

Title Study of water curing for the preservation of marrons (*Castanea sativa* Mill., Marrone fiorentino cv)

Author M. Migliorini, L. Funghini, C. Marinelli, T. Turchetti, S. Canuti and B. Zanoni

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Abstract

Water curing of chestnuts and marrons, a commonly used postharvest method, is based on soaking fresh fruit in water typically for 9 days. In this study, water curing tests were carried out on marrons (*Castanea sativa* Mill., cv. Marrone fiorentino) in a 1:2 marron/water ratio, at 18 ± 1 °C for 9 d. After curing, marrons were stored in a cold room at 15 ± 1 °C for 90 d. Several chemical, physical, microbiological characteristics of the fruit were measured prior to, during and after curing. Results showed that water curing had some preservative effects on marrons. Hydration of fruit during curing resulted in decreased moisture loss during storage. Water curing had an inhibiting effect on fruit-infecting fungi (i.e. *Ciboria batschiana*, the agent of black rot). A phenomenological hypothesis to explain preservation effects is proposed.