질경이(*Plantago asiatica* L.) 추출물의 항균성검색

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Screening of Antimicrobial activity of the Plantain (*Plantago asiatica* L.) extract

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Abstract

In order to develop the natural food preservative, freeze dried plantain (*Plantago asiatica* L.) was extracted with several solvents, and antimicrobial activity was investigated. The methanol extract from the plantain exhibited antimicrobial properties against five strains such as *Bacillus subtilis. Escherichia coli, Staphylococcus aurcus, Listeria monocytogenes*, and *Vibrio parahaemolyticus*. The methanol extract at the concentration of 1. 0 mg/m*l* completely inhibited the growth of *B. subtilis* and *V. parahaemolyticus*. Antimicrobial activity of the ethylacctate fraction from the methanol extract of plantain was the strongest fraction compare to those of the other solvent fractions such as *n*-hexane, chloroform, *n*-butanol and water. The ethylacetate fraction showed the inhibitory effect at the concentration of 0.5 mg/disc on the growth of the *B. subtilis* and *V. parahaemolyticus*.

Key words: natural preservative, plantain extract, antimicrobial effect, food spoilage microoganisms, ethylacetate fraction