# INTISARI

**FARINDA F., 2015, FORMULASI TABLET KUNYAH EKSTRAK ETANOL KULIT BUAH NAGA SUPER MERAH (*Hylocereus costaricensis*) SEBAGAI ANTIOKSIDAN DENGAN KOMBINASI MANITOL DAN POLIVINILPIROLIDON SECARA GRANULASI KERING, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.**

Limbah kulit buah naga super merah (*Hylocereus costaricensis*) kaya akan betasianin dapat dimanfaatkan sebagai sumber antioksidan. Kulit buah naga diekstraksi menggunakan etanol 70%. Ekstrak etanol kulit buah naga kemudian diformulasi tablet kunyah secara granulasi kering. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh manitol dan polivinilpirolidon terhadap sifat fisik, rasa tabet kunyah serta aktivitas antioksidan ($IC_{50}$) dari tiap formula tablet kunyah.

Penelitian ini menggunakan lima formula dengan konsentrasi polivinilpirolidon-manitol 1%:42%; 2%:41%; 3%:40%; 4%:39%; dan 5%:38% ditambah dengan satu formula kontrol negatif tanpa ekstrak. Analisa yang dilakukan meliputi evaluasi mutu fisik granul, evaluasi mutu fisik tablet, uji tanggap rasa, dan analisa antioksidan menggunakan metode DPPH. Data yang diperoleh dianalisis dengan ANOVA satu arah dengan taraf kepercayaan 95% dilanjutkan dengan uji *Post Hoc.*

Hasil penelitian menunjukkan bahwa kenaikan konsentrasi polivinilpirolidon menyebabkan penurunan waktu alir granul, peningkatan kekerasan tablet, serta penurunan kerapuhan tablet. Semakin banyak penambahan konsentrasi manitol menyebabkan rasa tablet kunyah lebih manis dan disukai responden. Aktivitas antioksidan ekstrak kental kulit buah naga super merah diperoleh nilai $IC_{50}$ 331,513 ppm, $IC_{50}$ formula 1 (kontrol negatif), formula 2, formula 3, formula 4, formula 5 dan formula 6 berturut-turut adalah 5022,269 ppm; 340,669 ppm; 342,937 ppm; 353,119 ppm; 354,573 ppm; dan 366,956 ppm.

Kata kunci : *Hylocereus costaricensis*, tablet kunyah, antioksidan, manitol, polivinilpirolidon, DPPH

## ABSTRACT

**FARINDA F., 2015, CHEWABLE TABLET FORMULATION OF ETHANOL EXTRACT SUPER RED DRAGON FRUIT PEEL (*Hylocereus costaricensis*) AS ANTIOXIDANTS WITH A COMBINATION OF MANNITOL AND POLYVINYLPYRROLIDONE IN DRY GRANULATION, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.**

Waste of super red dragon fruit peel (*Hylocereus costaricensis*) is rich of betasianin can be profitted as antioxidants source. Super red dragon fruit peel was extracted using 70% ethanol. Ethanol extract super red dragon fruit peel was formulated chewable tablet in dry granulation. The aim of this research was to determine the effect of mannitol and polyvinylpyrrolidone toward physical characteristics, taste chewablet tablet and antioxidants activity ($IC_{50}$) from each formula chewable tablets.

This research uses five formulas with concentration of polyvinylpyrrolidone-mannitol 1%:42%; 2%:41%; 3%:40%; 4%:39%; and 5%:38%; added a formula of negative control without extract. The analysis was conducted at three levels; granule physical evaluation, tablet physical evaluation, taste responses test, and antioxidants analysis using DPPH method. Data were analyzed by one way ANOVA method with 95% confidence interval followed by *Post Hoc Test.*

The result showed that the increase polyvinylpyrrolidone concentration causes decreasing flow time granules, increasing tablet hardness, and decreasing friability. The more adding mannitol causes chewable tablet taste sweeter and preferably respondents. Antioxidants activity of extract super red dragon fruit peel is got value $IC_{50}$331,513 ppm, $IC_{50}$ formula 1 (negative control), formula 2; 3; 4; 5 and formula 6 in succession is 5022,269 ppm; 340,669 ppm; 342,937 ppm; 353,119 ppm; 354,573 ppm;and366,956 ppm.


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Key word : *Hylocereus costaricensis*, chewable tablet, antioxidants, mannitol, polivinilpirolidon, DPPH