

Changes of Antioxidant Enzyme and Phenylalanine Ammonia-Lyase Activities during *Chimonanthus praecox* Seed Maturation

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Changes in peroxidase (POD), superoxide dismutase (SOD), catalase (CAT) and phenylalanine ammonia-lyase (PAL) activities were studied during *Chimonanthus praecox* seed maturation. According to our findings the protein content increased steadily from 8 to 12 weeks after flowering, and thereafter decreased significantly. Similarly, SOD and POD activities increased gradually up to 12 weeks after flowering and then declined. PAL activity declined gradually during seed maturation. CAT activity, however, showed no changes during seed maturation. By means of polyacrylamide gel electrophoresis (PAGE), SOD and POD isoenzymes were observed during seed maturation. The staining intensities of SOD and POD isoenzymes correlated well with SOD and POD activities as obtained by an assay in solution. These findings suggest that POD, SOD and PAL may be involved in the growth and development during *Chimonanthus praecox* seed maturation.

Key words: Antioxidant Enzymes, *Chimonanthus praecox*, Phenylalanine Ammonia-Lyase