

ABSTRACT

ANTIOXIDANT ACTIVITY TESTING OF NUTRACEUTICAL LOSSES OF PURPLE SWEET POTATO LEAF EXTRACT (*Ipomoea batatas* L.) ANTIN VARIETY 3

Irma Adinda Safira

Natural antioxidants are needed to prevent diseases caused by free radicals. Antioxidants can be found in various plants, one of which is purple sweet potato leaves, Antin 3. Therefore, Antin 3 leaf extract is made into lozenges for optimal use. The binding material that will be used for formula 1 and 2 is PVP K30 with a ratio of 5% and 10%. This study aims to determine whether the concentration of PVP K-30 in Antin 3 leaf extract lozenges can influence antioxidant activity on the IC50 value. This type of research is experimental, namely testing the antioxidant activity in antin 3 purple sweet potato leaf extract lozenges. Testing antioxidant activity uses the DPPH method as an indicator. In the results of this research, the average IC50 value for formula 1 was 24.1ppm ± 0,8 and formula 2 was 64,3 ppm ± 2,0. From these results it can be said that there is an influence of the binding agent on antioxidant activity. This can occur due to the nature of the binder. PVP K30 is a binder that is stronger than other binders because of its properties which can increase tablet hardness and make tablets into more compact preparations. The greater the concentration of PVP K30 given, the more difficult it is for the lozenge to disintegrate. So if it is used at a concentration that is too large, such as in formula 2 with a concentration of 10%, it can result in the active ingredient being difficult to separate from the binder. After obtaining the IC50 results, statistical tests are carried out to prove whether or not there is an effect of the binder on antioxidants. Statistical tests using the independent t test equal variences assumed sig (2 tailed) obtained a sig result of 0.00 or which means that in formulas 1 and 2 there is a significant difference, so these results can strengthen the evidence that there is an influence of the binder on antioxidant activity.

Keywords : *Ipomoea batatas* L, DPPH, Antioxidant, IC50, Nutraceutical.