

ABSTRAK

SILALAH, D.A., 2015 FORMULASI TABLET KUNYAH EKSTRAK ETANOL KULIT BUAH NAGA SUPER MERAH (*Hylocereus costaricensis*) SEBAGAI ANTIOKSIDAN DENGAN KOMBINASI MANITOL DAN PVP K.30 SECARA GRANULASI BASAH, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Buah naga super merah adalah tanaman yang telah memiliki khasiat salah satunya sebagai antioksidan. Tablet kunyah ekstrak etanol kulit buah naga ini merupakan sediaan yang praktis dan efektif. Penelitian ini bertujuan untuk mengetahui apakah ekstrak kulit buah naga super merah dapat dibuat tablet kunyah dengan pengikat PVP K.30, pengaruh PVP K.30 dan manitol terhadap sifat fisik tablet kunyah, dan adakah perbedaan nilai IC_{50} ekstrak dengan tablet kunyah.

Kulit buah naga super merah dimaserasi dengan pelarut etanol 70%, kemudian ekstrak disaring dan diuapkan sampai diperoleh ekstrak kental kemudian diidentifikasi secara KLT meliputi flavonoid, polifenol, dan saponin. Tablet kunyah dibuat menjadi lima formula berdasarkan perbedaan konsentrasi PVP K.30 dan manitol, dengan metode granulasi basah. Granul diuji waktu alir, sudut diam dan kadar lembab. Tablet kunyah diuji keseragaman bobot, kerapuhan, kekerasan serta tanggapan rasa. Uji aktivitas antioksidan ekstrak dan tablet kunyah dengan metode DPPH, yang dapat diukur dengan spektroskopi UV-Vis pada λ maks kemudian dihitung IC_{50} . Data yang diperoleh dianalisa dengan ANOVA satu jalan.

Hasil dari penelitian ini adalah ekstrak kulit buah naga dapat dibuat tablet kunyah dengan pengikat PVP K.30, kombinasi PVP K.30 dan manitol mempengaruhi mutu fisik tablet, terjadi perbedaan antara aktivitas antioksidan ekstrak dengan tablet kunyah, nilai IC_{50} ekstrak dan tiap formula tablet kunyah adalah 416,862; F1: 461, 785; F2: 464,999; F3: 474,551; F4: 506,144; F5: 539,928.

Kata kunci: antioksidan, tablet kunyah, kulit buah naga super merah (*Hylocereus costaricensis*), PVP K.30, Manitol

ABSTRACT

SILALAH, DA, 2015 CHEWABLE TABLET FORMULATION OF SUPER RED DRAGON FRUIT PEELS (*Hylocereus costaricensis*) ETHANOL EXTRACT AS ANTIOXIDANT WITH COMBINATION OF MANNITOL AND PVP K.30 BY WET GRANULATION, THESIS, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY , SURAKARTA.

Super red dragon fruit are particular as antioxidant. Chewable tablet of super red dragon fruit peels is a practical and effective dosage form. This study was aimed to find out whether the extract of super red dragon fruit peels could be made chewable tablet with PVP K.30 binder, and to know the effect of PVP K.30 and mannitol on the physical properties of a chewable tablet, and was there any difference value of IC_{50} extract with chewable tablet.

Super red dragon fruit peels were macerated with ethanol 70%, and then filtered and evaporated to obtain viscous extract, and then were conducted for its qualitative identification by TLC and proven that contains flavonoid, polyphenol and saponin. The extract was made into five formulas based on different concentrations of PVP K.30 and mannitol, by wet granulation method. The obtained granules were tested for its flowing time, the angle of repose and moisture level. The chewable tablets were tested the physical properties, weight uniformity, friability, hardness and taste response. Test of antioxidant activity of the extract and chewable tablet was done with DPPH method, which could be measured by UV-Vis spectroscopy at λ max then calculated IC_{50} . The obtained data were analyzed by one way ANOVA.

The conclusion of this study were dragon fruit peel extract could be made chewable tablet with binder PVP K.30, combination of PVP K.30 and mannitol affected the physical quality of the tablet, there was a difference between the antioxidant activity of the extract with chewable tablet, IC_{50} values of each extract and chewable tablet formula is 416.862; F1: 461, 785; F2: 464.999; F3: 474.551; F4: 506.144; F5: 539.928.

Keywords: antioxidant, chewable tablet, super red pitaya (*Hylocereus costaricensis*) peels, PVP K.30, Mannitol