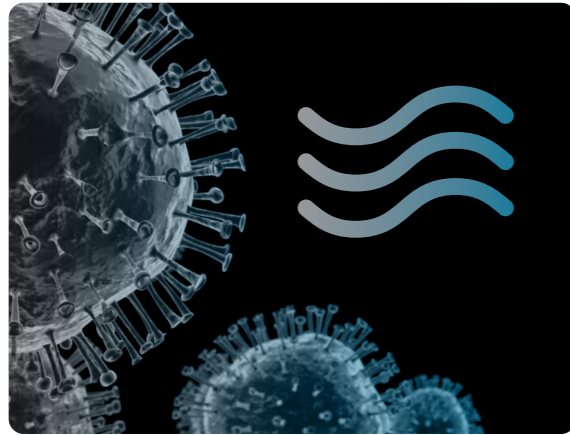


biointel



Technology

Photocatalytic Oxidation



BIOKKER is a system for the elimination of environmental pathogens (bacteria, viruses & mould) suitable for the treatment of indoor air and used to eliminate all organic compounds and particles, living or inert, dissolved in the air of any area within a building.

The technology used by **BIOKKER** is based on an advanced process of oxidative photocatalysis (PCO) included in the so-called AOTs (Advanced Oxidation Technologies) with the capacity to eliminate contaminants in the gas phase through the use of UV energy. All oxidative activity takes place in the sealed reactor inside the device.

Corporate, Public & Residential Buildings



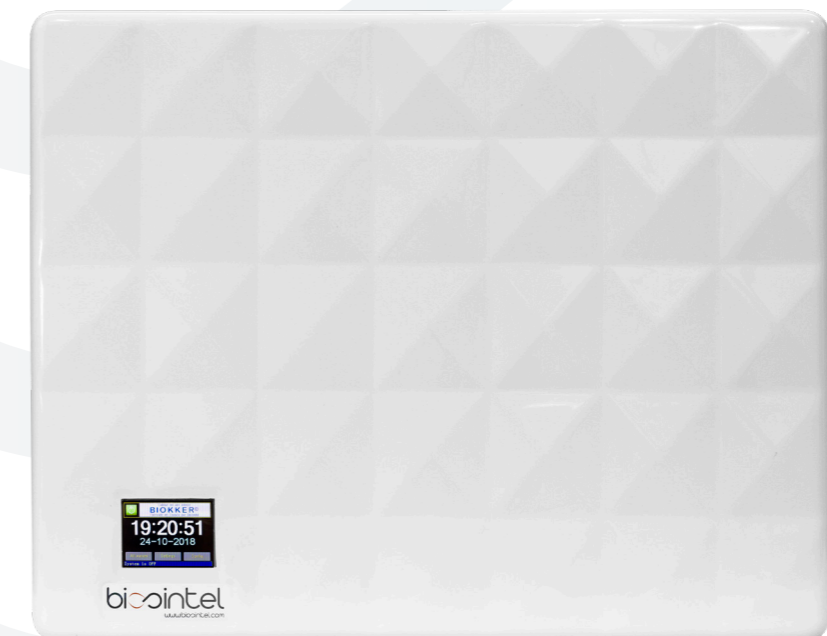
We spend between 80 and 90% of our time inside buildings and today more than ever, we are fully aware of the risks that breathing in a contaminated indoor air environment entails (up to 90 times more toxic than outdoor air).

Present society reacts to aggravating factors such as climate change and our own behaviour towards the environment, being increasingly strict and demanding higher quality of life standards. Architecture and technology are constantly evolving to meet these requirements while adapting to global new mandatory regulations related to indoor air quality, ventilation, filtration and energy saving.

The Biokker technology provides points towards granting of certifications Breeam, Leed, Well, Passivhaus, etc.

Biokker Advantages

BIOKKER is the most advanced and efficient system in the market for the reduction of airborne pathogens. Biokker and BiokkerInd are the new generation of devices using the renowned photocatalytic oxidation technology. It is not an air filtration system, it is a unique device designed to destroy pathogenic particles and in the same action eliminate VOCs.



