# interscience

## **THE APPLI'NEWS**

## January 2023

## THE APPLICATION QUESTIONS

#### Question n°1 :

"How often should easySpiral bottles and tubes be autoclaved?"

It is recommended to autoclave:

- The bottle containing the water or physiological water and its tube → every evening (or at the end of each shift if the device is not used every day).
- The bottle containing the disinfectant and its tube → at least once a week if not emptied first.

This does not replace the **EnzyClear** process, which should also be performed **every night** (or at the end of each shift).

#### Question n°2 :

## "How often can you autoclave tubing and filters?"

There is **no limit to the number of times tubing can be autoclaved**. Just make sure that the wear is not too important, especially when the tubing starts to yellow or crack. However, the **filters** must be replaced after **20 autoclaves**.

#### Question n°3 :

## "What is the difference between *cleaning* and *disinfecting*?"

- Cleaning: Physical removal of bacteria and other impurities from surfaces through the use of detergent and water. Prepares surfaces for more effective disinfection.
- Disinfection: Chemical elimination of bacteria and other micro-organisms through the use of chemicals, such as EnzyClear.

## Question n°4 :

"Are the pre-programmed **plating volumes** (50 / 100 / 200 µl) imposed by **standards** or by **customer applications**?"

Both. The **ISO 7218 standard** (food industry) mentions a **surface plating of 100**  $\mu$ l, so it is more coherent to plate 100  $\mu$ l with the spiral technique. But depending on the application, if the starting concentration is too high, 50  $\mu$ l can be inoculated.

#### Question n°5 :

"In what type of activity is the use of the **easySpiral** not recommended?"

There is no particular sector of activity where the use of the *easySpiral* is not possible. On the other hand, the spiral technique can be limiting for samples:

- With a **low bacterial concentration**: research of pathogens on a two-class plan (example: research of pathogens such as *Listeria* or *Salmonella*).
- With a **low enumeration threshold** (< 100 CFU / ml) (example: analysis of quality indicators in the food industry).

However, this does not prevent the use of the easySpiral in mass or constant mode.

## Question n°6 :

" Which dilution should be programmed on the automatic **Scan** when using the **circle mode** of the **easySpiral Dilute**?"

When counting in circle mode (of the **easySpiral Dilute**), the **first dilution** must be programmed in the **Scan** software. This is the value of the dilution in the central part.



Example: If you plate 10<sup>-1</sup> / 10<sup>-2</sup> / 10<sup>-3</sup> for example, you must indicate 10<sup>-1</sup>.

## THE APPLICATION POINT

#### EnzyClear

Some bacteria have a survival mechanism that consists in producing **spores** to protect themselves under stressful conditions. These spores are **very small**, resist **extreme conditions** and can remain in a **dormant state** for a long time before reforming into a viable bacterium. It is therefore essential to ensure their elimination. For this, a simple cleaning is not enough, it is necessary to carry out a **disinfection** with **EnzyClear**.

**EnzyClear** is a powder concentrated in enzymes. **Enzymes** are molecules able to **catalyze specific chemical reactions**. Here, enzymes have been chosen to catalyze the reactions of **digestion** (catabolism) of organic matter. Just as the enzymes in gastric juice digest our food, the enzymes in **EnzyClear digest bacteria and spores**.



Like our machines, enzymes need specific conditions (temperature, pH...) to work, that's why **EnzyClear** must be diluted in warm water, to activate the enzymes.

