

# Cleaning Kit for BactoSense Multi - User Manual

## General Information

This kit is suitable to clean the BactoSense Multi. The chemistry contained in the kit is designed to be used after having measured drinking water samples only. Samples other than water, such as wastewater, beverage or culture medium are the exclusive responsibility of the user. The cleaning kit efficiency might be reduced and cannot be guaranteed in these cases. One kit is designed to perform approximately 20 cleaning operations (10 of each type). The kit is stable one year if stored under correct conditions (2-25°C away from light).

The instructions in this manual assume that the Instruction Manual for the BactoSense Multi (Document number 40202) was read and understood.

## Safety Information



**Read the user manual**



**Wear protective safety glasses**



**Wear protective gloves**

Wear protective gloves during handling. In case of skin contact, rinse immediately and abundantly with fresh water. In case of pain or irritation, consult a doctor.



**Corrosive**



**Warning**



**Information**

## Contents

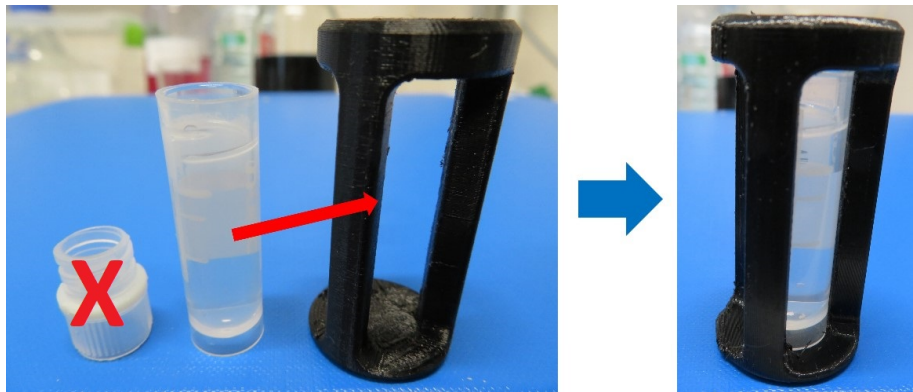
Item [tube]	Quantity [aliquots]	Function	Notes
Cleaning solution	10	Cleaning of optical cell and internal tubing	Single use only. Please close the tube and discard after use.
Decontamination solution	10	Cleaning of sampling needle and tubing	Single use only. Please close the tube and discard after use.
Rinse solution	20	Rinsing of sampling needle and tubing	Single use only. Please close the tube and discard after use.

## Intended use

The cleaning kit is intended to be used for cleaning of the instrument if the needle or the internal tubing of the BactoSense Multi are contaminated. This kit contains different compounds, each with a specific function. Any attempt to clean with other chemicals or materials is in the sole responsibility of the user.

## Tube holders

Tube holders (item number 200103) are designed to fit the 30 vials rack (item number 200121) of the BactoSense Multi. They will adapt the tube aliquots to the rack and are delivered separately from the kit. Take a tube aliquot, unscrew its cap, and put the tube inside the tube holder for use of the aliquot tubes with the autosampler.



- Ensure the aliquot tube touches the bottom of the tube holder.
- Ensure the cap is removed before any use with the BactoSense Multi.

Failure to do either of the above may result in the needle of the device being broken during the procedure.

## Individual or combined decontamination

Cleaning can be carried out in two ways:

1. **Treating the 2 different contamination sources separately: Biological and Non-Biological.** Each cleaning or decontamination can be done individually, without necessarily doing the other one afterwards. This is the common way of using the kit, as long as the type of contamination has been identified.
2. **A combined cleaning:** This method allows the device to be fully cleaned and decontaminated automatically, using both biological and non-biological cleaning in one sequence. This approach is recommended when the type of contamination is not identified or when complete decontamination is preferred (for example after a prolonged period of inactivity, after major issues).

