



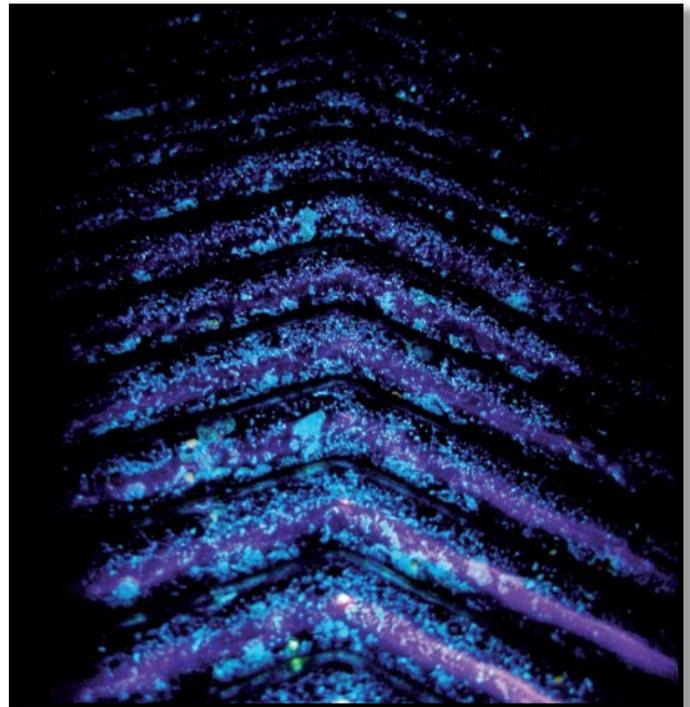
Bactiscan

Bactiscan and Bactiscope are portable light sources utilizing a variety of wavelengths that enable visual examination for detecting bacteria and biofilms in food manufacturing and processing plants.

Microbial colonization of surface (biofilms) has been documented in many environments. Research has shown that biofilms can often be a source of contamination in food processing environments.

Biofilm formation will occur on solid surfaces in contact with a liquid. Organic and inorganic material in the liquid form a sediment onto the solid material. Subsequently, biologically active microorganisms will be attracted to this conditioned surface and adhere to it. The microbial cells will initiate growth, form an attachment matrix and develop into a complex community forming a microbial biofilm. Such microbial biofilms are common on solid surfaces in contact with many different kinds of liquids, fresh water, sea water, oil, milk, blood and so on.

Currently, lab technicians are required to take small swabs of cleaned surfaces after CIP (clean in place) chemical cleaning has been performed to ensure the CIP process has removed the said biofilm from the surface, before new product is brought in to start the process again. This is done inside processing tanks, on counters and work surfaces, on cutting/grinding wheels, on floors and in floor drains as well as a variety of other surfaces within the processing facility.



Above: Biofilm detected on the plates of a heat exchanger.

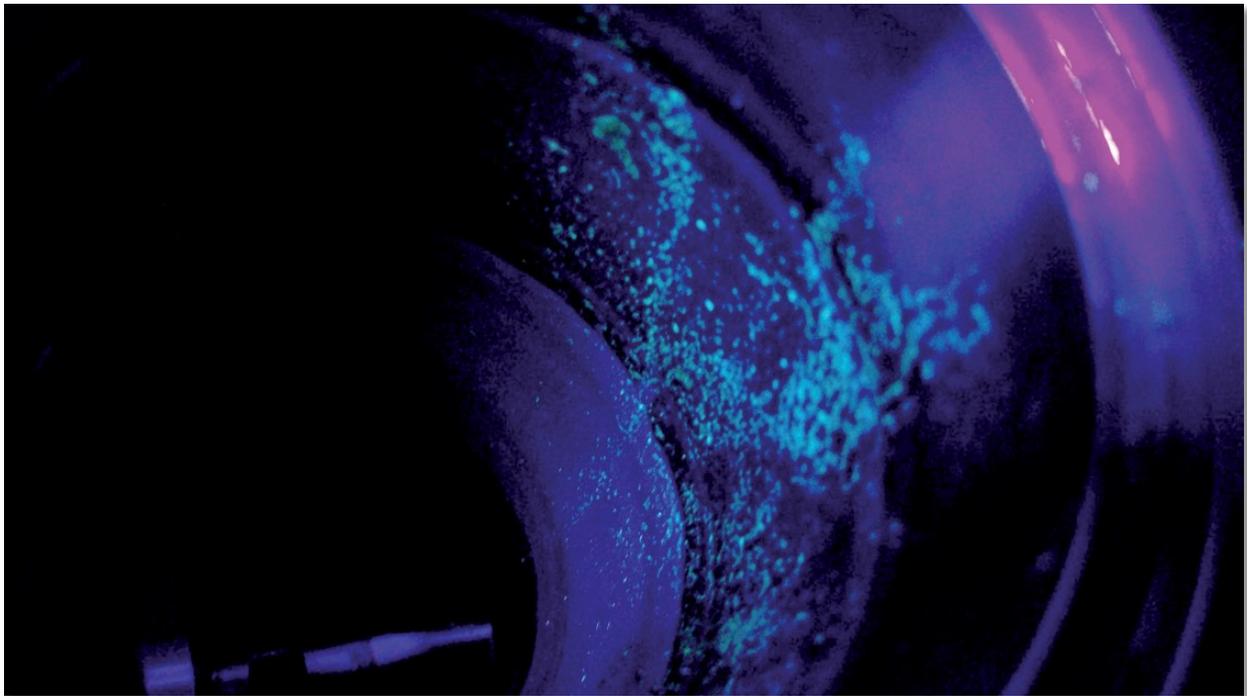




Bactiscan and Bactiscope can identify the location of biofilms, mold, bacteria and many other contaminants. Many times there is a contamination in an area such as vessel walls, filling machines, pipes, cutting wheels, work surfaces, floor drains, etc., but it may not be clear where it is coming from. Both Bactiscan and Bactiscope were developed to help determine the location of contamination and make the remediation job easier. These heavy duty professional lights are designed to display a small number of narrow waveband light in long wave frequencies. The high intensity radiation emitted from these units enables the operator to view large areas at a distance, for instance looking at contamination at the top of a tank while standing at the bottom. This radiation is a safe and natural component of the electromagnetic spectrum with high energy levels and wavelengths.

Some bacteria fluoresce under high wavelength light, and it is possible to view some bacteria in this way, Bactiscan has taken this one step further and using a unique wave alternating system, we are able to view bacteria such as Salmonella, E. coli, and many others without the use of any consumables, watching the proteins fluoresce in front of your eyes.

We have carried out a number of on-site validations of this system at dairy, cheese, brewery, soft drinks locations and have detected a variety of problems in many types of facilities, for example Listeria in the picture below.



Above: Biofilm detected in piping.

Extreme Microbial Technologies—Authorized Easytesters Distributor

844-885-0088 www.extrememicrobialtechnologies.com