# Article information:

Effect of blue light on ethylene biosynthesis, signalling and fruit ripening in postharvest peaches | Elsevier Enhanced Reader
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# Article summary:

1. Blue light treatment enhances softening and ethylene production in postharvest peaches.

2. Blue light treatment upregulates the expression of genes involved in ethylene biosynthesis and signaling.

3. Blue light treatment does not significantly affect total soluble solid, titratable acidity, or fruit color in postharvest peaches.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article Effect of blue light on ethylene biosynthesis, signalling and fruit ripening in postharvest peaches explores the impact of blue light treatment on the ripening process, ethylene biosynthesis, and signaling in postharvest peaches. The study found that blue light treatment significantly enhanced the softening of peach fruit, delayed the peak time of ethylene production, and promoted higher ethylene production during storage. However, the article has several limitations that need to be addressed.

Firstly, the study only focused on one type of peach (Prunus persica cv. Jinli), which limits its generalizability to other types of peaches or fruits. Secondly, the sample size was relatively small (three replicates of 80 fruit each per treatment), which may affect the statistical power and reliability of the results. Thirdly, there is no discussion about potential risks associated with blue light treatment or any safety measures taken during the experiment.

Moreover, while the article provides some evidence for the positive effects of blue light treatment on fruit ripening and ethylene biosynthesis, it does not explore potential counterarguments or alternative explanations for these findings. For example, it is possible that other environmental factors (such as temperature or humidity) may have influenced the results.

Additionally, there are some unsupported claims in the article that require further evidence or clarification. For instance, it is stated that blue light plays important roles in pigment biosynthesis and disease resistance in postharvest fruit without providing any empirical evidence to support this claim.

In conclusion, while this study provides some interesting insights into the effects of blue light treatment on postharvest peaches' ripening process and ethylene biosynthesis/signaling pathways, it has several limitations that need to be addressed before drawing any definitive conclusions. Further research with larger sample sizes and more diverse types of fruits is needed to confirm these findings and explore potential risks associated with blue light treatment.

# Topics for further research:

* Potential risks of blue light treatment in postharvest fruit
* Environmental factors affecting fruit ripening and ethylene production
* Alternative explanations for the effects of blue light treatment on fruit ripening
* Generalizability of the study's findings to other types of peaches or fruits
* Empirical evidence for the role of blue light in pigment biosynthesis and disease resistance
* Safety measures taken during the experiment to mitigate potential risks.

# Report location:

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