

**Feature**

- Purifies dairy farm wastewater including waste milk.
- Breaks down oil, grease, and other organic pollutants.
- Low-cost operation is possible.

**Overview**

(Technical principles, actions, etc.)

Activated coal is made by treating coal with diluted hydrochloric acid to make it finely porous. When it is submerged in water, therefore, microorganisms form a biofilm on the coal, which then becomes a den for microorganisms.

The aerobic bacteria that live on the biofilm eat the organic matter in the wastewater and are discharged as CO<sub>2</sub>. Since the purification process uses the aerobic bacteria, bubbling is required in order to supply oxygen.

In wastewater treatment using conventional bio-agents, microorganisms flow together with the treated water; with activated coal, however, microorganisms stick to the biofilm, so the addition of bio-agents is not necessary.

We were able to purify dairy farm wastewater using microorganisms as a support environment for activated coal.



Raw Water (Left) and Processed Water (Right)