

# Chemical-Free Wastewater Treatment System

MICRO WATER SYSTEM®  
IGADEN CO., LTD.

## Electrolytic Wastewater Treatment System MICRO WATER SYSTEM®

As environmental pollution escalates, water purification technologies that emphasize global environment conservation while seeking coexistence with a natural environment and a recycling-based society are desired. We offer a chemical-free environmental contaminant elimination system (patented) that uses an electro-physicochemical reaction. It contributes to conservation planning for water, space, and electric power, as well as for reduction of CO<sub>2</sub>.

Our system has been adopted in the "Kasumigaura water purification project" (a project for developing technologies to purify eutrophicated lakes by the Ministry of Education, Culture, Sports, Science, and Technology), "Development of a purification system for hard-to-process wastewater such as wastewater from dairy parlors" (by the Ministry of Economy, Trade, and Industry), and the "Purification project for dam lakes" (by the Ministry of Land, Infrastructure, Transport, and Tourism), receiving recognition for its efficient water purification performance.



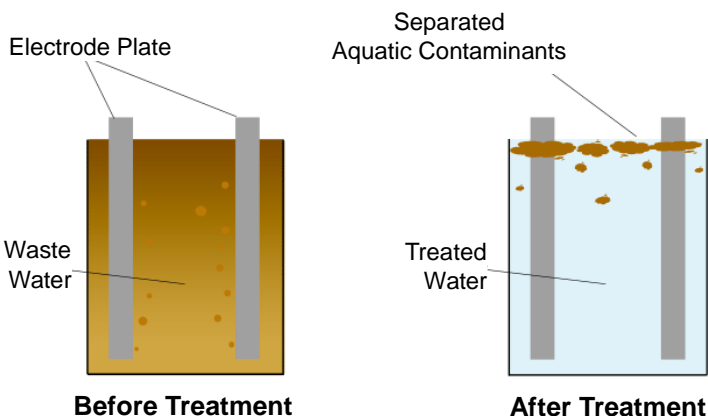
## Wastewater Treatment System



- ◆ Decomposition and elimination of aquatic contaminants
- ◆ Separation and decomposition of BOD, COD, nitrogen, ammonia, cyanogen, and other impurities in wastewater
- ◆ Separation of SS, scale deposits, sludge, rust, heavy metals, phosphorus, and oils
- ◆ Water recirculation treatment for cooling towers and hot-water boilers; prevention of red water, occurrence prevention and elimination of scale and silica
- ◆ Decomposition and separation of organic materials in industrial wastewater; decoloration; measures for the 5th total volume control
- ◆ Treatment and decoloration of dairy (livestock) wastewater; measures for the Act on Livestock Waste
- ◆ Purification, algicidal treatment, and separation/ elimination of toxic substances in the water in eutrophicated lakes
- ◆ Treatment of saline wastewater; chlorinator



- \* Treatment is adjusted depending on the amount of discharge and treatment, and the kind of blend materials.
- \* Some chemicals mixed in wastewater may not be treatable. Please consult us.



