

**THESIS**

**FORMULATION AND EVALUATION OF PHYSICAL  
QUALITY OF BIDARA LEAF EXTRACT GEL (*Ziziphus  
mauritiana L.*) AS A MOISTURIZER**



**Written by:**

**Zidni Rizqiyah**

**ID number 422021718085**

**DEPARTMENT OF PHARMACY**

**FACULTY OF HEALTH SCIENCES**

**UNIVERSITAS DARUSSALAM GONTOR**

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## ABSTRAK

### FORMULASI DAN EVALUASI MUTU FISIK SEDIAAN GEL EKSTRAK DAUN BIDARA (*Ziziphus mauritiana* L.) SEBAGAI MOISTURIZER

Zidni Rizqiyah

422021718085

Indonesia merupakan negara dengan iklim tropis yang memiliki suhu tinggi sepanjang tahun dengan sinar matahari yang berlimpah dan kelembapan udara yang tinggi. Penyebab terjadinya permasalahan kulit karena adanya paparan yang berbahaya seperti sinar UV, bahan kimia, dan lingkungan sekitar. Daun bidara (*Ziziphus mauritiana* L.) memiliki kandungan flavonoid berguna sebagai antioksidan yang dapat menjaga kelembapan kulit dengan mencegah proses penuaan dini yang ditandai dengan adanya penipisan, kerutan dan kulit kering. Penelitian ini bertujuan untuk mengetahui hasil evaluasi mutu fisik sediaan gel dan efektivitas kelembapan dari sediaan gel ekstrak daun bidara dengan variasi konsentrasi F0 0%, F1 0,5%, F2 1% dan F3 3%. Mutu fisik gel ekstrak daun bidara memiliki sediaan yang homogen, pH dalam rentang yang aman, viskositas yang tinggi pada F0, F1 dan F2 akan tetapi memiliki daya lekat dan daya sebar yang baik yang berfungsi sebagai *Moisturizer*. Penentuan kadar kelembapan dalam sediaan *Moisturizer* gel ekstrak daun bidara dilakukan dengan mengukur menggunakan alat *skin hydrate analyzer* pada konsentrasi ekstrak daun bidara (*Ziziphus mauritiana* L.) yang berbeda, dengan nilai kelembapan berturut-turut yaitu 54,3% (F0), 50,1% (F1), 55,56% (F2) dan 62,94% (F3). Hasil dari penelitian ini menyimpulkan bahwa ekstrak daun bidara berpotensi sebagai bahan alami yang efektif sebagai *moisturizer* dalam memberikan kelembapan dengan variasi konsentrasi menunjukkan tingkat kelembapan kulit sebelum dan sesudah pemakaian sediaan gel.

Kata Kunci: gel, flavonoid, *moisturizer*, daun bidara (*Ziziphus auritiana* L.)

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## ABSTRACT

### FORMULATION AND EVALUATION OF PHYSICAL QUALITY OF BIDARA LEAF EXTRACT GEL PREPARATION (*Ziziphus mauritiana L.*) AS MOISTURIZER

Zidni Rizqiyah

422021718085

Indonesia is a country with a tropical climate characterized by high temperatures throughout the year with abundant sunlight and high air humidity. The caused of skin problems is due to harmful exposure such as UV rays, chemicals, and the environment factors. Bidara leaf (*Ziziphus mauritiana L.*) contains flavonoids act as antioxidants helping to maintain skin moisture by preventing the premature aging process which is characterized by thinning, wrinkles and dry skin. This research aims to evaluate the physical quality of gel preparations and the effectiveness of moisture from the gel preparations of bidara leaf extract with variations in concentrations of F0 0%, F1 0.5%, F2 1% and F3 3%. The physical quality of bidara leaf extract gel has a homogeneous preparation, pH in a safe range, high viscosity at F0, F1 and F2 but has good adhesion and dispersion that making it effective as a *moisturizer*. The moisture content in the preparation of *Moisturizer* gel of bidara leaf extract was determined by *hydrate analyzer* at varying concentration of bidara leaf extract (*Ziziphus mauritiana L.*) with consecutive humidity values of 54.3% (F0), 50.1% (F1), 55.56% (F2) and 62.94% (F3). The results of this research concluded that bidara leaf extract has the potential to be an effective natural ingredient as a *moisturizer* for providing moisture with variations in concentration indicating the level of skin moisture before and after the use of gel preparations.

Keywords: gel, flavonoids, moisturizer, bidara leaves (*Ziziphus auritiana L.*)

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## VALIDITY SHEET

It is hereby stated that the thesis with the title :

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Written :

**Zidni Rizqiyah**  
**NIM 422021718085**

Has been tested and approved & before the Thesis Examiner Board

On : .....

Examiner Board :

**Supervisor I**

Apt. Fauziyrah Al Hasanah M.Farm  
NIDN. 0703089602

**Supervisor II**

Amugerah Suciani M.Farm  
NIDN. 0725109501

**Examiner**

Indriyanti Widyaningna, M.Farm  
NIDN. 0713119603

Approved by:

Head of Pharmacy Department  
Faculty of Health Science, University of Darussalam Gontor

Apt. Nadia Iba Fatimah, M.Clin.Pharm.  
NIDN. 0714059105

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## PERSYARATAN KEASLIAN PENELITIAN

Dengan ini saya,

Nama : ZIDNI RIZQIYAH

NIM : 422021718085

Fakultas : ILMU KESEHATAN

Program Studi : FARMASI

Judul Penelitian : Formulasi Dan Evaluasi Mutu Fisik Gel Ekstrak Daun Bidara (*Ziziphus mauritiana L*) Sebagai *Moisturizer*

Saya dengan tulus menyatakan bahwa penelitian yang tersusun dalam skripsi ini aslinya adalah karya saya sendiri dan bukan melik penelitian lain untuk derajat yang berbeda. Lebih lanjut, skripsi ini tidak pernah diterbitkan sebelumnya kecuali beberapa bagian dengan referensi aslinya.

Apabila dikemudian hari ditemukan bahwa karya ini adalah plagiat, saya siap diberikan sanksi secara administrasi dan akademis.

Ponorogo, 16 Januari 2025

Peneliti,

Zidni Rizqiyah

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Writer.

Zidni Rizqiyah

