

A Case Study

Fishmeal Manufacturing Odour Control

By Odour Control Biofilters

Background

Collagen Marine is one of the new fishmeal companies established in Kerala. The company was setup by a group of entrepreneurs in and around Kozhikode, also known as Calicut, the City of Spices. The company was setup in the tourist location, Kakkadampoil, where the smell of fish was not very common except in the festival seasons. The challenge was to match the expectation of the management to make the facility smell-free, and EES has attained 100% success in it. The hilly terrain makes the area not much familiar to the smell of fish.

The company, Collagen Marine started its operations in 2014. The company manufactures high quality sterilised fishmeals and fish oils mainly for domestic market. The raw material for the manufacture is fresh fish such as Oil sardine, Mackerel, Achovy etc. The manufacturing process includes unloading of fresh raw fish to the bin, cooking, pressing, drying, cooling, grinding and packing.

The odour control system includes condensation of the off-gases from the cooker, press and the dryer, followed by a humidification step and then to the final treatment in the Biofilter. The Biofilter at Collagen Marine is the first project carried out by Elixir Enviro Systems Pvt Ltd. Later, Collagen Marine Entrusted EES for the commissioning, operation and maintenance of the effluent treatment plant as well at their premises.

Biofilter Performance

The Biofilter installation was done by Elixir Enviro Systems Pvt Ltd. The media used was proprietary media. The advantage of using Biofilter is its unmatched odour removal efficiency of 99.5%. After installation of the Biofilter, the company never had an issue with its neighbourhood regarding odour issues which is a huge relaxation for the management considering the peculiar nature and terrain of their plant location.

| Sample # | Biofilter Inlet OU(DT) | Biofilter Inlet OU(DT) | Removal Efficiency (%) |
|----------|------------------------|------------------------|------------------------|
| Sample 1 | 18,718 | 130 | 99.3 |
| Sample 2 | 39,743 | 109 | 99.7 |
| Sample 3 | 13,398 | 66 | 99.5 |
| Sample 4 | 10,136 | 79.5 | 99.2 |
| Sample 5 | 18,718 | 87 | 99.5 |
| Sample 6 | 39,742 | 87 | 99.8 |

OU - Odour Units; DT - Detection Threshold



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