

**Antioxidant Enzyme Responses to Cadmium  
in Rice Seedlings**

**E15**

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To investigate the antioxidant enzyme responses of rice (*Oryza sativa* cv. Dong-Jin) to cadmium(Cd), green seedlings of rice were grown in various concentrations of CdCl<sub>2</sub>, ranging from 0.1-1 mM, for up to 48 hr in a hydroponic system. Roots of rice seedlings were analysed for catalase(CAT), glutathione peroxidase(GPX), glutathione reductase(GR) and guaiacol peroxidase(GPOD). Especially, CAT activity increased according to the increasing concentrations of CdCl<sub>2</sub>. About 16th fold higher CAT activity was found in the seedlings treated with 1mM CdCl<sub>2</sub> than in the control. The analysis of CAT activity staining on the native polyacrylamide gel revealed two major catalase isozymes. The two predominant isoenzymes exhibited enhanced activity in response to the increasing concentrations of CdCl<sub>2</sub>.

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