

Title Induction of stilbenes in grapes by UV-C: Comparison of different subspecies of *Vitis*

Author Raúl F. Guerrero, Belén Puertas, María I. Fernández, Miguel Palma and Emma Cantos-Villar

Citation Innovative Food Science & Emerging Technologies, Volume 11, Issue 1, January 2010, Pages 231-238

Keywords Grapes; LC-DAD-MS/MS; Stilbenes; UV-C treatment; *Vitis* subspecies

Abstract

Bioactive products enriched in stilbenes are considered of potential future interest, and the main sources of stilbenes in human diet are grapes. Postharvest ultraviolet C (UV-C) treatment was used to induce stilbene biosynthesis in grapes of three varieties of *Vitis vinifera sylvestris*, seven of *Vitis vinifera sativa*, and two Hybrid Direct Producers (HDPs). Stilbenes have been identified by UPLC-DAD-TQD and quantified by HPLC-DAD, and cluster analyses have been performed to classify subspecies by their stilbene profile. After UV-C treatment, the Syrah variety reached a maximum of 25 mg kg⁻¹ f.w. of total stilbenes in the 2008 vintage, and in the statistical analysis, this variety stood out from the other *Vitis* varieties tested. In 2008, varieties belonging to the *sylvestris* group and *Vitis vinifera sativa* Merlot also presented high stilbene production; however, the expected concentration in the HDPs was not obtained.