



Volatile Organic Compounds (VOCs) as BIOMARKER for fruit quality

During the storage of fruit small amounts of gases (Volatile Organic Compounds, VOCs) are released. The composition of these VOCs is a BIOMARKER for the quality of the fruit. Fruit flies have known this for a long time: they know how to find rotting fruit flawlessly. The aim of this research is to identify measurable VOCs that can serve as a biomarker for fruit quality, with a primary focus on red currant and pear during long-term Controlled Atmosphere (CA) storage.

About the research

During three storage seasons lab experiments have been conducted with red currants. VOCs and fruit quality were regularly analyzed. In another lab experiment, pears were infected with various fungal species, including *Cadophora* (fish eye rot, a.k.a. side rot). Produced VOCs and mold growth have been monitored. Many ad hoc practical measurements have been carried out to get an impression of the VOCs that occur in commercial storage rooms in specific situations.

Scientific innovations

A correlation has been shown between VOCs and the quality of red currants during long-term CA storage. In lab experiments VOCs were identified that are specific to common fungi in pear storage.

Relevance for sector

Monitoring VOCs gives an indication of the quality of fruit during storage, and can therefore help in optimizing the sales moment.

"Some VOCs are an indicator of fruit quality, and those VOCs are measurable in CA storage rooms"



For more information about the project and the partners, please visit:

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Information

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