

## **ABSTRACT**

### **THE INHIBITION STUDY OF SEVERAL ORNAMENTAL LEAF AS NATURAL ANTI MICROBE IN REDUCING CONTAMINATION OF *Salmonella sp.* IN CHICKEN MEAT (*Gallus domesticus*)**

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Chicken meat is one of the food that plays an important role as a source of animal protein in meeting the nutritional needs of the community. On the other hand, chicken meat is a food that is easily contaminated by bacteria, one of which is *Salmonella sp.* Therefore it is necessary to add natural additives to reduce contamination of such pathogenic bacteria. This study aimed to determine the best type and concentration of ornamental plant powder (Purple Leaves, Red Shoots, and Hibiscus) as natural antimicrobials based on microbial inhibitory tests and in reducing contamination of *Salmonella sp.* on chicken meat. The experimental design used in this study was Completely Randomized Block Design, in which the treatment of the research were types of ornamental plants and concentrations of ornamental plant powders. The concentration was divided into five concentration levels; 0% (w/v), 10% (w/v), 20% (w/v), 30% (w/v) and 40% (w/v) with positive controls using chloramphenicol 30 µg/ml. The research was carried out three replications. Data obtained from the study were analyzed descriptively. The results showed that Red Shoot extract at a concentration of 40% (w/v) was able to inhibit the growth of *Salmonella sp.* with inhibitory

diameter of 2.10 mm, classified as weak antibacterial activity. On the other hand, Purple Leaf and Hibiscus leaves extract did not produce inhibitory (antibacterial) activity. The best concentration of ornamental plant extracts as natural antimicrobials in chicken meat was 0.4% with a total decrease in *Salmonella sp.* of  $5.85 \times 10^4$  CFU/g (56.80%) by Red Shoot extract,  $1.93 \times 10^4$  CFU/g (18.73%) by Purple Leaf extract, and  $5.72 \times 10^4$  CFU/g (55.53%) by Red Shoot extract.

**Key words :** *Anti Microbe, Chicken Meat, Hibiscus, Inhibition, Purple Leaf, Red Shoot, Salmonella sp.*

## **ABSTRAK**

### **KAJIAN DAYA HAMBAT BEBERAPA DAUN HIAS SEBAGAI ANTIMIKROBA ALAMI DALAM MENURUNKAN CEMARAN *Salmonella sp.* PADA DAGING AYAM (*Gallus domesticus*)**

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Daging ayam merupakan salah satu bahan pangan yang memegang peranan penting sebagai sumber protein hewani dalam pemenuhan kebutuhan gizi masyarakat. Namun, daging ayam termasuk bahan pangan yang mudah tercemar oleh bakteri salah satunya yaitu *Salmonella sp.* Oleh karena itu diperlukan penambahan bahan tambahan alami untuk mengurangi cemaran bakteri patogen tersebut. Penelitian ini bertujuan untuk mengetahui jenis dan konsentrasi terbaik serbuk tanaman hias (Daun ungu, Pucuk Merah, dan Kembang Sepatu) sebagai antimikroba alami berdasarkan uji daya hambat mikroba dan dalam menurunkan cemaran *Salmonella sp.* pada daging ayam. Rancangan percobaan yang digunakan pada penelitian ini yaitu RAKL (Rancangan Acak Kelompok Lengkap), dengan perlakuan jenis tanaman hias dan konsentrasi serbuk tanaman hias. Konsentrasi terbagi menjadi lima taraf yaitu, 0% (b/v), 10% (b/v), 20% (b/v), 30% (b/v) dan 40% (b/v) dengan kontrol positif menggunakan kloramfenikol 30 µg/ml. Penelitian dilakukan sebanyak tiga kali ulangan. Data yang didapat dari hasil pengamatan dianalisis secara deskriptif. Hasil penelitian menunjukkan bahwa ekstrak daun pucuk merah mampu menghambat pertumbuhan bakteri *Salmonella sp.* dengan diameter daya hambat sebesar 2,10 mm dengan aktivitas antibakteri

lemah pada konsentrasi 40%, sedangkan pada ekstrak daun ungu dan daun kembang sepatu tidak menghasilkan daya hambat (aktivitas antibakteri). Konsentrasi terbaik ekstrak tanaman hias sebagai antimikroba alami pada daging ayam adalah 0,4% dengan total penurunan terhadap bakteri *Salmonella sp.* oleh ekstrak daun pucuk merah sebesar  $5,85 \times 10^4$  CFU/g (56,80%), ekstrak daun ungu sebesar  $1,93 \times 10^4$  CFU/g (18.73%), dan ekstrak daun pucuk merah sebesar  $5,72 \times 10^4$  CFU/g (55.53%).

**Kata Kunci :** *Antimikroba, Daging Ayam, Daun Ungu, Daya Hambat, Kembang Sepatu, Pucuk Merah, Salmonella sp.*