

ABSTRACT

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AKTIVITAS DAN STABILITAS EKSTRAK KASAR UMBI LOBAK (*Raphanus sativus* L.)

(xiii + 69 pages: 18 figures, 10 tables, and 12 appendices)

Radish daikon (Raphanus sativus L.) is a root-type vegetable that similar to carrot, but it has a white color and bigger size. Commonly its roots and leaves are used as herbs. The previous study shown that radish roots have antioxidant properties but still not studied further. In this research, radish roots were extracted using maceration method with three different solvents that have different polarity (ethanol (polar), ethyl acetate (semi polar) and hexane (non polar) for 8, 16, and 24 hours. Antioxidant activity, total phenolic, and total flavonoid of radish extract were measure using spectrophotometric method to determine the best treatment for extraction. Ethyl acetate 16 hours was choosen as the best treatment for extraction. Subsequently, radish roots that was extracted by ethyl acetate for 16 hours are used for stability test of the antioxidant properties with combination of pH (4, 5, 6, and 7) and temperature (70, 80, and 90°C). The result shown that the antioxidan properties of the extract is not stable to pH and temperature. In order to provide detail information about antioxidant components and optimization used of extract radish roots, phytochemical analysis, GC-MS, and toxicity of extraction with ethyl acetate for 16 hours were also studied in this research.

Keywords: Radish daikon, *Raphanus sativus* L., antioxidant, maceration, pH, stability, temperature

References: 87 (1995-2016)