- Indoor air quality
- Air renewals reduction
- Energy efficient
- No Ozone emission
- Photonic activation
- Green technology, no chemicals used
- No harmful by-products or emissions
- Contaminants are removed, not modified
- One single annual maintenance
- Different operating modes
- Operates at room temperature and atmospheric pressure
- Not a filter, it does not collect or keep pathogens or allergens
- Not a filter, it does not discriminate particles by size
- No ducts required
- Combines with other air treatments
- High oxidative power & low selectivity, allowing the degrading of multiple compounds & mixtures



bio∞sintel

Bioseguridad Integral, S.L.U
biosintel@biosintel.com
www.biosintel.com

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Food Industry, Preservation, Processing and Food Handling



The food industry is a very diverse sector that includes both natural products as well as developed and processed products that require the maximum hygienic and aseptic conditions throughout the different procedures.

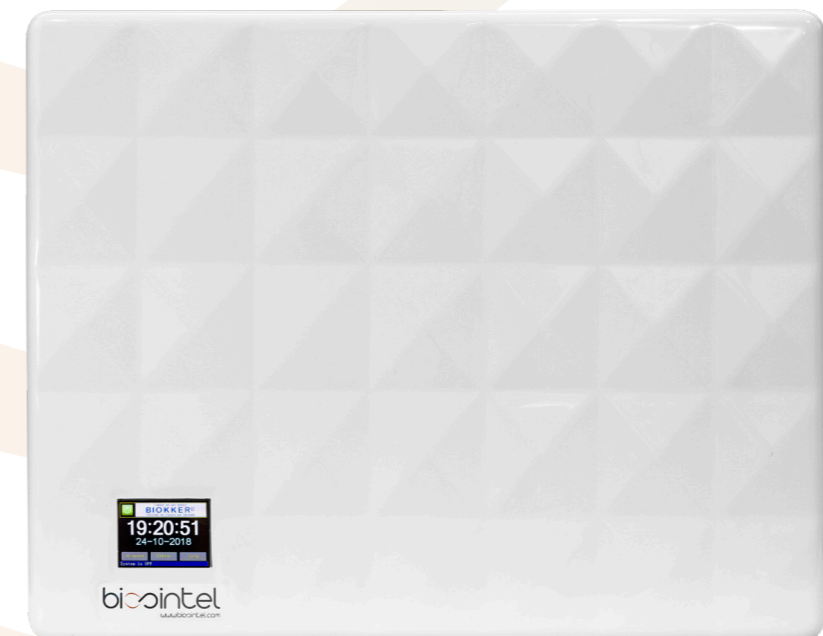
The dairy or fish industries, aside from the meat or fruit and vegetable industries present specific problems inherent to each sector: cross-contamination, responsible for the produce shrinkage due to bacterial contamination, filamentous moulds and yeasts, as well as multiple microorganisms. Pasteurization and other processes are used to eliminate pathogens present in products, but it is the handling and packaging phase that generates the greatest risk of uncontrolled

contamination between the air and the possible contaminant. Likewise, the deterioration of fresh perishable products due to fungal decomposition or the damage by ethylene gas during storage, cause early ripening and even physiologically and biochemically alters the product, shortening its shelf life, taste, appearance and of course, its quality.

BIOKKER helps prevent cross contamination due to bacterial colonization, and also the presence of moulds and yeasts. Biokker effectively removes VOCs and ethylene gas from warehouses and cold rooms, direct cause of the early ripening of fruits and vegetables.

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Wineries

Wineries have to renew constantly the air inside their facilities in order to prevent mould and spores growth, as well as the concentration of odours and other undesirable organic compounds such as TCA (trichloroanisole) or TeCA (tetrachloroanisole), both great enemies of wine and responsible for the smell and taste of "musty cork", in addition to controlling the air quality inside the cellar, the facilities must be kept refrigerated to achieve the proper conditions of humidity and temperature.

The most critical points of a winery are the bottling area, the bottle and barrel rooms, cork storage and fermentation and winemaking rooms; generally all of the areas that require special humidity, temperature and asepsis monitoring. The development and spread of pathogens and volatile organic compounds (VOCs) in any of this rooms which represents the perfect solution where air quality becomes important. The appearance of microorganisms or volatile organic compounds (VOCs) in any of these rooms, has fatal consequences for the quality and taste of the wine.

BIOKKER has been designed to eliminate pathogens and VOCs from the air, so that within a wine cave, it becomes an essential tool for the optimization of the indoor air.

Biokker and Eurostars Program

Our technology was awarded to be part of the European Union Program from Eurostars "Winepoll", on the elimination of TCA and TeCA from the indoor air in wineries, with the result of being currently considered the best technology for this purpose.



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biosintel@biosintel.com
www.biosintel.com