Inactivation of Mucose on Bread by Using Plasma Jet

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Abstract This paper presents the application of cold plasma technology on bread. Plasma is a fourth state of matter apart from solid liquid and gas states. It possesses the same amount of negative and positive ions that are produced from the gas molecule that goes through the electrical breakdown process. Plasma can be produced by injecting high voltage through an electrode. This project aims to develop a plasma jet system that will be able to produce cold plasma with the help of argon as the working gas. Due to its multifunction purpose, cold plasma can be used in many different fields such as biomedical, textile manufacturing, surface modification, food packaging, and many more. In this study, plasma generated with higher voltage may reduce the occupation of mucose on the bread as compares to the control.

Keywords Plasma jet · Food · High voltage

1 Introduction

According to the World Health Organization (WHO), they have estimated that almost 1 in 10 people fall ill every year from eating contaminated food resulting in 420,000 dying from it. Meanwhile, 125,000 children under 5 years are dying from the food-borne disease every year [1]. To reduce this number, tight guidelines and series of the process are added to the food processing process from cleaning, sanitizing, and packaging the end product. This conventional method of food processing allows the workers to make mistake in between each process and also increase the tendency

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