Abstract

Very little attention has been given, so far, to the utilization of the olfactory response of fresh produce, as an additional, complementing, consumer-oriented and non-destructive quality evaluation method. In many cases, fruit and vegetable ripening is associated with an accumulation of aromatic volatiles. Thus, it is conceivable that they can be related to the ripening process and hence, the incentive to develop an artificial olfactory sensing technology.

This problem has already been addressed by many researchers, but no commercial instrument is available as yet for the cited application.

The purpose of this review is provide a stimulus for further development of aroma sensing technologies to yield a suitable methodology and instrumentation for artificial olfactory sensing of fresh produce. For a full understanding of the complexity of the application, the review described the human mechanism of smelling, delineate existing technologies of gas and aroma sensing and suggest further future research and development.