



Book of Abstract

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Investigation on postharvest attitudes of cauliflower

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Cauliflower is a high demand vegetable, due to its high nutritional value. Indeed, especially during wintertime in the northern hemisphere, it is an important source of vitamins, antioxidants and anti-carcinogenic compounds. After harvest and before consumer 'consumption, the curds are usually stored for several weeks at 1-4 °C but more critical is the storage in slices or fresh-cut for its perishability. The overall visual appearance and absence of off flavours are crucial criteria for buying decisions of consumers of this type of vegetable. Moreover, its firmness, colour and aroma both of raw and cooked cauliflower influence further consumers' acceptance. The variability among different types of cauliflower is consistent: mainly common cauliflower and Romanesco cauliflower both belong to *Brassica oleracea* var. *botrytis*, but their external surface, colour, and aroma are different. In this study, a standard protocol was developed to assess the firmness and external color of the curd for both cauliflower types at harvest and after 1 week of storage at 4°C. After a literature review, a protocol was established to identify the proper spots for firmness measurements (using a cylindrical probe, model 53205, TR snc.) and colour measurements (using a portable colorimeter, model PCE –XXM 30) on the curd. Furthermore, aroma profile of green and orange colour Romanesco type cauliflower in three biological replicates at harvest and after 10 days of storage at 4°C and 15°C were characterized by analysis of volatile organic compounds of raw and cooked samples by proton-transfer-reaction time-of-flight mass spectrometry (PTR-ToF-MS). The overall differences were observed between different colour types and storage conditions of cauliflower for both raw and cooked samples.

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