

ABSTRAK

Judul : Uji Aktivitas Antibakteri Teh Celup Kulit Buah Jeruk Manis (*Citrus sinensis*) Terhadap Bakteri *Enterobacteriaceae* yang Diisolasi dari Depot Air Minum
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Kulit buah jeruk manis kebanyakan tidak dimanfaatkan dan hanya dibuang. Kulit buah jeruk mengandung nutrisi serta senyawa seperti flavonoid, terpenoid, alkaloid, dan minyak astiri yang merupakan metabolit sekunder, dimana berperan sebagai antibakteri. Penelitian ini memiliki tujuan untuk mencari tahu aktivitas antibakteri teh celup kulit buah jeruk manis terhadap bakteri *Enterobacteriaceae* yang disolasi dari depot air minum secara acak. Metode penelitian untuk uji antibakteri menggunakan metode difusi kertas cakram. Kulit jeruk manis diuji dalam bentuk teh celup dengan metode infusa dan dekokta yang diformulasikan dalam 3g dan 5g, untuk standar memakai kloramfenikol, dan kontrol menggunakan *aquadest*. Bakteri *Enterobacteriaceae* dari depot air minum diisolasi dan diidentifikasi menggunakan *Eosin methylene blue*, *MacConkey* Agar, pewarnaan gram dan uji biokimia. Hasil Penelitian menunjukkan depot air minum yang diambil secara acak terkontaminasi bakteri *Enterobacteriaceae* yang mempunyai ciri bakteri *Citrobacter sp.* Formulasi teh celup kulit buah jeruk manis dapat menghambat pertumbuhan bakteri isolat *Enterobacteriaceae* (*P-Value*: 0.010). Aktivitas antibakteri teh celup kulit jeruk manis ditunjukkan pada kelompok infusa 3g, infusa 5g, dan dekokta 5g. Tapi kemampuan aktivitas antibakteri teh celup tidak lebih baik daripada standar (Kloramfenikol). Kesimpulan penelitian ini teh celup kulit buah jeruk manis memiliki daya hambat kategori lemah terhadap bakteri *Enterobacteriaceae* yang diisolasi dari depot air minum, dengan ciri bakteri yang mirip *Citrobacter sp.*

Kata Kunci : Jeruk Manis, Dekokta, *Enterobacteriaceae*, *Citrobacter*, Infusa

ABSTRACT

Title : *Antibacterial Activity of Sweet Orange (Citrus sinensis) Peel Tea against Enterobacteriaceae Isolated from a Water Depot*
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Most orange peels are not utilized and become useless waste that is thrown away. Orange peels contain many nutrients and compounds, such as flavonoids, terpenoids, alkaloids, and essential oils, which are secondary metabolites that act as antibacterial agents. This study intends to investigate the antibacterial activity of sweet orange peel tea against isolated Enterobacteriaceae from a random water depot sample around Universitas Prima Indonesia. This experiment used disc diffusion for antibacterial assay. Meanwhile, the sweet orange peel was brewed using two different methods, including infusion and decoction, in two different masses (3 grams and 5 grams). These sweet orange peel tea formulations were compared to standard (chloramphenicol) and control (distilled water). Enterobacteriaceae was isolated and identified from a random water depot sample around Universitas Prima Indonesia, which included colony identification in EMB agar and MacConkey agar, gram staining, and biochemical test. This study showed that a random water depot sample contaminated by Enterobacteriaceae had some properties similar to Citrobacter sp. Sweet orange tea formulation inhibited this isolated Enterobacteriaceae growth (P-Value: 0.010). Antibacterial activity was observed in 3-gram infusion, 5-gram infusion, and 5-gram decoction. However, the antibacterial activity was not better than the standard (chloramphenicol). Overall, it can be concluded that the sweet orange peel tea as infusion or decoction has weak antibacterial activity against Enterobacteriaceae bacteria isolated from water depots, which had some properties similar to Citrobacter sp.

Keywords: Sweet Orange, Decoction, Enterobacteriaceae, Citrobacter, Infusion