

ABSTRACT

**A NOVEL METHOD OF ANTIOXIDANT ACTIVITY USING
DPPH TLC-BIOAUTOGRAPHY**

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Antioxidant compound is substance which is needed by human body to neutralize and prevent damage caused by free radical. Antioxidant compound also plays an important role in the body's defense system. Testing of antioxidant activity has various methods, such as UV-Vis spectrophotometry and TLC-bioautography methods. Determination of specific compounds in multicomponent which has antioxidant activity were performed by novel method of TLC-bioautography, the AAE value was subsequently measured. AAE is a common reference for measuring the strength of a material compared to the relative strength of vitamin C. Multicomponent was the curcuminoid groups, comprising of curcumin (diferuloylmethane), desmethoxycurcumin (feruloyl-p-hydroxy-cinnamoyl-methane) and bis-desmethoxycurcumin (bis-(p-hydroxi-cinnamoyl)-methane). The result showed that curcuminoid as multicomponent, curcumin, and desmethoxycurcumin had AAE value of 45.37%, 59.67%, and 36.26% respectively. These results indicated that a novel method of TLC-bioautography can be used to quantify the antioxidant activity in a multicomponent quantitatively with AAE value parameters.

Keywords: Antioxidant, TLC-bioautography, Curcuminoid, AAE value