

Table II. Selected analysis data of bath water after 100% ozone-treatment system

	Observed	Permitted limits
pH value	7.4	5.8 - 8.6
Turbidity / ntu	< 0.5	< 2
Color unit	< 1	< 5
COD (KMnO ₄) / mg dm ⁻³	1.4	< 10
Nitrate nitrogen / mg dm ⁻³	0.6	< 10
Evaporation residue / mg dm ⁻³	85	< 500
phenols / mg dm ⁻³	< 0.005	< 0.005
Anionic detergent reagents / mg dm ⁻³	< 0.02	< 0.5
Bacteria / peacies dm ⁻³	< 30	< 100
<i>legionella</i> / peacies dm ⁻³	nd ^a	nd ^a
<i>coliform bacteria</i> / peacies dm ⁻³	nd ^a	nd ^a
Ca, Mg / mg dm ⁻³	44.4	< 300
Hg / mg dm ⁻³	< 0.00005	< 0.0005
P / mg dm ⁻³	< 0.1	< 0.1
Cu / mg dm ⁻³	< 0.02	< 1.0
Fe / mg dm ⁻³	< 0.03	< 0.3
Mn / mg dm ⁻³	< 0.005	< 0.3
Zn / mg dm ⁻³	< 0.005	< 1.0
Pb / mg dm ⁻³	< 0.001	< 0.1
Cr (IV) / mg dm ⁻³	< 0.005	< 0.05
Cd / mg dm ⁻³	< 0.001	< 0.01
As / mg dm ⁻³	< 0.001	< 0.05
CN ⁻ / mg dm ⁻³	< 0.001	< 0.01
F ⁻ / mg dm ⁻³	< 0.08	< 0.8
Cl ⁻ / mg dm ⁻³	4.7	< 200

^aNot detected.

Amount of Consumed Water, Fuel, and Electrical Power

The differences in the amount of consumed water, fuel, and electrical power between 100 and 10 % systems are shown in Table III. In the case of 100 % system, whole water is substituted four times a year. When filter is cleaned every week, a small amount

of water (2 m³) is used. Meanwhile, in the 10 % system, whole water is substituted everyday. Therefore, the amount of consumed water in the 100 % system is *ca.* one fortieth compared with that in the 10 % system.

The amount of fuel (kerosene) is also calculated as shown in Table III. In the 100 % system, since whole water is substituted four times a year, 211 dm³ of