



Antioxidant Test of Binahong (*Anredera cordifolia* (Ten.) Steenis) Leaves Decocta Using DPPH Method



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Abstract

Air pollution is an example of a source of free radicals. Other sources of free radicals are toxins, excessive sun exposure, cigarette smoke, fried foods, and certain medications. Free radicals are molecules that contain one or more unpaired electrons. In the body, free radicals can become highly reactive compounds by binding to molecular electrons in body cells due to the presence of unpaired electrons in free radical compounds. The purpose of this study was to determine antioxidant activity of binahong leaves decocta using the DPPH method. This research uses laboratory experimental methods. The sample in this study was some of the leaves of the fresh binahong (*Anredera cordifolia* (Ten.) Steenis) leaves. The results showed that binahong leaves decocta had very weak antioxidant activity against DPPH (1,1-diphenyl-2-picrylhydrazyl) with an IC50 value of 15,400 ppm.

Keywords: antioxidant, decocta, binahong leaves

INTRODUCTION

Antioxidants are needed to prevent oxidative stress, which plays an important role in the etiology of various degenerative diseases. Free radical compounds are always present in human daily life. Various natural ingredients native to Indonesia contain many antioxidants with various active ingredients. The use of natural ingredients native to Indonesia as antioxidants is needed to improve the quality of public health at a relatively affordable cost. The leaves of the binahong plant (*Anredera cordifolia* (Ten.) Steenis) contain compounds of alkaloids, flavonoids, saponins, terpenoids, and ascorbic acid which have antioxidant activity.

METHOD

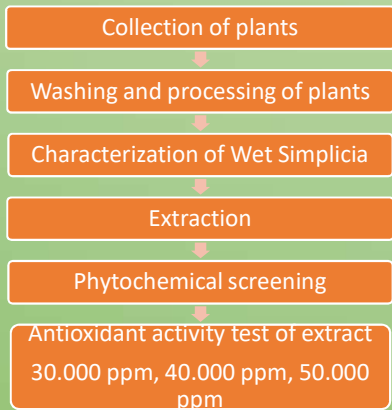


Table 2. Results Characteristics of Wet Simplicia Binahong Leaves

Characteristics of Simplicia	Results
Ash Content (% w/w)	1.62

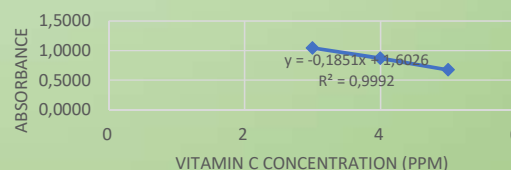


Figure 1. The antioxidant activity test against vitamin C

Table 3. Test Results of Binahong Leaves Decocta Activity Against DPPH

Concentration	A1	A2	average	%inhibition
Dekokta leaves binahong (ppm)				
30000	0.3382	0.3411	0.33965	53.91452
40000	0.3005	0.3326	0.31655	57.04885
50000	0.3024	0.3058	0.3041	58,73813

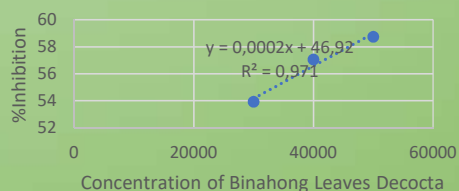


Figure 2. The antioxidant activity test against binahong leaves decocta

RESULT AND DISCUSSION

The binahong leaves used in this study came from binahong leaves which were planted and harvested directly in the City of Tasikmalaya, West Java. The determination is carried out to ensure the correctness of the identity of the plant to be studied. The results of the determination showed that this binahong leaf belongs to the species (*Anredera cordifolia* (Ten.) Steenis)

Table 1. Phytochemical screening of extracts

Compound Group	Test Material binahong leaves decocta
Flavonoids	+
Alkaloids	+
Saponins	+
Quinone	-
Tannins	-
Steroids/Triterpenoids	-
Polyphenol	+

CONCLUSION

Binahong leaves decocta had very weak antioxidant activity against DPPH (1,1-diphenyl-2-picrylhydrazyl) with an IC50 value of 15,400 ppm.

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