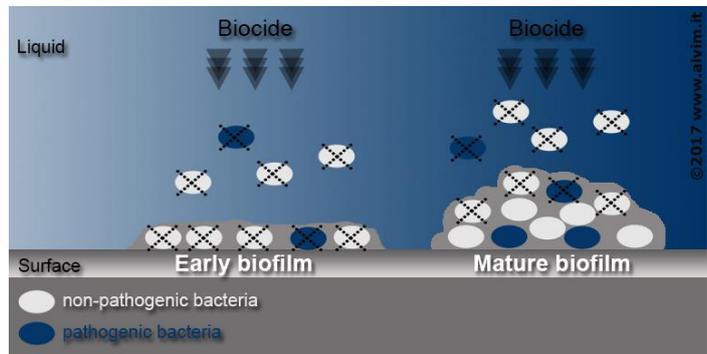


Bacterial growth on surfaces in contact with water and other liquids (a phenomenon usually known as “biofilm” or “bacterial slime”) causes many issues in [Food and Beverage production](#). Indeed, such bacterial layer is the ideal environment for the proliferation of pathogens. Moreover, biofilm is much more resistant to sanitation than free-floating bacteria, and this resistance increases with time.



In this soft drink production plant, Clean-In-Place (CIP) was applied on a scheduled time-basis. To verify the real effectiveness of CIP treatment against biofilm, the Customer decided to install an ALVIM Sensor in the feed water line of the beverage production plant. The following data illustrate the most relevant results of the biofilm monitoring that was carried out in this industry over several months.

As it can be seen in Figure 1, the ALVIM Sensor detected biofilm growth about 10 days after the installation in the soft drink production plant. Since the ALVIM Technology detects biofilm growth from its very early phase (first layer of bacteria), the scheduled CIP treatment, that was applied a couple days after bacterial growth, easily removed biofilm.

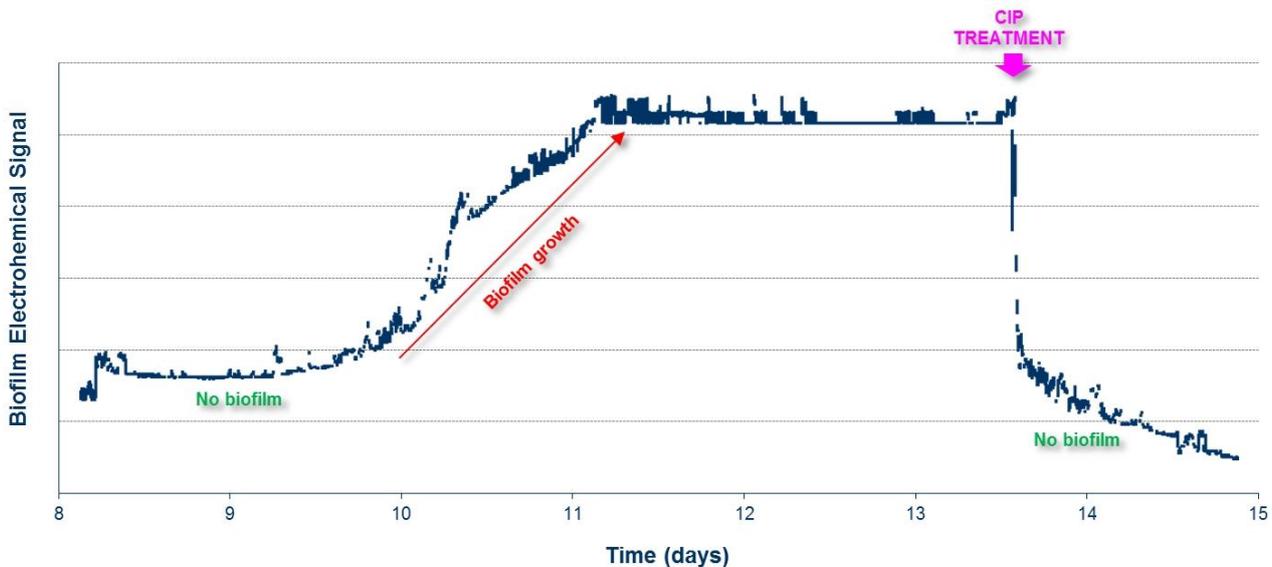


Figure 1: Monitoring of biofilm growth in the soft drink production plant, by ALVIM probe (days 8-14)

