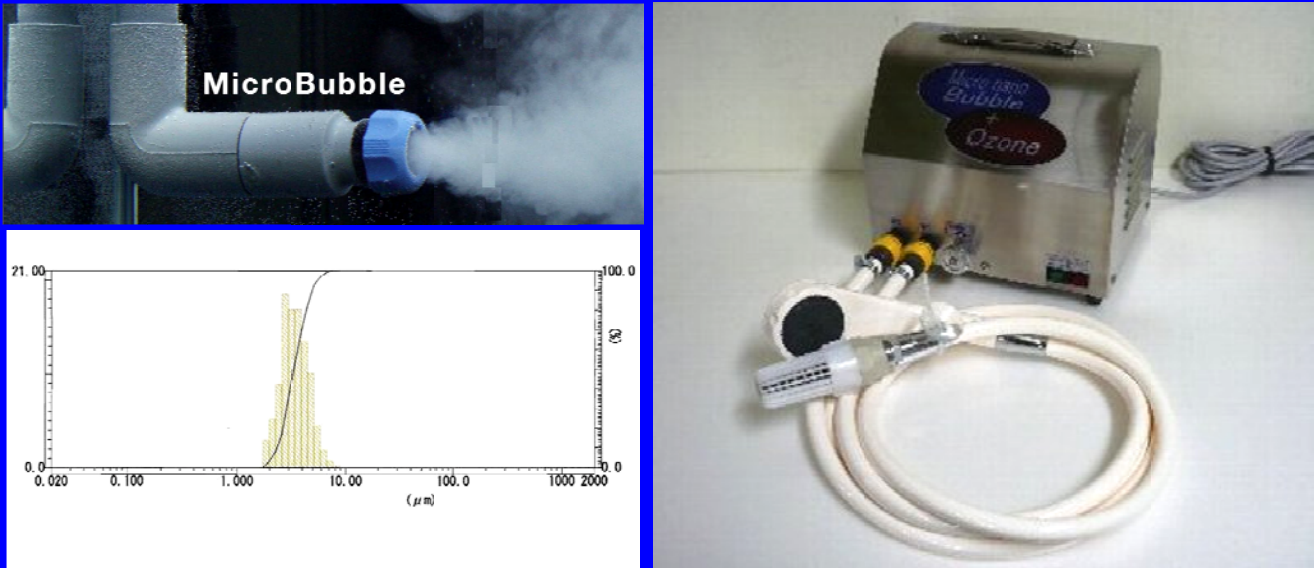


## Brochure of Micro bubble and Ozone Generator ; D-3N

Opto-Electronic Engineering Laboratory Corporation

[http://www.optoelec-engineering.com/websale/websale\\_en.html](http://www.optoelec-engineering.com/websale/websale_en.html)



### 1. Features

- Low Cost
- Small Size of Desk-Top
- Advantage of bacteria-killing action, odor eliminating, cleaning
- Very small bubble size ; 2 to 5um
- Generation of ozonated water

### 2. Description

Micro bubble is very small air particle with a large surface area per unit volume, which provides high performance for bacteria-killing action, odor eliminating, surface cleaning, ionization, osmosis. Our *micro bubble and ozone generator* is active in various field of such as agriculture, semiconductor industry, medical care, chemical engineering, aquatic products industry, beauty salon business, food industry, nursing care business, bathtub industry, public water quality management, various manufacturing industry.

### 3. Applications and these fields

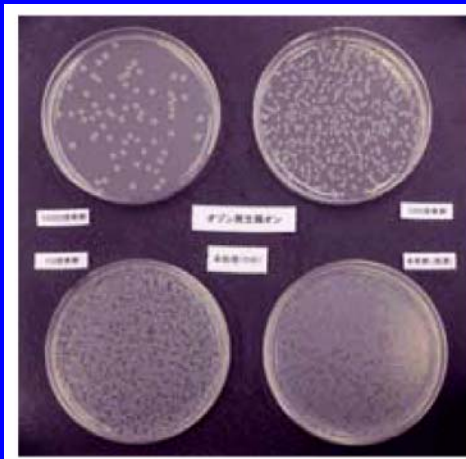
- agriculture, semiconductor industry, medical care, chemical engineering, aquatic products industry, beauty salon business, food industry, nursing care business, bathtub industry, public water quality management, various manufacturing industry.
- Surface cleaning system for a semiconductor wafer
- Washing machine for food

- Cleanup-water system as water quality management
- Chemical reactor equipment
- Bacteria-killing action system
- Odor eliminating system
- Facial massager
- Bathtub equipment for body care
- Ionizer equipment

