

Imro Atul Kasanah, 2020, **Patogenitas Entomopatogen *Bacillus* sp. LS9.1, EG6.4, dan BK5.2 Melalui Uji Hemolisis Sel Darah Merah**, Skripsi ini di bawah bimbingan Drs. Salamun, M.Kes. dan Dr. Fatimah, S.Si., M.Kes., Departemen Biologi, Fakultas Sains dan Teknologi, Universitas Airlangga, Surabaya.

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## ABSTRAK

Penelitian ini perlu dilakukan untuk mengetahui keamanan *Bacillus* sp. LS9.1, EG6.4, dan BK5.2 terhadap manusia melalui uji hemolisis sel darah merah. Penelitian ini bertujuan untuk mengetahui pengaruh jenis isolat dan variasi dosis pada indeks dan tipe hemolisis sel darah merah.. Uji patogenitas *Bacillus* sp. dilakukan dengan tiga variasi dosis yaitu OD ( $\lambda=600\text{nm}$ ) 0,8; 0,6; dan 0,4 dengan metode *streak* atau digoreskan di permukaan media *blood* agar. Pengukuran indeks hemolisis dilakukan dengan paper disk yang ditempelkan di permukaan Blood Agar. Zona bening yang terbentuk di sekitar koloni bakteri diamati tipe hemolisisnya dan diukur indeks hemolisis yang terbentuk. Data dianalisis secara statistik menggunakan *Statistical Package for the Social Science (SPSS)*. Hasil penelitian menunjukkan bahwa : Ada pengaruh jenis isolat pada indeks hemolisis dan tipe hemolisis. Isolat LS9.1 dan BK5.2 memiliki tipe hemolisis  $\beta$  dan isolat EG6.4 memiliki tipe hemolisis berbeda yaitu  $\alpha$ -hemolisis. Tidak ada pengaruh pemberian variasi dosis isolat isolat *Bacillus* sp. Ada pengaruh kombinasi antara jenis isolat *Bacillus* sp. LS9.1, EG6.4 dan BK5.2 dengan pemberian variasi dosis isolat pada indeks hemolisis dan tipe hemolisis

**Kata kunci** : Entomopatogen *Bacillus* sp., agar darah, uji hemolisis.

Imro Atul Kasanah, 2020, **Pathogenicity of Entomopathogen *Bacillus* sp. LS9.1, EG6.4, and BK5.2 Using Red Blood Cell Hemolysis Test**, This Script is guided by Drs. Salamun, M.Kes. and Dr. Fatimah, S.Si., M.Kes., Department of Biology, Faculty of Science and Technology, Airlangga University, Surabaya.

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## ABSTRACT

*This research needs to be done to find out the safety of Bacillus sp. LS9.1, EG6.4, and BK5.2 on humans through the red blood cell hemolysis test. This study aims to determine the effect of isolate types and dosage variations on the index and type of hemolysis of red blood cells. Pathogenicity test Bacillus sp. performed with three dose variations, namely OD ( $\lambda = 600\text{nm}$ ) 0.8; 0.6; and 0.4 with the streak method or etched on the surface of the blood agar medium. The measurement of the hemolysis index was carried out with a paper disk affixed to the surface of the Blood Agar. Clear zones formed around bacterial colonies were observed for their type of hemolysis and measured the index of formed hemolysis. Data were analyzed statistically using Statistical Package for the Social Science (SPSS). The results showed that: There was an effect of isolate type on the hemolysis index and hemolysis type. Isolates LS9.1 and BK5.2 have type  $\beta$  hemolysis and isolate EG6.4 has a different type of hemolysis,  $\alpha$ -hemolysis. There was no effect of giving variations in dosage isolates of Bacillus sp. There is a combination effect between the isolates of Bacillus sp. LS9.1, EG6.4 and BK5.2 by varying the dosage of isolates in the hemolysis index and hemolysis type.*

**Keywords:** *Entomopathogenic Bacillus sp., Blood agar, hemolysis test.*