Potensi Gel Ekstrak Etanol Kelopak Bunga Rosela (Hibiscus sabdariffa Linn) Sebagai Antibakteri Fusobacterium nucleatum (In Vitro) = Potential of Roselle Calyx Ethanol Extract Gel (Hibiscus sabdariffa Linn) as Antibacterial of Fusobacterium nucleatum (In Vitro)

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Abstrak

Latar Belakang: Penyakit periodontal terjadi karena adanya keterlibatan mikroorganisme oral salah satunya adalah Fusobacterium nucleatum. Perawatan suportif penyakit periodontal dapat berupa penggunaan antiseptik sintetik atau alami seperti tanaman obat. Salah satunya adalah rosela yang dilaporkan memiliki khasiat antibakteri secara in vitro. Dalam upaya pengembangan bentuk sediaan, ekstrak etanol kelopak bunga rosela dibuat dalam bentuk sediaan gel.

Tujuan: Mengetahui potensi antibakteri gel ekstrak etanol kelopak bunga rosela terhadap Fusobacterium nucleatum.

Metode:Uji zona hambat dilakukan dengan menghitung diameter zona hambat yang terbentuk pada kertas saring yang telah dipaparkan gel ekstrak etanol kelopak bunga rosela pada media MHA yang sudah diinokulasi Fusobacterium nucleatum. Uji Total Plate Countdilakukan dengan menghitung jumlah koloni Fusobacterium nucleatumyang bertahan hidup setelah dipaparkan gel ekstrak etanol kelopak bunga rosela.

Hasil: Uji zona hambat, gel ekstrak etanol kelopak bunga rosela konsentrasi 15% memiliki zona hambat yang setara dengan gel klorheksidin. Pada uji Total Plate Count, adanya penurunan jumlah koloniFusobacterium nucleatumpada gel ekstrak etanol kelopak bunga rosela konsentrasi 10%, 15%, dan 25% yang setara dengan gel klorheksidin 0,2%.

Kesimpulan: Gel ekstrak etanol kelopak bunga konsentrasi 10%, 15%,25% memiliki efek antibakteri terhadap Fusobacterium nucleatum.
.....Background:Periodontal disease occurs due to the involvement the presence of oral microorganisms, one of them is Fusobacterium nucleatum. Supportive treatment of periodontal disease can use synthetic or natural antiseptics such as medicinal plants. One of them is roselle which is reported to has antibacterial effect (in vitro). In developing the dosage form, roselle calyx ethanol extract is developed into gel form.

Objective: To determine the antibacterial effect of roselle calyx ethanol extract gel at 10%, 15%, and 25% concentration on Fusobacterium nucleatum.

Method: The inhibition zone test was carried out by counting the inhibition zone formed on paper disc that had been exposed to the roselle calyx ethanol extract gel on MHA media that had been inoculated by Fusobacterium nucleatum. Total Plate Count test was performed by counting the colonies of Fusobacterium nucleatumthat survived after being exposed to roselle calyx ethanol extract gel.

Result: In inhibition zone test, 15% concentration roselle calyx ethanol extract gel showed inhibition zone equivalent to chlorhexidine gel. Total plate count test showed that at 10%, 15%, and 25% concentration gel,Fusobacterium nucleatumcolonies have survived equivalent to chlorhexidine gel.

Conclusion: Roselle calyx ethanol extract gel at 10%, 15%, and 25% concentration have antibacterial effect to Fusobacterium nucleatum.