the particular machine to complete the cleaning process in the shortest possible time.

With the advancement in technology of medical instruments comes the complexity and need for tailored solutions both in terms of equipment used and cycle profiles. It also stipulates that cycles will be optimal only to the type of instruments and/or particular SSD's.

I am aware that I am answering the topic question with more questions but I believe that there is no one answer here.

## 2. Features of the design for efficient wash.

The efficient wash must be also repeatable and these two features create the desired combination. The most important feature of conventional Washer Disinfectors is distribution of the cleaning action within the entire chamber or a tank, meaning that cleaning solution (water + chemical) reaches all surfaced of instruments and accessories and at the same times ensures the chamber itself is also cleaned.

In case of spray-arms for instance the location of holes that spray water around is critical to the efficient water distribution. Location will depend on the pressure/flow ratio, shape of the chamber and the basket/rack. Finite Element Methods in Fluid Dynamics are extremely helpful in this case.

Efficient draining and elimination of residual water in the machine's internal plumbing minimises cross-contamination between different stages of the cycle –which makes the process more efficient.

In case of chemicals repeatability is in my opinion far more important than precision. It is also essential to use them in the range of temperatures they are designed for. Beyond this range chemicals may cause foaming that may be not only detrimental to the cleaning process but can actually damage the machine.

There are many more very important factors but these mentioned above are in my opinion the core of the cleaning process.



## About the author

Pawel de Sternberg Stojalowski MBA, MSc, BSc is a research and development consultant specialising in solutions for decontamination of complex surgical instruments. He's been involved in the decontamination sciences since 2007, designing equipment and processes for cleaning, disinfection and sterilisation of surgical instruments. He created Aseptium to innovate decontamination sciences and develop solutions that will become the answer to the growing complexity of surgical instruments. If you are interested in exploring the subject further visit [www.aseptium.com](http://www.aseptium.com)



## Get in touch

Aseptium Limited  
Phase 2, Second Floor, Room S/210  
Centre for Health Science  
Old Perth Road  
Inverness  
IB2 3JH

e: [info@aseptium.com](mailto:info@aseptium.com)  
m: 0044 (0) 7853 200 379  
w: [aseptium.com](http://aseptium.com)