

## NATURAL EXTRACTS INDUSTRY

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### ISSUE

Microbial contamination of final product at a natural extracts manufacturer.

### BACKGROUND

- High microbial contamination of natural extracts from fruits.



### PROBLEM DESCRIPTION

- Maximum acceptable levels: 100.000 cfu/g total count. Detectable level: >10.000.000 cfu/g.
- Unacceptable final product.
- Losses of 80.000 €/week.
- Yeast problem.
- Environmental origin.
- High increase after concentration of the product.
- Colour affected (orange).

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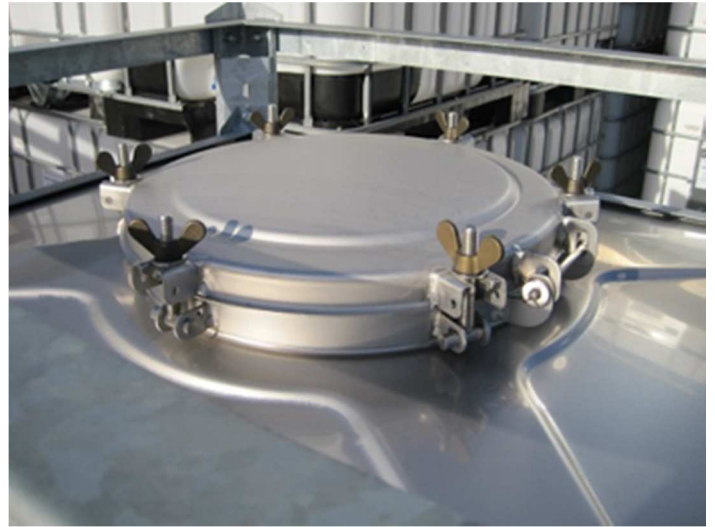
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## TREATMENT

- Application of Biofinder over direct contact surfaces.
- Installation of surface sensors (SCH).
- Cleaning with Enzymatic detergent.



## RESULTS

### First results:

- The filtration area showed little positive Biofinder reaction.
- Very positive Biofinder reaction over the tank lids.
- Cross contamination between surfaces and filtration unit (SCH results).

### After Treatment:

- Elimination of the microbiological problem.

## RECOMMENDATION

ITRAM proposed the following actions:

- Separation of contaminated areas.
- Use of surface sensors SCH to detect cross contamination.
- Fixation of a surface limit for yeast.
- Rapid method based on ATP analysis:
  - Use of sensors, incubation for 4 hours inside a yeast broth.
  - Reading with ATP before and after incubation.
  - If RLU differences are higher than 400, enzymatic cleaning and disinfection.
- Cleaning of facilities with enzymatic detergents.
- Strong disinfection.
- Follow up with regular inspections using Biofinder at critical points.

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