**Comparative study between Elisa and Surface Plasmon Resonance (Spr) for rice tungro disease detection**


## Abstract

Rice tungro disease (tungro) is one of the most damaging diseases of rice in South and Southeast Asia. This disease is caused by dual infections from rice tungro bacilliform virus (RTBV) and rice tungro spherical virus (RTSV). Both are transmitted by green leaf hoppers (GLH).This disease make serious loss of income to farmers when their crops are affected with an approximately 5-10% annual losses of rice yield in Asia was affected by rice tungro disease. This disease contributes to serious loss of income to farmers and also accounts for an approximately 5-10% annual loss of rice yield in Asia.Immunosensors based Surface Plasmon Resonance (SPR) and ELISA that used specific antigen-antibody reaction format have become a promising tool for the quantification of viruses. However both method need to compare which is to be used to determine the antigen with highly sensitive, specific, rapid, and label free detection for the analysis.



**Keyword:** Rice tungro bacilliform virus (RTBV); Rice tungro spherical virus (RTSV); Surface Plasmon Resonance (SPR); Enzyme linked immunosorbent assay (ELISA)