



Noodle Plant Wastewater Treatment System

- **Name of System**

"M" Noodle Plant Wastewater Treatment System (Chiba Prefecture)

- **Start of Operation**

March 1996

- **Outline of System**

Noodle-making wastewater is treated with a membrane bioreactor, then released to the environment.

- **Throughput**

750 m³/day

- **Influent BOD**

1,000 mg/L

- **Membrane Modules**

UMF 824 LF

- **Membrane Cutoff**

0.1 μm

- **Advantages of Membrane Use**

A high MLSS concentration can be maintained in the aeration tank, enabling an approximately two-fold increase in throughput over the previous system.

System Features

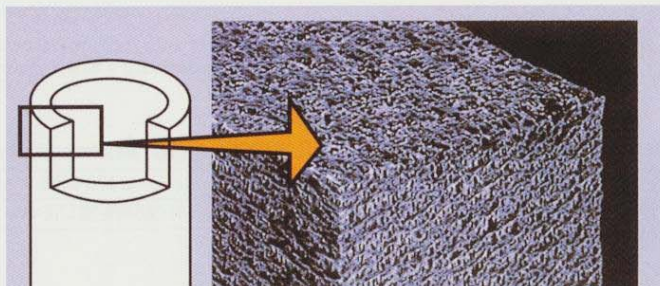
A wastewater treatment system having a throughput of 400 m³/day was originally employed at this noodle plant, but a higher wastewater treatment capacity was needed to keep pace with increases in the production volume. The new system was installed underground beneath the building, so enlarging the existing aeration tank was not an option. However, by making use of a membrane bioreactor, it was possible to nearly double throughput to 750 m³/day. This could not have been done without a membrane bioreactor.



General view of system

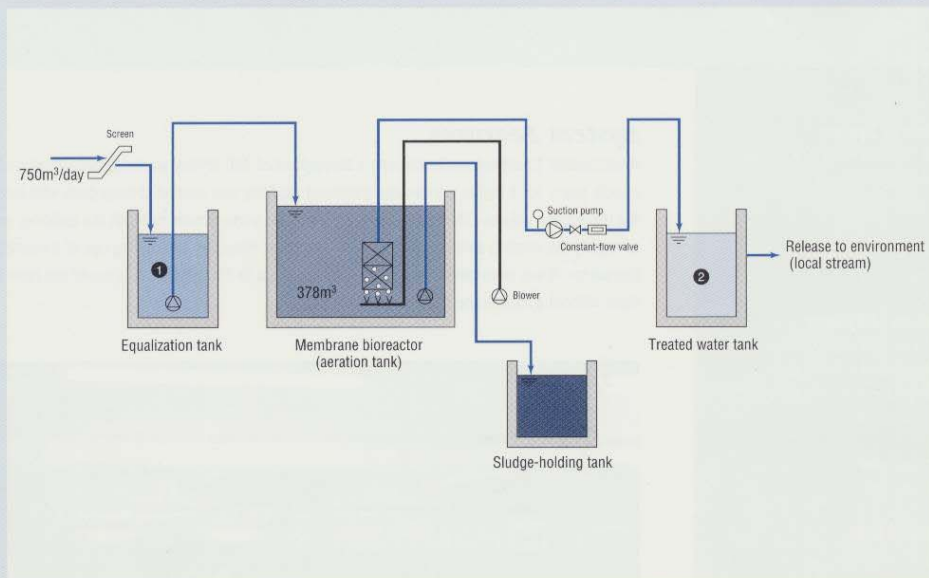
Remarks

Because the wastewater treatment system has been installed underneath the building housing the plant, little vertical space is available. To facilitate membrane module insertion and removal, a low-profile module is used.



Enlarged view showing exterior of hollow-fiber membrane

• **Flow Sheet**



• **Water Quality Analysis**

Test items		Influent (1)	Effluent (2)
pH	(-)	4.0	7.5
BOD	(mg/L)	1,000	2
COD (Mn)	(mg/L)	800	15
SS	(mg/L)	150	2
T-N	(mg/L)	50	1
T-P	(mg/L)	5.0	0.5

(average monthly values)

• **Operating Conditions**

MLSS:	8,000 mg/L
MLVSS:	6,000 mg/L
DO:	0.5 mg/L
HRT:	12 hours

Suction Pump Operation:
 9 minutes on (operating)
 3 minutes off (at rest)

Data furnished by: Daiki Co., Ltd. Phone: +81(267)64-8000

This sheet presents one example of an industrial wastewater treatment system. Each system must be designed according to the water quality of the influent and the target wastewater standards.



MITSUBISHI RAYON CO., LTD. Membrane Products Dept.

6-41, Konan 1-chome, Minato-ku, Tokyo 108-8506, Japan

Phone: +81(3)5495-3152/Fax: +81(3)5495-3217/E-mail: membrane@mrc.co.jp

URL: <http://www.sterapore.com/>