

DETECTION OF PHOSPHATASES, PLA₂, PLC AND PLD ACTIVITIES
ACTIVATED IN RESPONSE TO WOUNDING IN *RICINUS COMMUNIS* PLANTS

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Plants have mechanisms to defend themselves against stress conditions through changes in phosphorylation/dephosphorylation of kinase and phospholipase proteins. Recent studies demonstrate the involvement of protein phosphatases in the regulation of signaling pathways activated stress. The aim of this study was to verify the effect of mechanical wounding upon the phosphatase, PLA₂, PLC and PLD activities of leaf extracts submitted to a mechanical injury after specific intervals 5, 15, 30 and 60 minutes. The proteins were separated by native electrophoresis and the phosphatase activity was determined in pieces of the gel (0.5 cm) incubated with reaction buffer in alkaline medium. The analysis of activity in gel indicated that a phosphatase activity increased in 30` and 60` after wounding. The PLA₂, PLC and PLD activities in *R. communis* leaves were also detected in crude extracts using a spectrophotometric assay. PLA₂, PLC and PLD activities increased after 15`, 30` and 5` respectively. Biochemical characteristics of phosphatase activity were determined. In conclusion, these results reinforce the involvement of phosphatases and phospholipases in the regulation of signaling pathways activated for wounding in *Ricinus communis* plants.

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