Sterile graduated bottles in PP 125 ml with thiosulfate

Dedicated to the optimization of the sampling work of water and / or food substances, to be analyzed microbiologically, these bottles are designed with attention to safety and ergonomics.

They are available in four different capacities: 125 - 250 - 500 and 1000 ml.

Features common to all types:

- Manufactured with virgin raw materials, compliant with environmental standards: (PETG - PP - HDPE)
- Robust and practically unbreakable.
- Lightweight, stable and easy to handle thanks to the square section with rounded edges, they optimize storage and transport, minimizing the volume of the packages.
- A single pack version is also available of all types.
- Two types of opening: narrow mouth - wide mouth
- The quantity of liquid introduced can be checked (accuracy ± 2% of the total volume) visually, by means of a special graduated scale, impressed on a wall, directly during the production phase.
- Caps material: HDPE
- All closures are designed with vertical ribs to facilitate use and opening, even when wearing gloves.
- Traceability: The product label on each box includes the batch number and expiration date. In addition, each bottle has a pre-glued label that allows the recording of the main identification data of the sample:

- batch number, - Expiration date - a unique number, in clear text and in the form of a bar code.
All this allows complete traceability of each individual sample.

- Sterilization: carried out by means of ionizing radiation. According to ISO 11137 - SAL 10-6
- Shelf life: 24 months with thiosulfate - 60 months without thiosulfate
- The entire production process, up to the packaging, is controlled according to the regulatory references in force.
- Sodium thiosulfate content: where not otherwise specified, equal to 20 mg / l

The mouth with a nominal diameter of 50 mm facilitates filling, minimizing the risk of contamination during the sampling phase (in accordance with the recommendations of the ISO 19458: 2006 standard - Sampling techniques)

Transparency: translucent

Cap color: natural white

SWAB WITH SODIUM THYOSOPHATE:

Chlorides:

for the sampling of chlorinated waters it is advisable to neutralize the free chlorine present, to prevent its bactericidal action, during the transport and storage (see “Tips”) of the sample, which would alter the reliability of the examination.

For this reason the bottles are produced both empty and pre-dosed with sodium thiosulfate, reducing agent, in compliance with:

- to ISO 19458: 2006 and / or French standard NFT 90-40: with 20 mg / l (codes concerned, in this sheet) or

- to the international standard ISO 5667-3: with 80 mg / l (codes not listed here).

For the cases of sampling of highly chlorinated waters it is also possible, at the request of the user, to supply bottles containing larger quantities of thiosulphate. The canonical solution, for these applications, is 100 mg / l, however, since a slight increase in the concentration of buffering salt does not affect the quality of the sample, bottles containing salt up to 120 mg / l are prepared (see Tips), typically for swimming pool water sampling; ratio valid for bottles filled with nominal volume.

Since thiosulfate has no effect on the sample, it is possible to use bottles containing sodium thiosulfate even in the cases of non-chlorinated water samples.

Sterility and individual packaging:

after the possible introduction of thiosulfate and capping, all the sampling bottles are sterilized with ionizing radiation, SAL (Sterility Assurance Level) 10-6, guaranteed until the moment of opening (shelf life see tables). In cases where it is necessary to avoid any possible pollution induced by the bottle (eg withdrawal by immersion), the external surface of the bottle is also required sterile, as well as the internal one. To meet this need, all the bottles can be supplied in individual packaging (flow pack - single wrap).

Warranty:

the cap has a special anti-unscrewing ring with a predetermined fracture, the integrity of which guarantees the non-opening and therefore the microbiological condition of internal sterility.

Estate :

ensured by the cap made of HDPE (high density polyethylene) and by a special gasket of inert expanded material.

TIPS FOR BEST USE:

1) the bacteriological examination of the water samples must be carried out as soon as possible after collection. There are many factors that can intervene, over time, to produce significant variations in the bacterial content, all related to the quality of the sampled water (presence of toxic or nutritional substances for the bacterial flora, salinity, pH, etc.).

In general it is suggested to analyze the samples within 24 h (variation margins are possible depending on the factors mentioned) and to transport and store the samples at a temperature between (+4 and +10) ° C

2) Buffer reports:

with bactericidal, sporicidal, fungicidal and virocidal functions, an oxidizing agent is added to the water, usually a sodium salt (hypochlorite NaClO and / or chlorite NaClO2) or, more frequently, a mixture of the two.

It is not possible to know a priori the composition of the mixture, nor the quantity of dissolved salts, therefore normally it is not known how much free chlorine must be "buffered". Furthermore, depending on the dynamics of inactivation, it is difficult to say what is the quantity of sodium thiosulfate (Na2S2O3) necessary to neutralize even a known quantity of free residual chlorine.

It is suggested to take into account the following indications:

buffering ratio between thiosulfate and hypochlorite → 1 Mole: 1 Mole

buffering ratio between thiosulfate and chlorite → 4 Mole: 1 Mole

To know the actual weight ratios, these ratios must be referred to the respective molecular weights, but quantitative indications are not given here because they could be misleading or not relevant to the case of the individual user.

It is limited to highlighting that, in the extreme case (all chlorite), an approximately quadruple quantity of thiosulphate will be required compared to the opposite case of “all hypochlorite”.

In general, consider that 18 mg of Sodium Thiosulfate are sufficient to buffer 2 to 5 mg of chlorine.

Code	Description	with thiosulfate	Volume ml	Total height mm	Pieces per pack.
02299148	Sterile graduated bottles in PP 125 ml with thiosulfate	AND	125	93	350