Therefore three sequences are delivered with the instrument:

1. Cleaning Kit: Biological Contamination
2. Cleaning Kit: Non-Biological Contamination
3. Cleaning Kit: Full Sequence

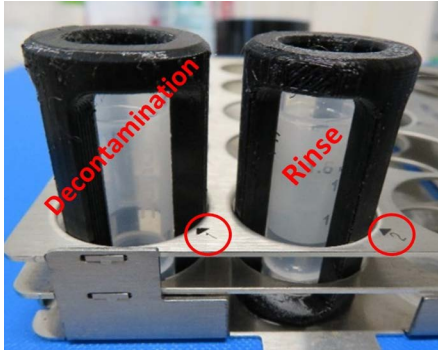


If in doubt which protocols to use, use sequence 3: combined decontamination.

## Biological contamination

The most common situations in which biological contamination can occur are:

- The BactoSense Multi has been stopped during operation and left for a long period of time (>4h).
- An excessively high bacterial concentration has been measured (>5M/ml).
- A sample with abnormal characteristics was measured (for example high turbidity, high viscosity, intense colour). For more information, please refer to the user manual.

### Cleaning Procedure #1: Cleaning Kit Biological Contamination

	WORK STEP	ADDITIONAL INFO / IMAGE
1.	Take one of the decontamination solution tubes and remove its cap.	
2.	Take one of the tube holders and place the <b>decontamination solution tube</b> inside it.	
3.	Place the <b>tube holder + decontamination solution tube</b> in the <b>position #1</b> of the rack.	
4.	Take one of the rinse solution tubes and remove its cap	
5.	Take one of the tube holders and place the <b>rinse solution tube</b> inside it.	
6.	Place the <b>tube holder + rinse solution tube</b> in the <b>position #2</b> of the rack.	
7.	<b>Insert the rack</b> into position inside the BactoSense Multi	 If the positions are reversed, the procedure will not work. Make sure the caps are removed, the tube is pushed down and the latch is securely positioned otherwise BactoSense Multi needle will be damaged during the process.
8.	Go to the <b>Home menu</b> . Press <b>Sequence analysis</b> , click on <b>Load sequence</b> and select <b>Cleaning Kit Biological Contamination</b> .	
9.	Click on <b>Confirm</b> , press <b>Next</b> , wait for the check page to run and then press <b>Start</b> to begin the sequence.	 This sequence will last approximately half an hour.

When the sequence is complete, the BactoSense Multi is biologically decontaminated. Remove both tube holders from the rack and both used aliquot tubes from the holders. Close both aliquot tubes, discard them, and store the tube holders. The device is now ready for operation again.

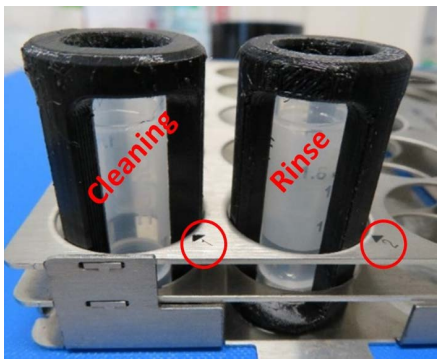
 **Discard the tubes after use. Attempting to use previously used tubes may introduce air into the system.**



## Non-biological contamination

The most common situations in which non-biological contamination can occur are:

- Frequent appearance of high-baseline in SSC or warning of air bubbles detected
- Deposits (often white in colour) are visible on the needle.
- The noise displayed on the dot plots appears much bigger than usual (bigger than 4 on the FL1 axis).

### Cleaning Procedure #2: Cleaning Kit Non-Biological Contamination

	WORK STEP	ADDITIONAL INFO / IMAGE
1.	Take one of the cleaning solution tubes and remove its cap.	
2.	Take one of the <b>tube holders</b> and place the <b>cleaning solution tube</b> inside it.	
3.	Place the <b>tube holder + cleaning solution</b> tube in the <b>position #1</b> of the rack.	
4.	Take one of the rinse solution tubes and remove its cap.	
5.	Take one of the <b>tube holders</b> and place the <b>rinse solution tube</b> inside it.	
6.	Place the <b>tube holder + rinse solution tube</b> in the <b>position #2</b> of the rack.	

