

**Title** Controlling blue and green moulds of citrus by UV-C light  
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### **Abstract**

The application of Ultraviolet light-C doses (254 nm, UV-C) was used to determine the hormesis dose of UV-C which is able to reduce blue and green moulds of Citrus fruits caused by *Penicillium italicum* and *P. digitatum* respectively. UV-C effects on spore germination and fungus development, colony formation, spore viability and induction of enzyme related resistance were analyzed in relation with applied doses. The role of Citrus variety was also evaluated. The results of this investigation showed that UVC treatments had a positive effect on most traits. The optimal dose of UVC was established at 7 KJ/m<sup>2</sup> and was used in all performed tests. Effects on germination in the host tissues were affected by UVC treatment. Evidence of germicidal effect on of the *Penicillium* spp. was visualized by vital fluorescent staining with Cacofluor white and Nile red. Chitinase activity was also significant stimulated in UV-C irradiated fruit. We conclude that UV-C stimulate defense of fruit and also act by inhibiting the growth of the fungus.