Quantification of sakuranetin in paddy leaves and stem after elicitation with abiotic elicitors (UV, $AgNO_3$, $CuSO_4$)

Abstract

Phytoalexins are substances produced in appreciable amounts in plants only after stimulation of various biotic or abiotic agents. Sakuranetin was extracted from paddy leaves and stem after elicitated by silver nitrate, cuprum (II) sulfate and UV irradiation. Thin layer chromatography (TLC) was conducted to detect the presence of sakuranetin at Rf 0.09 under 365 nm UV light. Extracted sakuranetin was subjected to spectrophotometry at 337 nm. The concentration of sakuranetin present in the sample was calculated. Elicitation by silver nitrate significantly accumulated the highest amount of sakuranetin in leaves of paddy followed by UV radiation and cuprum sulfate. However, elicitation by UV radiation and silver nitrate in paddy stems produced significantly highest amount of sakuranetin. Comparing of sakuranetin amount recovered from leaves and stem, the leaves appeared to be significantly accumulated higher amount of sakuranetin than that recovered from stem.