

# Fact Sheet for Bioquell BQ-EMS Frequently Asked Questions



## What is the Bioquell BQ-EMS?

The Bioquell BQ-EMS is a mobile decontamination system which uses hydrogen peroxide vapour to kill pathogens in EMS vehicles.

## How effective is the Bioquell decontamination process?

The Bioquell BQ-EMS utilises a 35% hydrogen peroxide solution to deliver a >99.9999% sporicidal reduction. This is known as a 6-log kill, the same standard of decontamination that high containment labs apply for areas hosting research on hazardous organisms.

## When should the Bioquell BQ-EMS be used to decontaminate EMS vehicles?

Decontamination can be performed during routine maintenance, at the end of a shift, following a patient with a confirmed or suspected case of infection, or following particular patient procedures, such as when Aerosol Generating Procedures (AGPs) have been performed in the EMS vehicle.

## How long does the decontamination process take?

Between 35-60 minutes depending on the size of the vehicle. All cycle times are subject to configuration, loading and environmental conditions. Please consult the user manual for proper setup and operation.

## How is the Bioquell BQ-EMS set up?

The system is very simple to set up and takes just a few minutes. Simply load and place the equipment, power it up and each component will automatically connect wirelessly.

## Does hydrogen peroxide vapour decontamination replace manual cleaning?

No. As the process provides a surface decontamination, the EMS vehicle must be manually cleaned and dry so that there is no visible soiling or dirt present before starting the process. This ensures the hydrogen peroxide vapour decontamination can contact and kill the organisms. With manual cleaning alone comes risk of missed spots, a potential for inconsistent contact times, and repeatability concerns. Using the Bioquell system provides the high level of assurance of a thorough disinfection by providing a proven, repeatable 6-log sporicidal i.e. 99.9999% kill on all exposed surfaces when used according to label directions.

## How do I know when the process is finished?

The Bioquell BQ-EMS system is controlled from outside of the vehicle and a green light will flash on the control system when the cycle is near completion. At this point, an operator would crack open the door to the vehicle and reach in with a separate low-level sensor provided with each Bioquell BQ-EMS to confirm that the hydrogen peroxide vapour concentration has fallen below the appropriate Occupational Exposure Limit (OEL). If the concentration is still above the OEL, simply close the door and wait longer. If the concentration is below the OEL then the process is complete.

## How do I know the process has worked?

Ecolab recommends placing 3-4 Bioquell Room CIs (chemical indicator cards) in challenging locations within the EMS vehicle. These chemical indicators change colour to indicate that an expected level of efficacy from the decontamination has been achieved.

### What do I need to take out/keep in the EMS vehicle?

Ecolab recommends removing exposed medicines, linens and any other absorbent materials from the vehicle before starting the process. Glucose meters using a glucose oxidase chemical reaction should also be removed.<sup>1</sup> Users should conduct a compatibility assessment of remaining items prior to running a cycle.

### Is it safe for electronics?

Yes, the Bioquell decontamination process has a history of compatibility with electronic devices, which means nearly all equipment can remain inside the EMS vehicle. Ecolab recommends ensuring that any compatible machine with an internal fan e.g. computer is kept running so that the internal surfaces are exposed to the vapour.

### Do I have to seal the vehicle?

Yes, it is important to do this to prevent the vapour from escaping therefore all windows and doors must be closed before starting the process.

If the rubber seals around the doors are in good condition then this is usually sufficient, however it is important to check for deteriorated seals before starting the process and add sealing tape to any damaged areas if necessary.

### Will I receive training?

Yes, Ecolab will provide complete operator training covering the above points and more to ensure safe and robust implementation of the system.

### Can the system be used in other vehicles such as police transport vehicles and fire trucks?

Yes, providing the vehicle is >10 m<sup>3</sup> (350 ft<sup>3</sup>) in volume, the Bioquell BQ-EMS system is suitable to be used in any vehicles, not just ambulances.

### Am I able to use the Bioquell BQ-EMS in other areas within our facility such as break rooms or staffing quarters?

Yes, the Bioquell BQ-EMS system is versatile and can also be used to decontaminate rooms as well as vehicles. Please consult with Ecolab before doing this for specific training. The Bioquell BQ-EMS system can decontaminate rooms up to 200 m<sup>3</sup> (7,000 ft<sup>3</sup>) in volume.

Ecolab also supplies a decontamination system designed specifically for rooms, the Bioquell BQ-50, which has more aeration capacity than the Bioquell BQ-EMS, vent sealing devices, and is stored on a rugged trolley for easy transportation. This increase in aeration capacity allows for faster cycle times.



1. Mahoney JJ, Lim CG. Effect of Disinfectants on Glucose Monitors Journal of Diabetes Science and Technology. 2012;6(1):81-85.doi:10.1177/19322968120060011 EPA Registration No. 72372-1

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