After some weeks, the ALVIM probe detected biofilm growth again (Fig. 2). Also in this case, the scheduled CIP treatment was applied a couple days after bacterial growth and, again, the cleaning treatment completely removed biofilm.

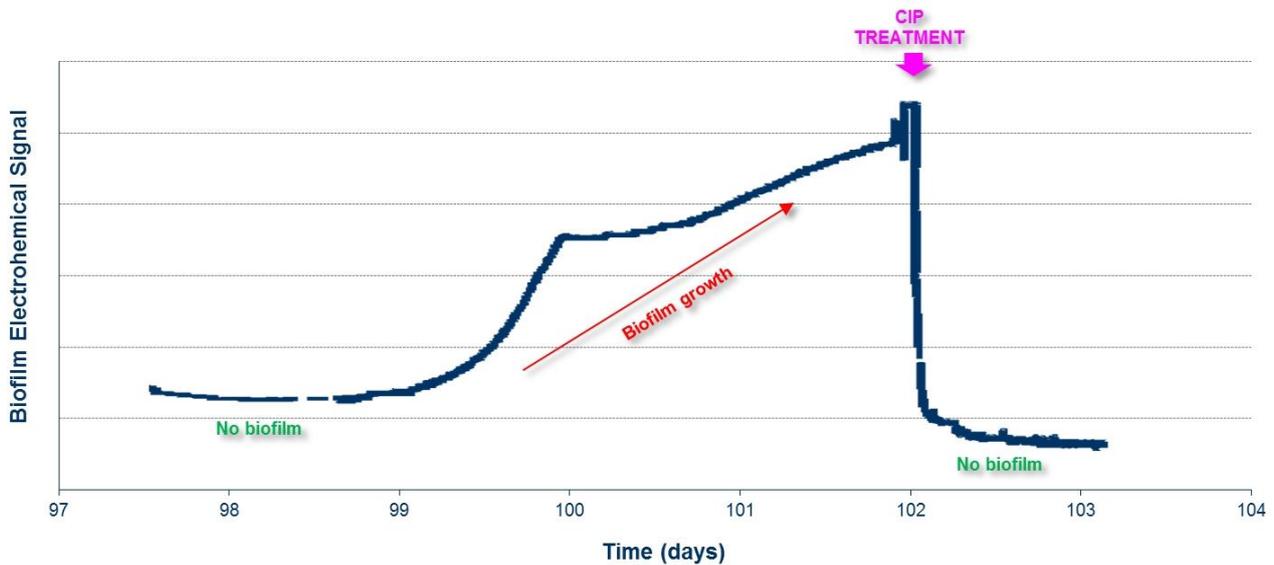


Figure 2: Monitoring of biofilm growth in the soft drink production plant, by ALVIM probe (days 97-103)

The ALVIM Sensor demonstrated that the application of CIP was timely enough, during the considered period, even if a small adjustment (anticipating the treatment of 4-5 days) would have prevented bacterial growth inside pipelines even better.

The indication provided by the ALVIM Biofilm Monitoring System allowed to check, on line and in real time, the actual need of a cleaning treatment, and the effectiveness of CIP.



Do you have a similar problem with biofilm? Contact our experts and ask for a free custom-tailored consultancy, you will receive further information about ALVIM products and services.

The ALVIM Biofilm Monitoring System is a reliable tool for the early detection of bacterial growth on surfaces, on-line and in real time, in industrial production lines, cooling water systems, etc.

The ALVIM Technology has been developed in collaboration with the Italian National Research Council, Institute of Marine Sciences, and it is currently used worldwide in many different application fields.

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