

Plasma Sterilization for Bacterial Inactivation: Studies on Probable Mechanisms and Biochemical Actions

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- Healthcare associated infections spread through various equipment used during medical and surgical interventions in hospitals and surgical centers.
- This study explores the role of plasma in bacterial inactivation at molecular and genetic levels.
- Plasma has shown the ability to kill both gram positive and gram negative bacteria.
- The generation of reactive oxygen species (e.g. H_2O_2 & $\cdot\text{OH}$) radicals during plasma exposure creates oxidative stress and causes cell death.
- The outcomes of the present research have been used to achieve successful sterilization of medical equipment.

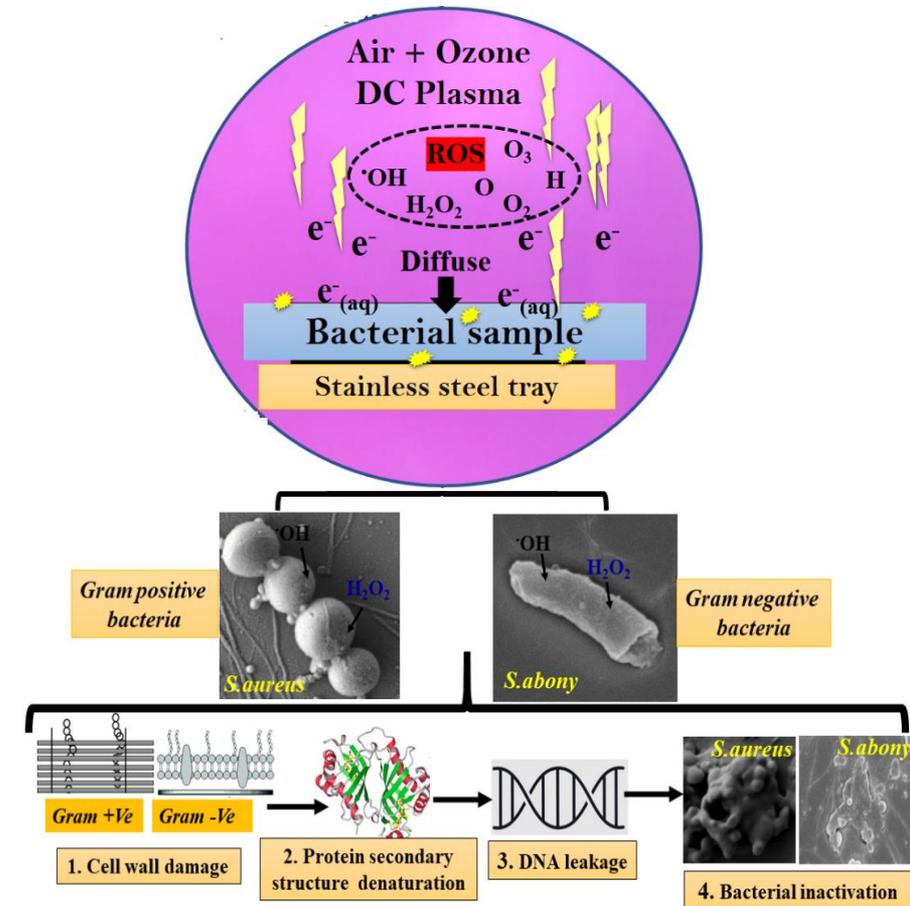


Figure: Schematic demonstration of bacterial inactivation by plasma

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