Bio-tech

Method for inactivating antibiotics in aqueous solutions



About the solution

The invention concerns a method for deactivating antibiotics in aqueous solutions using direct current atmospheric pressure glow discharge (dc-APGD).

This technology enables efficient degradation of antibiotics such as ampicillin, penicillin G and chloramphenicol in a continuous, energy-efficient process without the need for plasma-forming gases.

The process eliminates the antibacterial activity of antibiotics, reducing the spread of antibiotic resistance in the environment.

The flow-through system can be integrated with wastewater treatment facilities in medical, pharmaceutical, and agricultural sectors, minimizing operational costs and ecological risks.

IP Protection

The invention is protected by the Polish Patent Office under the following number: **Pat.242412**

Technology readiness level

TRL 4 –Technology validated in laboratory conditions

Research Team

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Applications

- Treatment of medical, pharmaceutical, and agricultural wastewater,
- Deactivation of antibiotics in liquid waste,
- Environmental protection and water management technologies.

Cooperation opportunities

- Joint research on process optimization,
- Licensing of the technology for industrial use,
- Partnership in implementation at wastewater treatment facilities.

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