

**POLITEKNIK KESEHATAN TANJUNGPURUN  
JURUSAN FARMASI  
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**Jatmiko Rahmat**

**Formulasi *Spray Gel* Anti Nyamuk Ekstrak Kulit Buah Kakao (*Theobroma cacao* L.).**

**xviii + 41 halaman, 7 tabel, 7 gambar, dan 11 lampiran**

**ABSTRAK**

Kulit buah kakao (*Theobroma cacao* L.) diketahui mengandung zat aktif tanin, polifenol, alkaloid, dan flavonoid yang dapat dikembangkan sebagai anti nyamuk. Sediaan gel semprot dapat mengoptimalkan daya proteksi anti nyamuk karena mengandung pengental yang dapat bertahan ketika diaplikasikan serta tidak mengandung propelan yang berbahaya.

Tujuan penelitian ini untuk membuat sediaan *spray gel* ekstrak kulit buah kakao (*Theobroma cacao* L.) dengan variasi ekstrak yaitu F0(0%), F1(6%), F2(8%), dan F3(10%). Kemudian dilakukan pengamatan terhadap warna, bau, konsistensi, daya sebar, kondisi semprotan, sifat ketahanan melekat, waktu kering, dan pH. Penelitian yang dilakukan bersifat eksperimental. Hasil evaluasi dianalisis menggunakan analisis univariat. Formulasi sediaan *spray gel* dilakukan 4 perlakuan dan 3 kali pengulangan. Hasil penelitian yang diperoleh yaitu evaluasi organoleptis sediaan *spray gel* ekstrak kulit buah kakao didapatkan konsentrasi 0% menghasilkan warna bening (tidak berwarna), konsentrasi 6% dan 8% menghasilkan warna coklat kehitaman, dan konsentrasi 10% menghasilkan warna coklat. Bau sediaan *spray gel* konsentrasi 0% adalah lemah, sedangkan konsentrasi 6%, 8%, dan 10% memiliki bau khas. Daya sebar sediaan *spray gel* menunjukkan semua sediaan memiliki diameter penyebaran 5-7 cm. Kondisi semprotan dari semua sediaan *spray gel* baik, yaitu sediaan *spray gel* yang menyemprot keluar, seragam dan partikel kecil. Sifat ketahanan melekat dari sediaan *spray gel* menunjukkan bahwa semua sediaan dinyatakan melekat. Waktu kering menyatakan semua sediaan *spray gel* mengering sebelum 5 menit sejak pertama kali diaplikasikan. Formulasi *spray gel* ekstrak kulit buah kakao memiliki pH 6,26-6,86.

**Kata Kunci** : Ekstrak Kulit Buah Kakao (*Theobroma cacao* L.), Repelen, Spray Gel

**Daftar Bacaan** : 33 (1993-2020)

**POLYTECHNIC OF HEALTH TANJUNGPUR  
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**Jatmiko Rahmat**

*Anti Mosquito Spray Gel Formulation Cocoa Pod Extract (Theobroma cacao L.).*

*xviii + 41 pages, 7 tables, 7 pictures and 11 attachments*

**ABSTRACT**

*Cocoa pods (Theobroma cacao L.) are known to contain active substances such as tannins, polyphenols, alkaloids, and flavonoids that can be developed as repellents. The preparation of spray gel can optimize the protective power of mosquito repellent because it contains a thickener that can last when applied and does not contain harmful propellants.*

*The purpose of this study was to make a spray gel preparation of cocoa pod extract (Theobroma cacao L.) with various extracts, namely F0(0%), F1(6%), F2(8%), and F3(10%). Then, observations were made on color, odor, consistency, spreadability, spray conditions, adhesive resistance, dry time, and pH. The research conducted is experimental. The evaluation results were analyzed using univariate analysis. The formulation of the spray gel preparation was carried out in 4 treatments and 3 repetitions. The results obtained were organoleptic evaluation of spray gel preparations of cocoa pod extract, it was found that a concentration of 0% produced a clear color (colorless), a concentration of 6% and 8% produced a blackish-brown color, and a concentration of 10% produced a brown color. The odor of spray gel preparations with a concentration of 0% was weak, while those of 6%, 8%, and 10% had a distinctive odor. The spreadability of the spray gel preparations showed that all the preparations had a diameter of 5-7 cm spread. The spray conditions of all spray gel preparations were good, namely, the spray gel preparations that sprayed out, uniform and small particles. The inherent resistance properties of the spray gel preparations indicated that all the preparations were stated to be attached. Dry time states that all spray gel preparations dries before 5 minutes since they were first applied. Cocoa pod extract spray gel formulation has a pH of 6.26-6.86.*

*Keywords : Cocoa Pods Extract (Theobroma cacao L.), Repellant, Spray Gel  
Reference : 33 (1993-2020)*