

CASE STUDY OF COMMERCIAL KITCHEN HOODS: REDUCTION OF CLEANING TIMES BY 75% OR MORE

Challenge

A popular commercial kitchen in Milwaukee, WI that prepares more than 3500 meals per week for local establishments tasked our team to reduce the 8+hour cleaning times of their stainless steel hood filters, kitchen hood and fascia. Cleaning teams require many hours each week to clean the kitchen hood, using a lot of hot water, PPE, caustic chemicals, and plenty of muscle-energy and skill to reach & scrub the enclosures. And have our solution to reduced cleaning remain in place for 3-5 years.



4EverGuard's Jon Rehorst in front of the kitchen hood



A video of this case study can be found here:

Plan of attack

The initial cleaning and pre-treatment at the kitchen took place in October of 2021 right before a busy holiday season when tens of thousands of customers visit the restaurant facility.



Figure 1 The kitchen's suppression hood, cleaned state

The **kitchen's** process for cleaning the hood, hood filters & the fascia typically took two-days: remove nine (9) filters (2 x 1.5' ea.) & soak them overnight in a degreaser to soften up the baked-on grease, hoping to ease the cleaning of those filters the next day.



Kitchen hood, behind the filters prior to cleaning



Close up of area behind hood filters

Once they started cleaning on the 2nd day, it took 30 - 45 minutes per filter to clean, totaling 6 hours just for the filters, then another two hours for the hood and fascia, making it an all-day affair. Time to clean: 8 hours plus overnight soaking of filters in caustic cleaning agent.

1. A team of two from 4EverGuard removed the filters, laid them down so we could spray *Cyclone* on the front, back, and sides allowing the degreaser to start working. We then immediately took one filter at a time & submersed it in hot water mixed with *Cyclone* and scrubbed off the baked-on grease with scouring pads. The first cleaning we did was before the *Titania* treatment, so

it took us about 20 min/filter, or just over 2.5 hours total, and included a wipe down with our dual quat *Safe-T-Gard*, after the *Cyclone* cleaning. Although we didn't have the benefit of a *Titania*-surface yet, *Cyclone* proved to be a much better degreaser than typically used in this type of cleaning. We also cleaned the hood & fascia in about an hour. *Cyclone* was diluted at 10:1: more savings & no gloves were needed.

2. Once we were done cleaning and preparing all the surfaces for a *Titania* treatment it took us about 15 minutes to spray all the filters, the hood, and the fascia with *Titania* and replaced the filters completing the initial clean and treatment within 4 hours from start to finish.



Two months later: the win-win

After the holiday season, 4EverGuard returned to the kitchen for a follow-up cleaning and to gauge the benefits of the *Titania* surfaces. We removed the nine (9) filters from the suppression hood, laid them on a prep bench, and sprayed them with *Cyclone*. Just like the first time, we submerged one filter at a time in hot water mixed with *Cyclone*. Instead of hard brushes and scouring pads, we utilized only a soft cloth & a soft brush and were able fully to clean each filter in 5 min., bringing each filter to a shine much like when they were new. We completed the cleaning of two months of cooked on grease of all nine (9) filters in 45 minutes. **Reduction in cleaning times using their standard cleaning process used for years: from 8 hours plus overnight soaking, down to 45 minutes total!**

We then cleaned the hood & fascia within 15 minutes, bringing those surfaces to the same like-new shine & clean to the touch, feeling no grease at all on the surfaces. Total cleaning time: 60 min. **Reduction in cleaning time of hood & fascia: 60 min.!** The chef smiled in disbelief. But we have the evidence, and he has a like-new kitchen. **There's a lot to our safer & more effective** chemistry, almost a 100 years newer than the weary old formulas of the 1930s.

The most noticeable attribute of the *Titania* treated surface was the grease was no longer able to bake onto the surface, the active *Titania* surface made of hydroxyl radicals kept this from happening, all the way up to 20,000 deg. F, day and night.

→ Our cleaning & coating solution was replicated at University of North Texas, Denton Texas; Austin Hilton Hotel restaurant in Austin Texas; Shriners commercial kitchen in Milwaukee WI, Nashville Detroit MI, Andiamo's Restaurant in Detroit Mi, and another commercial kitchen in Cincinnati, OH.



4EverGuard Protective Coatings A CASE STUDY



The kitchen's crew were grateful to 4EverGuards in saving labor-hours, reducing the cost of cleaning products, as well as keeping the kitchen safe from fires due to grease build up. Eighteen months after the initial cleaning & treatment of the surfaces, they are working as good as the day they were completed; we anticipate that this will continue for another couple years before a re-treatment is required. This kitchen is on a tight budget. Their savings in labor, chemical costs, and improved surfaces equates to massive savings, ROI and no more sore muscles. Everybody wins here.



Kitchen filter with Titania, after 2 months, and a five min. cleaning. Like new.

We want your business. Let's chat about your facility's cleaning, odor & disinfecting challenges.

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