

## **ABSTRAK**

Tujuan dari penelitian ini adalah untuk mengetahui pengaruh dosis iradiasi pada jus tomat dalam kemasan botol kaca dan botol plastik terhadap respon fisik, kimia dan mikrobiologi.

Metode penelitian yang dilakukan terdiri dari penelitian pendahuluan dan penelitian utama. Penelitian pendahuluan dilakukan untuk mengetahui pembuatan jus tomat, mengetahui kadar vitamin C, jumlah mikroorganisme, intensitas warna dan nilai pH pada tomat dan jus tomat, dan mempersiapkan kemasan botol kaca dan botol plastik. Penelitian utama dilakukan untuk mengetahui pengaruh dosis iradiasi sinar UV dan jenis kemasan botol kaca dan botol plastik selama proses iradiasi terhadap kadar vitamin C, jumlah mikroorganisme, nilai pH dan intensitas warna jus tomat.

Hasil penelitian dosis iradiasi sebesar 28,8 kGy dan 57,6 kGy berpengaruh terhadap perubahan kadar vitamin C, nilai pH, intensitas warna dan jumlah mikroorganisme produk jus tomat dalam kemasan botol kaca dan botol plastik.

Kata Kunci : iradiasi, ultraviolet, kemasan, jus tomat.

## ABSTRACT

The purpose of this study was to determine effect of irradiation dose on the packaging of tomato juice in glass bottles and plastic bottles to the response of the physical, chemical and microbiological.

The research method consists of preliminary research and primary research. The preliminary study was conducted to determine the manufacture of tomato juice, determine levels of vitamin C, the number of microorganisms, the intensity of color and pH value in tomatoes and tomato juice, and prepare packaging glass bottles and plastic bottles. The main study was conducted to determine the effect of UV light irradiation dose and type of packaging glass bottles and plastic bottles during the process of irradiation on the vitamin C content, the number of microorganisms, the pH value and color intensity of tomato juice.

Research result by kGy irradiation dose was 28.8 and 57.6 kGy effect on changes in levels of vitamin C, pH value, color and number of microorganisms intensitas tomato juice products in packaging glass bottles and plastic bottles.

*Key words: iiradiation, ultraviolet, bottled, tomato juice.*