

# Dynamic variation of endogenous flora in kiwifruit and its association with ripening metabolism in response to ethylene micro-environment

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## Abstract

The interaction between endophytes and their host affects fruit health and adaptability to the environment. To explore the intimate association between endogenous flora of postharvest fruit and its host under specific metabolic conditions, the ethylene micro-environment was constructed to accelerate kiwifruit ripening. The results showed that the ethylene micro-environment accelerated the ripening metabolism of kiwifruit. The bacterial and fungal microbiome may play various roles as kiwifruit endophytes and displayed different variations under the effect of micro-environment. While the correlation patterns among core bacterial and fungal members in different groups also showed different variations. In addition, three bacterial genera and six fungal species were found to show correlations with soluble solids content, skin hardness, flesh firmness, water soluble pectin content and protopectin content of kiwifruit. Our results revealed the dynamic variations of endophytes and their associations with kiwifruit ripening under the effect of ethylene micro-environment.