

# ACID TOLERANCE AND ANTIBIOTIC RESISTANCE OF SOME STRAINS OF *BRADYRHIZOBIUM* APPLIED IN THAILAND

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## Abstract

The pH sensitivity and antibiotic resistance of 20 strains of *Bradyrhizobium* spp. and 16 strains of *B. japonicum* were characterized. The characteristics of acid tolerance among *Bradyrhizobium* can be observed after being cultured in a defined medium for 10 days of growth. One mechanism which provides the ability to tolerate low pH conditions is alkali producing, such as *Bradyrhizobium* spp. strain TAL 305 isolated from *Vigna radiata*. The antibiotic resistance profiles when applied with Carbenicillin (500 µg/ml), Chloramphenical (500 µg/ml), Streptomycin (100 µg/ml), Tetracycline (100 µg/ml) and Trimethoprim (50 µg/ml) were established. To differentiate them by using antibiotic resistance property, the results showed that this can be a rapid and efficient method for phenotypically distinguishing strains of *Bradyrhizobium*. The results obtained from this study will be combined with the data from primers-based technique.

**Key words :** *Bradyrhizobium*, antibiotic resistance, pH sensitivity, *Vigna radiata*

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