**Discharge  
(to sewage or river)**

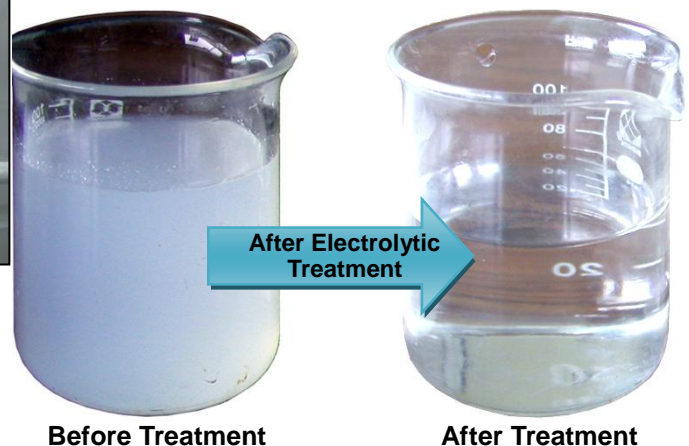
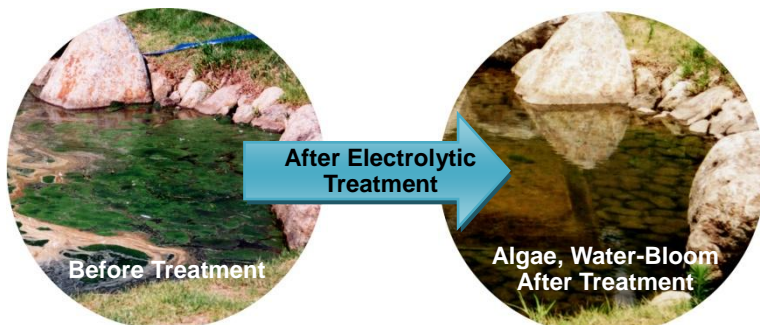
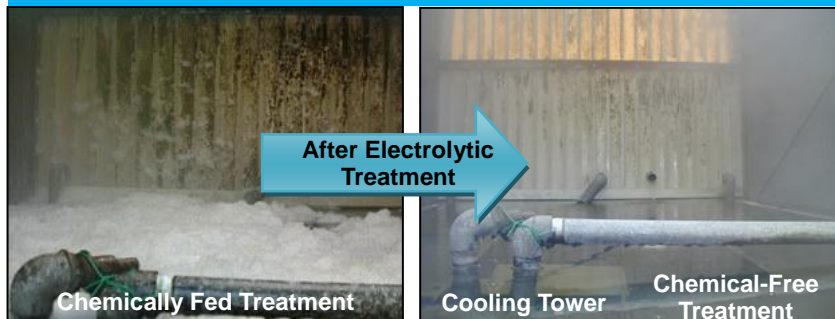
Electrolysis of wastewater efficiently separates, decomposes, and eliminates contaminants in the wastewater.

The treated water can be discharged into sewage or a river if it is within the water quality standard.

# Treatment Capacity Model

CATEGORY	TEST SAMPLE	ITEM	BEFORE TREATMENT (m g/L)	AFTER TREATMENT (m g/L)	ELIMINATION RATE (%)
FOOD PROCESSING FACTORY	Treatment of Wastewater from Food Processing	COD	820	6	99.3
		BOD	520	1	99.8
		SS	2,000	20	99
		N-Hexane Extracts	18	0	100
		Nitrogen Content	100	9.8	90.2
		Kjeldahl Nitrogen	100	0.15	99.9
		Total Phosphorus	23	14	99.4
ELECTRONICS MANUFACTURER	Treatment of Wastewater from Employee Cafeteria	BOD	89	12	86.5
		COD	130	24	81.5
		SS	150	14	90.7
		Nitrogen Content Rate	15	3.7	75.3
		Phosphorus Content Rate	4	0.3	92.5
DUCT WASHER MANUFACTURER	Treatment of Ventilation Duct Washing Wastewater from Kitchens of Restaurants and Hotels	BOD	120,000	1,300	99
		COD	42,000	980	98
		SS	240,000	1	100
		N-Hexane	170,000	6	99.9
		T-N	370	4.5	98.8
		T-P	100	1.6	98.4
CHEMICAL PRODUCTS	Treatment of Wastewater from Caustic Soda	COD	290,000	5	99.9
MACHINING	Treatment of Wastewater from Compressors	N-Hexane Extracts	1,100	2.5	99.8
METAL PLATING FACTORY	Treatment of Wastewater from Nickel	Cyanogen	13.7	<0.1	99.3
		Cyanogen	10,000	0.6	99.9
HEAVY METALS	Treatment of Cleaning Water for Soldering	Copper	1.8	<0.02	98.9
		Lead	0.03	<0.005	83.3

