

BIOFILMS IN FRUIT & VEGETABLES INDUSTRY

ISSUE

An Itram distributor (Zohar Dalia) was contacted by a large fruit & vegetable processing facility who was experiencing periodic *Listeria* presumptive positives across their installation.



BACKGROUND

Normal cleaning was conducted with regular chemical products. Due to microbiological problems, the conventional cleaning product was circulated 15 min longer to try to solve the problem; however the problems persisted.

PROBLEM DESCRIPTION

- Lack of clear and “easy” cleaning and sanitizing procedures to avoid microbiological contamination.
- Sudden microbiological peaks including pathogens like *Listeria*.
- Shortening product shelf life.

TREATMENT

- Conducted Biofinder tests at different points of the facility.
- Pipes were cleaned with enzymatic products TENSIO CIP and BIO CIP. The products were added manually at 0.25% and 0.05% respectively. The Jacuzzi was filled with water at temperatures between 50-53°C.

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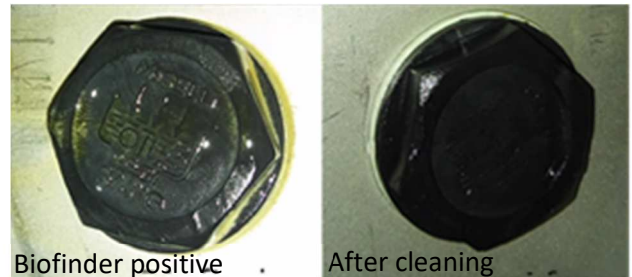
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- Removable parts of the Jacuzzi which Biofinder showed positive biofilm reaction, were dismantled and put it inside the Jacuzzi together with the enzymatic products, in order to remove the biofilms growing on it.
- Rinsed with potable water.
- Sanitized with 150 ppm Chlorine (circulation for 10 min).

RESULTS



First results:

- Biofinder detected biofilms in the vegetable cleaning and washing Jacuzzis.

After Treatment:

- Biofilm was removed from the sensitive parts of the Jacuzzi including external areas, by applying TENSIO CIP and BIO CIP. Only 1 treatment cycle was required.
- *Listeria* spikes were eliminated.

RECOMMENDATION

- Create a monitoring program for each piece of equipment to control biofilm growth.
- Implement a preventive enzymatic treatment to avoid the development of biofilms.