

**Title** Effects of salicylic acid (SA), ultraviolet radiation (UV-B and UV-C) on trans-resveratrol inducement in the skin of harvested grape berries

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**Citation** Frontiers of Agriculture in China, 2, Number 1, 77-81, 2008

**Keywords** grape; salicylic acid (SA); ultraviolet radiation; UV-B; UV-C; trans-resveratrol

#### **Abstract**

Effects of salicylic acid (SA), ultraviolet radiation (UV-B and UV-C) on the trans-resveratrol (Res) inducement of the skin of harvested grape berries were studied with three grape cultivars Takasuma, Tano Red and Carigane. Split plot design tests were adopted to compare the effects of UV-B and UV-C radiation on Res inducement of different cultivars. Results showed that spraying  $100 \text{ mg}\cdot\text{L}^{-1}$  SA markedly enhanced Res contents in the skins of harvested berries for the three selected cultivars. However, the effect of SA varied with the cultivars, and Res inducement by SA was more effective to Tano Red than Takasuma and Carigane. UV-B or UV-C irradiation significantly increased Res contents in grape skins and UV-C was more effective than UV-B. The effects of UV types and dosages on Res inducement depended upon cultivars. In the range of  $0\text{--}3.6 \text{ kJ}\cdot\text{m}^{-2}$ , the Res contents in the skins of the three grape cultivars were enhanced along with the increase of dosages of UV-B and UV-C.

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