## Example



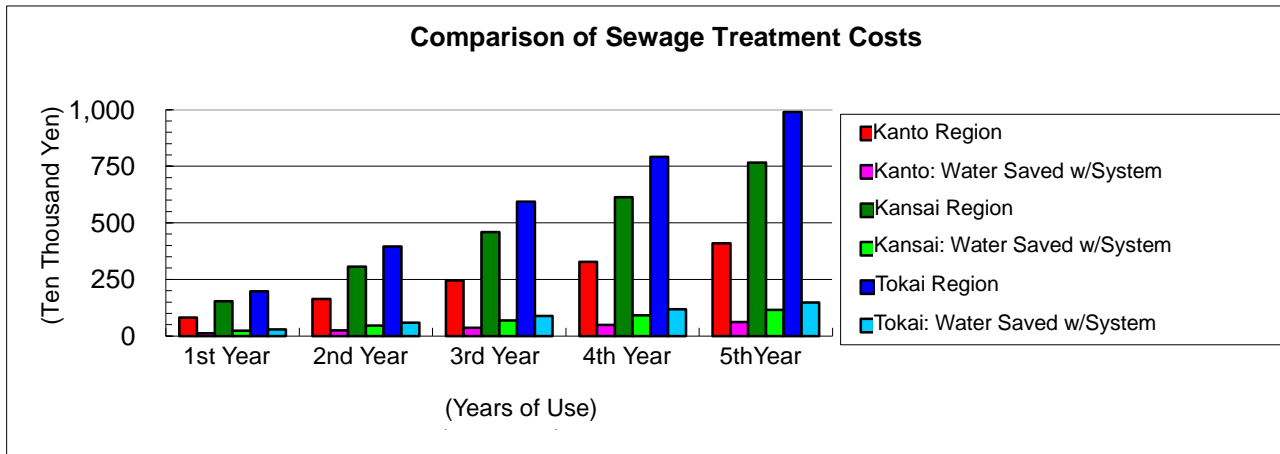
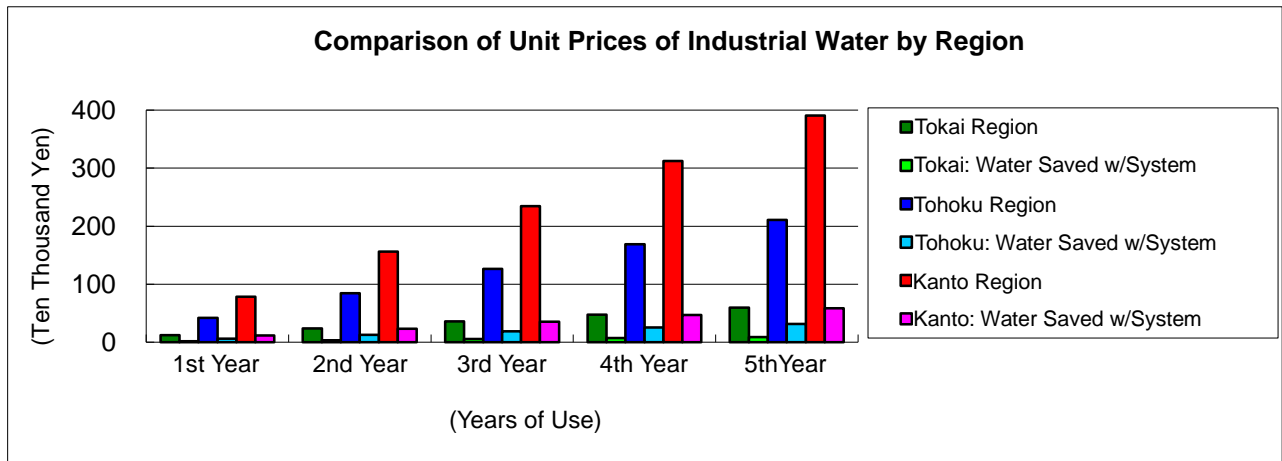
Wastewater Treatment at Food Processing Factory

# What Are the Costs of Treating Industrial Water and Sewage?

If water intake is 20t/D and the same amount is discharged, the total costs, including the fees for industrial water and treatment of sewage, will accumulate to huge amounts over a period of five years as shown in the charts below.

For example, if wastewater from the factory is purified and 85% of it is reused, conservation of water leads to a substantial savings in costs.

**Investing in a wastewater purification system and conserving water can reduce much more cost than diluting and discharging wastewater from the factory.**



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■ Dealership:

Specifications and appearance are subject to change without prior notice.

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