

606b Nonthermal Inactivation of *Escherichia Coli* and *Listeria Innocua* in Apple Cider Using a Novel Ultraviolet Light Apparatus

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Apple cider, inoculated with bacteria, was processed using an ultraviolet (UV) apparatus that is simple and effective. The apparatus consisted of a low pressure mercury lamp surrounded by a coil of UV transparent tubing. Cider was pumped through the tubing at flow rates of 27 to 83 ml/min. The population of *Escherichia coli* K12 was reduced by 3.4 log after being exposed for 19 s at a treatment temperature of 25 C. The population of *Listeria innocua*, which was less sensitive to UV, was reduced by 2.5 log after being exposed for 58 s at 25 C. The electrical energy for the process was 34 J/ml and is similar to that for conventional thermal processing. UV processing has the potential to improve the safety and extend the shelf life of apple cider while maintaining more of the fresh-like qualities of the cider compared to thermal processing.

