

Instruction Manual

Product Name	Product Description	Size	Catalog Number
Aquaguard-1	Aquaguard-1 Solution for the maintenance of water quality in the incubator (tray)	100 ml	PK-CC01-867-1B
Aquaguard-1	Aquaguard-1 Solution for the maintenance of water quality in the incubator (tray)	3 x 100 ml	PK-CC01-867-3B
Aquaguard-1	Aquaguard-1 Solution for the maintenance of water quality in the incubator (tray)	10 x 100 ml	PK-CC01-867-10B
Aquaguard-2	Ordinary water bath disinfection	500 ml	PK-CC01-916-500

Cleaning and Disinfecting CO₂ Incubators

A CO₂ incubator is a basic piece of equipment in any laboratory involved in cultivation of *in vitro* cells. The culture bottles must be kept slightly opened in order to allow the penetration of CO₂, and enable the formation of a bicarbonate-CO₂ buffer system, which is the most common buffer system for tissue culture. Leakage of medium from the culture bottles, high humidity, suitable temperature, the water tray and the air flow, all form a fertile breeding ground for the development of contaminants in the incubator, which are liable to contaminate the tissue culture in all the semi-opened culture bottles.

As soon as contamination appears in the incubator, it is very difficult to eliminate it, and severe damage can be caused. Therefore, it is essential to systematically clean and disinfect the incubator. It is recommended to disinfect every 14 days, or at least once a month.

Cleaning

The shelves and surfaces of the incubator should be cleaned with soap and water. After washing with water, dry with absorbent paper.

Disinfecting the Incubator Surfaces

We recommend using one of our highly efficient **Mycoplasma-ExS**, **PromoCidal** and **Spore-EX Disinfection Sprays** or **Disinfection Wipes** (see our website and "Related Products" below) which are very effective against bacteria, fungi, viruses, and spores. It is recommended to spray the incubators thoroughly every two weeks (please see respective data sheets).

Maintaining the Water Quality in the Incubator (Tray)

The water required for humidity is a source of microbial contamination which disperses in the incubator. In order to keep the water in the incubator (tray) clean and free of unwanted contaminations, we recommend **Aquaguard-1** Solution (Cat. No. PK-CC-01-867-1B/-3B/-10B), which contains a non-corrosive reagent that does not cause damage to the stainless steel or copper trays. **Aquaguard-1** is non-irritating, non-volatile, and extremely effective in maintaining the water quality in the incubator tray. We recommend using **Aquaguard-1** for the water trays of common incubator types. Some larger incubators may use steam-generators or atomizers to control relative humidity levels. Please ask whether **Aquaguard-1** is suited for such incubators as well.

The water should be replaced with sterile water every two to four weeks, adding 50 ml of **Aquaguard-1** per 5 liters of water.

Preventive treatment as described above will prevent damage that can be caused as a result of contamination to the tissue culture. In addition, it will also prevent the necessity of dealing with contamination that has dispersed in the incubator and causes repeated contamination of the tissue culture.

Maintaining Ordinary Water Baths free of Microbial Contamination

Aquaguard-2 (Cat. No. PK-CC01-916-500) has been developed for maintaining various kinds of water baths free of contaminating microorganisms such as bacteria and fungi. Aquaguard-2 is effective against all groups of bacteria including anaerobic sulphate-reducing bacteria (SRB) and mycoplasmas. It also inhibits algal growth and has a moderate anti-fungal activity. Aquaguard-2 is heat-stable up to 100°C and no foam is produced when using it with circulating water baths. Avoid mixture with alkali.

It is recommended to use 10 ml of **Aquaguard-2** for each liter of water in the bath, and to repeat the procedure every 1-2 weeks. After 4-6 weeks, the water bath should be emptied, cleaned (using e.g. our PromoCidal or Spore-EX wipes) and refilled with water containing **Aquaguard-2**. (Note: To protect the water bath from growth of common fungi, a dilution of at least 50 ml Aquaguard-2/liter of water is recommended.)

The active ingredient in **Aquaguard-2** is non-corrosive, non-volatile and does not cause any irritating effects to the skin when used in the recommended concentration. It is biodegradable. **Aquaguard-2** is not suited for use in CO₂ incubators.

Storage and Stability

Stable at 4°C for up to one month. For long-term storage keep at -20°C.

Intended Use

For *in vitro* research use only. Not for diagnostic or therapeutic procedures.

Related Products

Catalog Number	Product Name	Product Description	Unit Size
PK-CC91-5051	Mycoplasma-ExS Spray	Surface Disinfection (Lab Equipment)	500 ml
PK-CC91-5051-5L	Mycoplasma-ExS Spray	Surface Disinfection (Lab Equipment)	5 L
PK-CC91-5052	PromoCidal Spray	Surface Disinfection (Lab Equipment)	500 ml
PK-CC91-5052-5L	PromoCidal Spray	Surface Disinfection (Lab Equipment)	5 L
PK-CC91-5052-W100	PromoCidal Wipes	Surface Disinfection (Lab Equipment)	100 pieces
PK-CC91-5053	Spore-EX Spray	Surface Disinfection (Lab Equipment)	500 ml
PK-CC91-5053-W120	Spore-EX Wipes	Surface Disinfection (Lab Equipment)	120 pieces
PK-CC91-5061	Mycoplasma Disinfection Kit I	Consists of Mycoplasma-ExS Spray, Aquaguard-1 and Aquaguard-2	1 Kit
PK-CC91-5071	Mycoplasma Disinfection Kit II	Consists of PromoCidal Spray, Aquaguard-1 and Aquaguard-2	1 Kit

Please see our website for products suited to detect mycoplasma or bacterial contamination in cell cultures/media and to eliminate contaminating mycoplasmas in cell cultures.

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