Differences in the Activity of Superoxide Dismutase, Polyphenol Oxidase and Cu-Zn Content in the Fruits of *Gordal* and *Manzanilla* Olive Varieties

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Z. Naturforsch. **57c,** 113–120 (2002); received September 18/October 19, 2001

Superoxide Dismutase, Polyphenol Oxidase, Olive

Activity of the enzymes superoxide dismutase (SOD) and polyphenol oxidase (PPO) as well as Cu-Zn content have been monitored during the thirteen weeks growth of both *Gordal* and *Manzanilla* olive variety fruits. These metalloenzymes, with Cu and Zn in the prostetic group, are involved in controlling the redox balance in the chloroplast environment. The results indicated that, under similar phenological and environmental conditions, there are periodic peaks of SOD activity in both varieties, followed by fluctuations in the copper content of the fruit. This was interpreted as a common and simultaneous response to situations of oxidative stress, and this response was more intense in the variety *Gordal*. The enzyme PPO showed an activity peak at start of growth and then practically disappeared. Thus, its activity cannot be correlated with situations of stress or with changes of Cu and Zn in the fruit.