

**Title** Ultraviolet-C treatments for spearmint decontamination of *Salmonella* sp. and *Escherichia coli*

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**Keyword** ultraviolet C; spearmint; *Salmonella* sp.

#### **Abstract**

This work was to evaluate the effect of ultraviolet-C (UV-C) radiation on spearmint leaves decontaminated with *Salmonella* sp. and *Escherichia coli*. Growth of *Salmonella* sp. and *E. coli* were evaluated *in vitro* after exposition to different UV-C radiation doses (0, 0.6, 1.2, 1.8, and 3.6 kJ/m<sup>2</sup>). *In vivo* assays, spearmint leaves were inoculated with the cocktail cell suspension of *Salmonella* sp. and *E. coli* then submitted to UV-C radiation at 3.6 kJ/m<sup>2</sup>. The treated leaves were stored at 13°C for 4 days and evaluated for microbial growths. The results showed that all UV-C doses was able to inhibit *Salmonella* sp. and *E. coli* growth *in vitro*, particularly the dose 3.6 kJ/m<sup>2</sup> showed the best inhibition. However, the UV-C radiation did not inhibit the growth of both pathogens on the spearmint leaves.