

PLASMA STERILIZER

ALMA MATER STUDIORUM-UNIVERSITÀ DI BOLOGNA



The proposed technology is able to **sterilize bulk or pre-packaged items**, through the indirect action of a **non-thermal plasma**. The invention claims to be an alternative to other existing methods of sterilization, e.g. using ethylene oxide (EtO).

Protection: International

Inventors: Carlo Angelo Borghi, Gabriele Neretti, Paolo Seri

INVENTION

In order to provide an **alternative solution** to the sterilization with EtO, having some drawbacks, the new method is based on the usage of either air present in the environment or synthetic air stored in gas cylinders. The air is delivered into a reaction in which an electrical discharge is generated, producing reactive oxygen and nitrogen species, namely ROS and RNS. The output is introduced into a vacuum chamber where the item to be sterilized is placed. The vacuum is achieved in the sterilization chamber, ROS and RSN can be introduced. This process allows active species to penetrate inside the conventional semiporous blisters used in the medical field, achieving the sterilization of the products.

ADVANTAGES

- Greater sustainability of the process without using toxic gases;
- low impact on the production site;
- no harmful chemical traces in the final product.

APPLICATIONS

- Sterilization of single-use devices;
- Biomedical field.

CONTACTS

Knowledge Transfer Office

www.unibo.it/patents

051 20 80 635 - 683

kto@unibo.it



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