

**VARIATION OF BUTTERFLY PEA FLOWER (*Clitoria ternatea* L.)
EXTRACT CONCENTRATION IN PUSTELANG PRODUCT ON
PROTEIN CONTENT, ANTIOXIDANT ACTIVITY, ORGANOLEPTIC
PROPERTIES, AND ACCEPTABILITY AMONG CANCER PATIENTS**

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ABSTRACT

Background: Cancer patients often suffer from decreased appetite due to treatment side effects such as nausea, vomiting, and diarrhea. High-protein, antioxidant-rich snacks can help fulfill nutritional needs and improve patients' quality of life. Butterfly pea flower (*Clitoria ternatea* L.) contains anthocyanins and flavonoids that act as natural antioxidants.

Objective: To examine the effect of varying concentrations of butterfly pea extract in pustelang on protein content, antioxidant activity, organoleptic properties, and acceptance among cancer patients.

Methods: A quasi-experimental study using a completely randomized design with four treatments (0%, 10%, 15%, and 20% extract). Antioxidant activity was measured using the DPPH method; organoleptic testing involved 20 semi-trained panelists, and acceptance testing involved 15 cancer patients.

Results: All pustelang formulations contained the same protein amount of 5.88 grams per serving. Antioxidant activity significantly increased with higher extract concentration, with the 20% formulation showing the highest activity (32.3%). Organoleptic tests revealed that 15% extract received the highest preference scores in color, aroma, taste, and texture. Acceptability among cancer patients varied, with most consuming 25–50% of the portion.

Conclusion: The addition of butterfly pea extract enhances antioxidant activity and organoleptic quality, with the 15% formulation being most preferred, although protein content remained constant across all treatments.

Keywords: butterfly pea flower, antioxidant, protein, cancer patients.

**VARIASI KEPEKATAN EKSTRAK BUNGA TELANG (*Clitoria ternatea L*)
PADA PRODUK PUSTELANG TERHADAP KANDUNGAN PROTEIN,
AKTIVITAS ANTIOKSIDAN, SIFAT ORGANOLEPTIK DAN DAYA
TERIMA PASIEN KANKER**

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ABSTRAK

Latar belakang: Pasien kanker sering mengalami penurunan nafsu makan akibat efek samping pengobatan seperti mual dan muntah. Makanan selingan tinggi protein dan antioksidan dapat membantu memenuhi kebutuhan gizi dan meningkatkan kualitas hidup pasien. Bunga telang (*Clitoria ternatea L.*) kaya akan antosianin dan flavonoid yang bersifat antioksidan alami.

Tujuan: Mengetahui pengaruh variasi kepekatan ekstrak bunga telang terhadap kandungan protein, aktivitas antioksidan, sifat organoleptik, dan daya terima pasien kanker terhadap produk pustelang.

Metode: Penelitian menggunakan desain eksperimental semu dengan Rancangan Acak Sederhana (RAS) dan empat perlakuan (0%, 10%, 15%, dan 20% ekstrak bunga telang). Uji aktivitas antioksidan dilakukan dengan metode DPPH, uji organoleptik melibatkan 20 panelis agak terlatih, dan uji daya terima melibatkan 15 pasien kanker.

Hasil: Kandungan protein pustelang pada semua perlakuan adalah sama yaitu 5,88 gram per porsi. Aktivitas antioksidan meningkat signifikan seiring peningkatan kepekatan ekstrak, dengan perlakuan 20% memiliki aktivitas tertinggi (32,3%). Uji organoleptik menunjukkan perlakuan 15% paling disukai dalam hal warna, aroma, rasa, dan tekstur. Daya terima pada pasien kanker bervariasi, dengan mayoritas mampu mengonsumsi 25–50% porsi.

Kesimpulan: Penambahan ekstrak bunga telang meningkatkan aktivitas antioksidan dan kualitas organoleptik, dengan formulasi 15% sebagai yang paling disukai, meskipun tidak ada perubahan kandungan protein antar perlakuan.

Kata kunci: bunga telang, antioksidan, protein, pasien kanker.