



【Environmental Service】 Wastewater treatment O & M and Dioxin Analysis - HIYOSHI CORPORATION -

Facility O&M and Analysis of water quality with our solid techniques



Features

- 60 years of experience in Japan, more than 80 business licenses, and a total of 1900 personnel qualifications
- One-stop Environmental Service: O&M, water testing, water treatment, chemical supply, installation repair work, solid waste treatment.

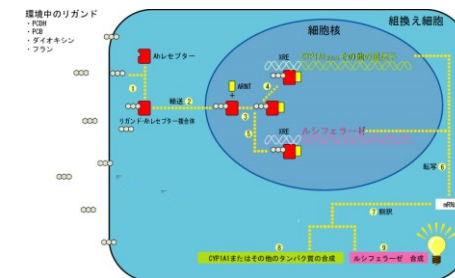
Overview

“Everything starts from measurement” based on this principle, we provide comprehensive solution to Environmental related issues.

Hiyoshi Corporation

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The Only One Unique and Quick Analysis method for Dioxin Analysis



It is approved as an official method in Japan, USA, EU and Taiwan

- Comparison with Instrumental Analysis:
 - ✓ High Correlation
 - ✓ Cost is about 1/2
 - ✓ Turnaround is less than 1/4
- In Japan about 60,000 samples were analyzed
- Can be used for an official measurement screening, or internal testing purpose.

CALUX BIOASSAY (HighLux) is a reporter-gene bioassay that uses a mouse recombinant cell line which can measure Dioxins in various matrices such as Environment (ash, exhaust gas, soil, etc.) as well as biological and food matrices.

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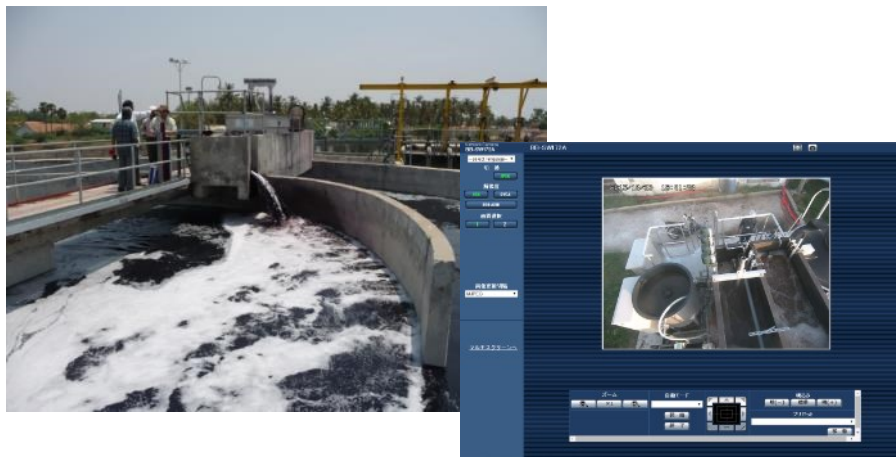
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With one window, we can solve any problems related to facility management, so we can reduce cost, labor, time and so on. Since each expert is present, it is possible to comprehensively judge the problem and deal with it. Even when accidents or troubles occurs, the relevant department can be contacted quickly for appropriate response.

Usage Example · Actual Performance

In Japan, there are many achievements, from public sectors to the private sectors, such as water treatment, sewage treatment facilities, waste disposal facilities, effluent wastewater treatment facilities and septic tanks.

Furthermore, from the experience of wastewater treatment facilities O&M in remote areas, we established a remote monitoring system making it possible to maintain facilities not only in Japan but also overseas.



The Only One Unique and Quick Analysis method for Dioxin Analysis

- 【Accuracy】** Since it highly sensitive as 0.19pgTEQ/well, it require less sample amount
- 【Analysis Cost】** No need of expensive instrument and so the analysis can be done at low cost
- 【Analysis time】** Using highly sensitive cells shortens the process and thus reduces the time for analysis
- 【Simple Process & Operation】** Does not need complicated instruments and so it is easy to set up.
- 【High performance】** High Correlation with HRGC/HRMS

CALUX (HighLux) vs. HRGC/HRMS (Conventional Method)

	CALUX Assay	HRGC/HRMS
Turn Around	3-7 days	About 30 days
Price	50,000 yen ~	Approx. 120,000 yen
Sample quantity	3.5g	10-20g (soil)

【Official Method】

Japan (JIS K0463, MoE): Emission gas, ashes, and cinders.

USA (EPA Method 4435): Solid Waste

EU(Commission Directive 2002/69/EC): Food and Feed

Taiwan (NIEA S901.60B5): Soil

Because of 1) Low cost 2) Faster turnaround 3) Less sample amount, it is being utilized in various field.

【Screening method】

- Kanagawa Prefecture (Ashinoko Lake-Environmental survey carried out to check the actual quality of sediment)
- Nagahama city, Shiga prefecture (Survey of dioxins in soil)
- World Bank (Biological Monitoring of POPs in SE Asia)

【Self inspection / Product Development / Research】

There are various ways to use the method; Monitoring of waste incinerator, product development such as dioxin inhibitor investigation of pollution of dioxin in living organisms (blood, biological samples etc.)

