



Case Study: Supermarket

Major Supermarket Cool Room - WA, Australia

“The results clearly show that the cleaning method used was successful at eliminating fungal and bacteria growth at the time of sampling.”

Dr Peter Kemp,
 Mycologia Australia

This refrigeration service company in WA has a core business of service, maintenance and installation in refrigeration and air conditioning with major supermarkets as one sector of its client base.

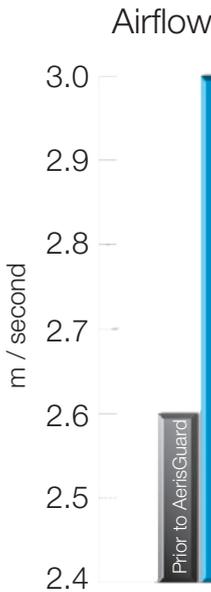
They were keen to work with Aeris Technologies to find a solution for their clients’ biofilm and microbial slime related build-up on their forced draft cooler (FDC) units within their Cool Rooms.

This study concerns the treatment of a FDC unit in a Cool Room of

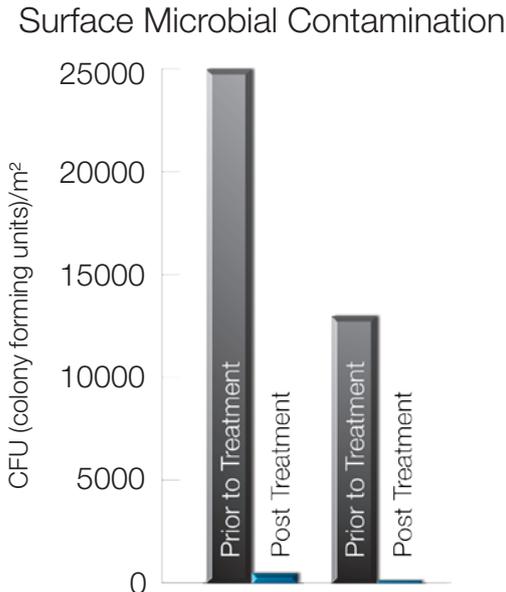
one of the company’s clients - a major supermarket chain.

Biological contamination present over extended periods in Cool Rooms can lead to a reduction in operating efficiency.

The contamination of the FDC is a common problem for this company as their Cool Rooms typically store a large amount of fresh produce which potentially creates a large organic load within the airspace. This then provides a nutrient source for biofilm to proliferate within the FDC.



15% Improvement



Almost Disappears

See over page for the full trial details which produced in these outstanding results

Situation Identification

- An inspection of the FDC unit prior to treatment showed that there was heavy biological contamination of the heat exchange coil and surrounds
- A remediation using AerisGuard™ products was thought by the company to be the best solution to resolve their biofilm issues
- The company requested for the remediation to be completed within 1½ hours due to the limited shelf life of the stored produce and that the stored produce remain in the Cool Room during the treatment

Methodology

- AHS Coil Cleaner was diluted and applied to the FDC unit according to the SOP and left to digest the biofilm for around 25 minutes
- The FDC unit was then rinsed with water and allowed to dry, whereupon the AHS Coil Treatment was applied to provide an anti-microbial

coating to the unit

- A repeat treatment with the enzyme product would have provided an even more thorough remediation, however due to time constraints this was not possible

Results

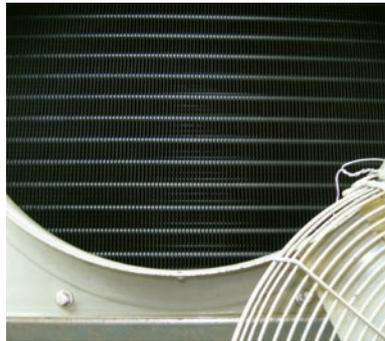
The outstanding results are displayed in the graphs at the bottom of the page one. There was a 15% increase in airflow – increasing from 2.6 m/sec to an impressive 3.0 m/sec.

The microbial analysis explains the results achieved. Pre-trial locations had “Very High” to “Extremely High” surface concentrations of fungi. The main species were typical “Water-Loving” fungi. The presence of *Trichoderma* sp. indicated that the mould growth was not recent.

Post trial location samples showed no fungal growth or growth at the detection level of a single colony (less than 421 CFU/m²).



Air on: prior to AerisGuard* treatment



Air on: post AerisGuard* treatment

Conclusion

The biological contamination was successfully remediated with almost all of the biofilm successfully removed from the coil and the external surface of the FDC.

The customer experienced considerable benefits from the increase in airflow.

Aeris Hygiene Services delivers Cool Room performance solutions through the use of the AerisGuard* technology which has a residual action, preventing colonisation of Cool Room surfaces for extended periods.

*AerisGuard™



Aeris Hygiene
Services
Cool Room Performance Solutions



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