#### 4. Verification Examples

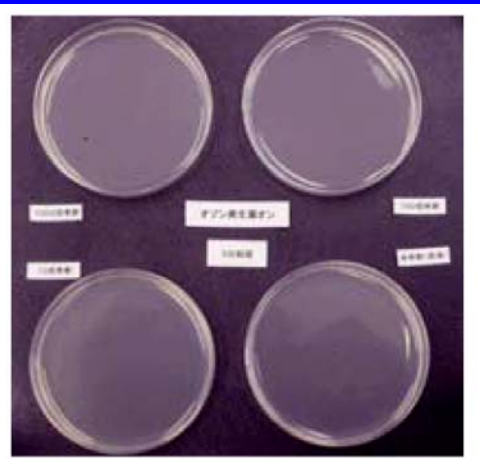
##### 1) bacteria-killing action for bacteria coliform

Before bacteria-killing



So much bacteria coliform

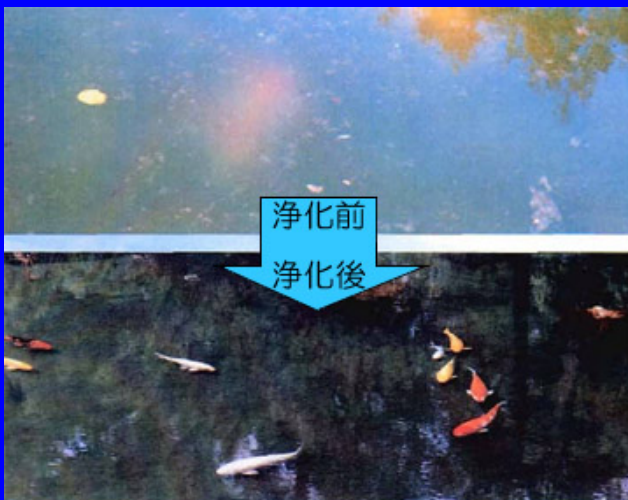
After bacteria-killing via *micro bubble* and *ozone generator D-3N*



No bacteria coliform

Tested by Industrial Technology Research Institute

##### 2) Cleanup-pond water



Before cleanup-water

Muddy pond-water

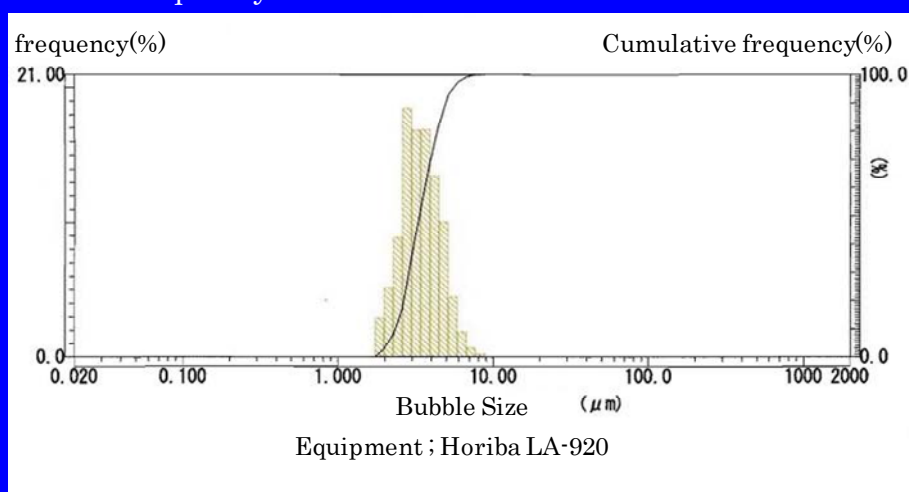
After cleanup-water via *micro bubble* and *ozone generator D-3N*

Clear pond-water

## 5. Specifications

Item	D-3N
Dimension	200mm×260mm×240mmH
Weight	6.2kg
Capability of flow amount	Average 7L/minute
Power Supply	AC100V/2.0A
Power Consumption	72W
Safety circuits	Alarm for circuit current Alarm for water pressure
Temperature range of water	0 to 50 degC
Liquid	Water
Capability of generation of ozonated water	Concentration of Ozone 0.05ppm
Duration time of ozonated water for bacteria-killing action	45minutes

Frequency distribution for Micro Bubble diameter



## 6. Contact us

Name ; Opto-Electronic Engineering Laboratory Corporation  
 Web ; [http://www.optoelec-engineering.com/websale/websale\\_en.html](http://www.optoelec-engineering.com/websale/websale_en.html)  
 e-mai ; [info@optoelec-engineering.com](mailto:info@optoelec-engineering.com)  
 Address ; Postal Code 069-0831  
 Ai-city Wakaba-dai B-205  
 Nopporo, Wakaba-chou 6-1,  
 Ebetsu-city, Hokkaidou-Pref, Japan  
 Manufacturer ; Dainichi Industry Co..ltd.  
<http://www.dainichi-k.co.jp/index.htm>