

Abstract Submitted
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Inactivation of the biofilm by the air plasma containing water RY-OTA SUGANUMA, KOICHI YASUOKA, Tokyo Inst of Tech - Tokyo, YASUOKA TAKEUCHI LAB TEAM — Biofilms are caused by environmental degradation in food factory and medical facilities. Inactivation of biofilm has the method of making it react to chemicals including chlorine, hydrogen peroxide, and ozone. Although inactivation by chemicals has the problem that hazardous property of a residual substance and hydrogen peroxide have slow reaction velocity. We achieved advanced oxidation process (AOP) with air plasma. Hydrogen peroxide and ozone, which were used for the formation of OH radicals in our experiment, were able to be generated selectively by adjusting the amount of water supplied to the plasma. We inactivated *Pseudomonas aeruginosa* biofilm in five minutes with OH radicals generated by using hydrogen peroxide and ozone.

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