

PEMANFAATAN AIR PERASAN BUAH STRAWBERRY (*Fragaria sp.*) TERHADAP PERTUMBUHAN *Escherichia coli*

ABSTRAK

Menurut Dinas Kesehatan Kota Bandung, penyakit diare yang disebabkan oleh penyakit menular selalu berada pada 10 penyakit terbesar setiap tahunnya; pada tahun 2019 tercatat telah menangani 61.711 kasus diare untuk semua jenis usia atau sebesar 76,07%. Sedangkan pada kasus balita tercatat diare sebanyak 21.412 kasus atau sebesar 50,72%. *Escherichia coli*, merupakan salah satu flora normal dalam tubuh, yaitu di usus, yang dapat berubah menjadi patogen, sehingga akan dapat menginfeksi saluran pencernaan. Strawberry mengandung banyak komponen penting termasuk vitamin, folat, mineral, serat, dan merupakan sumber yang kaya akan senyawa fitokimia. Komponen terbanyak pada buah strawberry antara lain: flavonoid (antosianin, katekin dan flavonol), asam fenolat (asam hidroksisinamat dan asam hidroksibenzoat), dan tannin (gallotannin dan ellagitannin) serta komponen terkecilnya, yaitu proanthocyanidin. Penelitian ini, bertujuan untuk membuktikan adanya efek antibakteri strawberry terhadap *Escherichia coli*, dengan metode penelitian yang digunakan adalah rancangan acak lengkap, dengan cara mengamati zona bening di sekitar paper disc pada media padat setelah penambahan perasan buah strawberry (*Fragaria sp.*) dengan konsentrasi 20%, 40%, 60%, 80%, dan 100%. Hasil penelitian menunjukkan bahwa air perasan buah strawberry (*Fragaria sp.*) dengan konsentrasi 100% memiliki potensi daya hambat terhadap pertumbuhan *Escherichia coli* dengan rata-rata diameter zona hambat sebesar 4,55 mm, dan termasuk ke dalam kategori daya hambat resisten; Dari penelitian ini, disarankan agar air perasan buah strawberry dipekatkan terlebih dahulu, kemudian diujikan secara in vitro terhadap *Escherichia coli*, atau mikroflora patogen lainnya.

Kata Kunci : Air perasan buah Strawberry (*Fragaria sp.*), *Escherichia coli*, daya hambat

UTILIZATION OF STRAWBERRY FRUIT (*Fragaria sp*) ON THE GROWTH OF *Escherichia coli*

ABSTRACT

*According to the Bandung City Health Office, diarrheal diseases caused by infectious diseases are always in the top 10 diseases every year; in 2019 it was recorded that it had handled 61,711 cases of diarrhea for all ages or 76.07%. Meanwhile, in the case of children under five, there were 21,412 cases of diarrhea or 50.72%. *Escherichia coli*, is one of the normal flora in the body, namely in the intestine, which can turn into a pathogen, so that it can infect the digestive tract. Strawberry contains many important components including vitamins, folate, minerals, fiber, and is a rich source of phytochemical compounds. The most abundant components in strawberries include: flavonoids (anthocyanins, catechins and flavonols), phenolic acids (hydroxycinnamic acid and hydroxybenzoic acid), and tannins (gallotannins and ellagitannins) and the smallest component, namely proanthocyanidins. This study aims to prove the antibacterial effect of strawberries against *Escherichia coli*, with the research method used is a completely randomized design, by observing the clear zone around the paper disc on solid media after the addition of strawberry juice (*Fragaria sp.*) with a concentration of 20%, 40%, 60%, 80%, and 100%. The results showed that strawberry juice (*Fragaria sp.*) with a concentration of 100% had the potential to inhibit the growth of *Escherichia coli* with an average diameter of the inhibition zone of 4.55 mm, and was included in the category of resistant inhibition. From this study, it is recommended that the strawberry juice be concentrated first, then tested in vitro against *Escherichia coli*, or other pathogenic microflora.*

*Keywords : Strawberry (*Fragaria sp.*) juice, *Escherichia coli*, inhibition*