

## **ABSTRACT**

### **DETERMINATION OF ANTIOXIDANT ACTIVITY EXTRACTS 96% ETHANOL OF KRATOM (*Mitragyna speciosa*) LEAF MACERATION USING DPPH METHOD**

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Most of the antioxidants are found in plants. Because plants produce large amounts of free radicals, they have a natural innate protection system that prevents free radicals from causing cell damage. Antioxidants will stabilize free radicals that have a shortage of electrons and inhibit the formation of free radicals. The way this antioxidant works donates one of its electrons to a compound that acts as an oxidant. This natural antioxidant can be extracted from Kratom leaves. Kratom leaves can be used as a source of natural antioxidants because of their phenol content. In addition, Kratom essential oil also contains antioxidants against free radicals. Kratom (*Mitragyna speciosa* Korth.) can be used to treat various diseases. This research was conducted to determine the antioxidant activity of 96% ethanol extract of kratom using a comparison of the antioxidant activity of vitamin C. The method used in this study was maceration, chosen because the process is easy, the equipment is simple and can be used to extract compounds that are thermolabile (cannot withstand heating temperatures) because maceration is carried out without heating. The extraction results of kratom leaves are green in color and in powder form. The extract was tested for antioxidant. Antioxidant test used with the DPPH method. The DPPH method uses a UV-Vis spectrophotometer so that the value of free radical scavenging activity will be known which is expressed by the IC<sub>50</sub> value. This method has many advantages apart from being simple, easy, fast and only requires a small amount of sample.

Key word: Kratom, DPPH, extract, antioxidant, free radicals, maceration