

Integrated Wastewater Treatment System and practical examples of actions how to make money by saving

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Zakwit sinic w Bałtyku, zdjęcie wykonane za pomocą instrumentu OLI satelity Landsat 8. Credits: ©NASA

IMPLEMENTATION OF THE WATER FRAMEWORK DIRECTIVE (2000/60/EC)

AND THE WASTE WATER DIRECTIVE (91/271/EEC)

CONSISTS IN **REDUCTION OF EXCESS OF ORGANIC BIOGENES**
IN WASTEWATER AND ATROPHIED WATER RESERVOIRS



THE ECO-TABS™ TECHNOLOGY REDUCES THE EXCESS
ORGANIC NUTRIENTS (NITROGEN, PHOSPHORUS)
AT THE PLACE:

- **WHERE THEY ARE GENERATED** - HOTELS, SHOPPING CENTERS
- **THERE THEY ARE BEING TRANSMITTED** - THE SEWAGE NETWORK
- PUMPING STATIONS
- **WHERE THEY ARE REDUCED** - WASTEWATER TREATMENT PLANTS
- **WHERE THEY ARE DEPOSITED** - WATER RESERVOIRS - KOBIO MIK
TECHNOLOGY



Eco-Tabs TECHNOLOGY IS A MINI-WASTEWATER TREATMENT PLANT IN THE SEWER NETWORK

Eco-Tabs products

- Donor of molecular oxygen O_2 ,
- Microdot Separation Technology (MST),
- They oxygenate wastewater, thus supporting the processes of mineralization of organic matter.
- Cost **0.2-0.4 PLN (0.1 USD)/m³** of wastewater

- Ferrox destroys concrete sewage systems, causes corrosion of pipes, and contributes to the growth of sludge at the sewage treatment plant
- At the concentration of 200-300 ppm, approx. **200-350 g/m³** of wastewater should be used
- The cost of the product is approx. **850 PLN (220 USD)** per ton
- The unit cost per 1 m³ of wastewater is **0.18-0.3 PLN (0.05 – 0.1 USD)**
- The cost of the dosing system is approx **PLN 20,000 (5000 USD)**

(Source: K. Krzaczkowski, Presentation given in September 2012)



THE SOONER THE ECO-TABS ARE USED IN A WASTEWATER TREATMENT SYSTEM, THE HIGHER IS THEIR EFFICIENCY

Possible dosing points: RESIDENTIAL BUILDINGS, HOTELS, SHOPPING MALLS, HOSPITALS

- Application cost: **200 – 2000 PLN** (50 -500 USD) per month
- Example: Hotel Kuracyjny in Gdynia
- Financing – savings on the chemical products used, the mechanical cleaning of the sewage system, and fat disposal.



OPERATION IN WASTEWATER TREATMENT PLANTS

- Cost of application: 1st-3rd month **0.40 - 0.80 PLN/m³** (0.1 - 0.2 USD/m³)
- Subsequent months: **0.20 - 0.40 PLN/m³** (0.05 - 0.1 USD/m³)
- Financing – savings in electricity consumption, PIX, no penalties for exceeding parameters, higher dry mass of dehydrated sludge.



ECO TABS™

- **BETTER** ECOLOGICAL INDICATOR
- **REDUCTION OF** CHOD, BOD₅, AMMONIA, PHOSPHORUS, AND SUSPENDED SOLIDS
 - **BEING A GOOD** NEIGHBOR
 - **REDUCTION OF** HYDROGEN SULPHIDE
 - **LOWER** ELECTRICITY BILLS
 - **REDUCED** MECHANICAL AERATION
 - **LOWER** CONSUMPTION OF PIX'S AND POLYMERS
 - **REDUCTION OF** EXCESS SLUDGE AND BIOGENIC COMPONENTS
- **CONTROL OF** WASTEWATER TREATMENT PLANT OPERATION COSTS

