

## ABSTRACT

### THE INHIBITION TEST OF RED BETEL LEAVES (*Piper crocatum* Ruiz & PAV) EXTRACT AGAINST THE GROWTH OF *Streptococcus pneumoniae* AND *Salmonella typhi*

By

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**Background:** Infectious diseases are still a health problem in the world, both in developed and developing countries. Infectious disease is a disease caused by pathogenic microbes (viruses, bacteria, fungi) and is the main cause of high morbidity and mortality rates. Respiratory tract infections and typhoid fever caused by bacteria are still the most common health problems. Pneumonia is an infection or acute inflammation of the lung tissue caused by various *Streptococcus pneumoniae* bacterial microorganisms, exposure to chemicals or physical damage to the lungs. Meanwhile, typhoid fever is a type of infection caused by the bacterium *Salmonella Enterica*, especially the *Salmonella Typhi* derivative. The high level of resistance to antimicrobials, which currently still causes chronic infections in humans, has led to the idea that medical personnel must be more careful in using and finding the right antibiotics. One of the potential medicinal plants that is known empirically to have properties for curing various diseases is Red Betel Leaf (*Piper crocatum* ruiz and PAV).

**Purpose:** This study aims to prove that red betel leaves has an inhibitory effect against *Streptococcus pneumoniae* and *Salmonella typhi*.

**Methods :** This study used an experimental method. The technique used to measure antibiotic activity is the method of well diffusion and continued by Kruskal-Wallis test and Mann-Whitney test.

**Results:** The results showed that extract of red betel leaf can inhibit the growth of *Salmonella typhi* at concentrations 20%, 30%, 40%, and 50% and the most effective is 50% concentration. But, there is no result on *Streptococcus pneumoniae*

**Conclusions:** Red betel leaves (*Piper crocatum* Ruiz & PAV) have an inhibitory power against *Salmonella typhi* but does not have an inhibitory effect on *Streptococcus pneumoniae* bacteria

**Keyword:** *Piper crocatum* Ruiz and Pav, *Streptococcus pneumoniae*, *Salmonella typhi*