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Antioxidant Activity Test For Button Mushroom (*Agaricus Bisporus*) Ethanol Extract Using The FRAP Method (Ferric Reducing Antioxidant Power)

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ABSTRACT

Button mushrooms (*Agaricus bisporus*) are plants that contain phenols as antioxidants. Antioxidants are electron donor or reductant compounds. These compounds have a small molecular weight but can inhibit the development of oxidation reactions by preventing the formation of radicals. phenol is the main antioxidant component found in *Agaricus bisporus* extracts. This research aims to determine the antioxidant activity value of button mushroom ethanol extract (*Agaricus bisporus*) using the method of ferric-reducing antioxidant power (FRAP). This research uses the maceration method as an extraction process using 96% ethanol. The resulting filtrate was concentrated with a vacuum rotary evaporator to produce a thick extract. Antioxidant testing was carried out using the FRAP method with a reagent solution of potassium feryricide, phosphate buffer pH 6,6 trichloroacetic acid (TCA), aquadest, and iron 3 chlorides (FeCl₃). Samples were analyzed using a UV-Vis spectrophotometer at a wavelength of 725 nm using quercetin as a standard solution. The results showed that the antioxidant activity value of the button mushroom ethanol extract (*Agaricus bisporus*) with the FRAP method was 3,847 mg QE /g extract.

Keywords: Antioxidants, button mushrooms ethanol extract, FRAP