

SCD Probiotics

Case Study Summary – Treatment of Oil and Grease with SCD Bio Klean™ on a kitchen wastewater in Hong Kong

Industrial Cleaning – Sludge treatment (CSS-020-2012)

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Industry:	Industrial Cleaning
Application:	Treat the oil & grease in grease interceptor as trial
Where:	Hong Kong
When:	20 th Nov 2012 – 28 th Nov 2012
Products:	SCD Bio Klean™
SCD Licensee:	SCD Probiotics (HK) Co, Ltd.

Background

This study was treating a wastewater system sourced from a canteen of a huge company. The system needed treatment as it exceeded the standard of HK Environmental Protection Department and it contained high concentration O & G (oil and grease) that needed to be reduced. The trial treatment with SCD Bio Klean, manufactured through SCD Probiotics Technology, at the grease interceptor showed that the fatty oil and grease slowly reduced and the condition of the grease trap improved compared when it was untreated.

Introduction

The canteen in HAECO (Hong Kong Aircraft Engineering Company Limited) serves as the main food supplier of the company's employees with daily wastewater of 16 m³. The wastewater flows into a central grease trap towards the ground floor and is then discharged. Recently, the concentration of O & G (oil and grease) of the effluent from grease trap exceeded the HKEPD (Hong Kong Environmental Protection Department) standard that is less than 100 mg/L.

Researchers would like to introduce probiotics into the system to clean and reduce O & G. They tested the effectiveness of SCD Bio Klean by applying it regularly into the system, specifically into the grease inceptor and grease trap. SCD Bio Klean is an all-natural, probiotic cleaner containing living microorganisms and their metabolites which break down grease, grime and dirt, manufactured through SCD Probiotics Technology that is an increasingly effective product for a variety of industrial, commercial and household applications.

Methodology

The product was applied into the grease trap at 4 L per day to help reduce the concentration of O & G in the kitchen wastewater. As an initial reference of Bio Klean Treatment on FOGs, a trial was done on a selected Grease Interceptor of HAECO Staff Canteen Kitchen between



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20th Nov 2012 and 28th Nov 2012 (8 days trial). One (1) Liter of SCD Bio Klean was poured daily into the selected grease interceptor after work.

Results

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From the Grease Trap before trial in Figure 1, heavy and solid grease scab (or grease layer) with brown color oil could be clearly seen and covered the entire surface. The after treatment photo in Figure 1 showed an obvious decomposition of grease scab. In several small areas, the grease has been entirely broken down and we could see the water under the surface.

This could be accounted for by the living microorganisms' ability to utilize, degrade or recycle materials/compounds found on the grease trap.

Figure 1: Before and After of SCD Bio Klean in the grease trap



Before treatment (15th November)



After treatment (28th November)

On the other hand, the grease interceptor was cleaned regularly. During the trial, the oil and grease stayed in liquid form, making clean up of the surface oils much easier. The cleaning operation was already stopped between 26th and 28th Nov 2012. After two days, it is showed in Figure 2 that the oil and grease stayed in liquid form instead of accumulating, hardening and solidifying.

The living microorganisms in the product break down hard/solid materials on the interceptor providing a cleaner, pathogen free system. A process of decomposition happened to the materials/compounds that accumulated as sludge in the system (in a form of grease/oils).

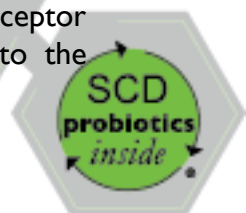


Figure 2: Before and After of SCD Bio Klean at the grease interceptor



Before treatment (20th November)



After treatment (28th November)



After treatment (28th November)

Conclusions

The trial treatment with SCD Bio Klean at the grease interceptor showed that the fatty oil and grease have not turned into solid or scab, and the condition of the grease trap improved compared to when it was not yet treated. In order to achieve the desired results, it is advised to continue the utilization of SCD Bio Klean.