	WORK STEP	ADDITIONAL INFO / IMAGE
7.	<b>Insert the rack</b> into position inside the BactoSense Multi.	 If the positions are reversed, the procedure will not work. Make sure the caps are removed, the tube is pushed down and the latch is securely positioned otherwise BactoSense Multi needle will be damaged during the process.
8.	Go to the <b>Home menu</b> . Press <b>Sequence analysis</b> , click on <b>Load sequence</b> and select <b>Cleaning Kit Non-Biological Contamination</b> .	
9.	Click on <b>Confirm</b> , press <b>Next</b> , wait for the check page to run and then press <b>Start</b> to begin the sequence.	 This sequence will last approximately three hours.

When the sequence is complete, the BactoSense Multi is clean from non-biological contaminants. Remove both tube holders from the rack and both used aliquot tubes from the holders. Close both aliquot tubes, discard them, and store the tube holders. The device is now ready for operation again.



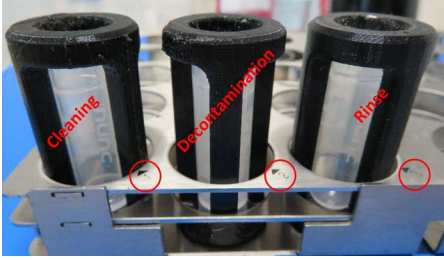


***Discard the tubes after use. Attempting to use previously used tubes may introduce air into the system.***

## Combined decontamination and cleaning

It is possible to combine the 2 cleaning and cleaning procedures (#1 and #2) into one sequence (#3), which is suitable for both decontamination of biological and cleaning of non-biological contaminations.

### Cleaning Procedure #3: Cleaning Kit Full Cycle

	WORK STEP	ADDITIONAL INFO / IMAGE
1.	Take one of the cleaning solution tubes and remove its cap.	
2.	Take one of the <b>tube holders</b> and place the <b>cleaning solution tube</b> inside it.	
3.	Place the <b>tube holder + cleaning solution</b> tube in the <b>position #1</b> of the rack.	
4.	Take one of the decontamination solution tubes and remove its cap.	
5.	Take one of the <b>tube holders</b> and place the <b>decontamination solution tube</b> inside it.	
6.	Place the <b>tube holder + decontamination solution</b> tube in the <b>position #2</b> of the rack.	
7.	Take one of the rinse solution tubes and remove its cap.	
8.	Take one of the <b>tube holders</b> and place the <b>rinse solution tube</b> inside it.	

	WORK STEP	ADDITIONAL INFO / IMAGE
9.	Place the <b>tube holder + rinse solution</b> tube in the <b>position #3</b> of the rack.	
10.	<b>Insert the rack</b> into position inside the BactoSense Multi.	<p> If the positions are reversed, the procedure will not work. Make sure the caps are removed, the tube is pushed down and the latch is securely positioned otherwise BactoSense Multi needle will be damaged during the process.</p>
11.	Go to the <b>Home menu</b> . Press <b>Sequence analysis</b> , click on <b>Load sequence</b> and select <b>Cleaning Kit Full Cycle</b> .	
12.	Click on <b>Confirm</b> , press <b>Next</b> , wait for the check page to run and then press <b>Start</b> to begin the sequence.	<p> This sequence will last approximately 3.5 hours.</p>

When the sequence is complete, the BactoSense Multi is clean from non-biological contaminants and biologically decontaminated. Remove all tube holders from the rack and both used aliquot tubes from the holders. Close both aliquot tubes, discard them, and store the tube holders. The device is now ready for operation again.

 **Discard the tubes after use. Attempting to use previously used tubes may introduce air into the system.**