Antimicrobial Activity of Hibiscus sabdariffa Calyx Extract against Shigella dysenteriae in vitro

Abstrak:

Each year, 80 million cases of bacillary dysentery is found. It causes 700,000 deaths worldwide. Bacillary dysentery due to Shigella dysenteriae infections show the most severe clinical symptoms and become epidemic on wide areas. In Indonesia, it began to be a reemerging disease. Meanwhile, there is emerging drug resistance of Shigella dysenteriae to several drugs which are originally used to cure its infection such as co-trimoxazole. Extracts of Hibiscus sabdariffa calyx is known to have antimicrobial activity against several strains of bacteria. Therefore, the researcher conducted a study of the antimicrobial activity of Hibiscus sabdariffa calyx extract against Shigella dysenteriae. This study determines the antimicrobial potential of Hibiscus sabdariffa calyx extract against Shigella dysenteriae. Hibiscus sabdariffa calyx were extracted with methanol and divided into 6 concentrations. Antimicrobial activity assay performed with the dilution method in Mueller Hinton broth medium. The result of this research is Shigella dysenteriae did not grow in all tubes with extract concentration of 0.5 ml/ml up to 0.03 ml/ml and negative control tubes. Shigella dysenteriae grew in tubes containing the extract of Hibiscus sabdariffa with concentration of 0.015 ml/ml and positive control tubes. It can be concluded that extract of Hibiscus sabdariffa calyx extract have antimicrobial activity against bacteria Shigella dysenteriae at minimum concentration of 0.03 ml/ml.

Keyword:

antimicrobial, Hibiscus sabdariffa calyx extract, Shigella dysenteriae

Daftar Pustaka:

WHO for the Control of Shigellosis, Including Epidemics Due to Shigella dysenteriae Type 1 WHO Press 2005 Geneva