APRICOT: TEXTURE VARIABILITY AS A FUNCTION OF CULTIVAR, INFLUENCE OF MATURITY AND IMPACT OF COOKING

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Introduction

Apricot (Prunus armeniaca L.) is a fleshy fruit of real economic and nutritional interest. The rapid loss of fruit firmness is a decisive factor for quality and difficulty. To better understand the texture heterogeneity in apricot, we studied the impact of the harvest stage and the effect of a heat treatment on a large range of cultivars.

Materials and methods

18 apricot cultivars were collected from Aamarine (Gard) and Gothenon (Drôme) INRA domains in 2015. Maturity stages were defined by compression test, with the same pressure value for all cultivars: M1 130 kPa (commercial) and M2 100 kPa (half-ripe). Apricot halves were cooked in a light syrup until 85°C at heart. Puncture test (diam. 2mm, height 9 mm) and shear test (Kramer cell) were performed with a Texturometer TaPlus (Lloyd).

Localization of the puncture tests and parameters obtained according the force / displacement curve. Fm (N): maximum load, Defln(mm): deflection at maximum load. Wm(N): work to maximum load, Fl(N): load at limit, Wl(J): work to limit, Mp (N): load average for the tray.

The classification according the work at limit (Wl) for median equatorial area (z2) shows the differences between the cultivars. For fresh apricots, the classification obtained for M1 stage changes for more ripe fruits (M2).

The firmest and the less firm cultivars keep their property after a heat treatment for the two maturity stages. Vertige, Gaterie, Bergarouge, Hargrand and Candide represent the more resistant apricots after cooking, so the more suitable cultivars for industrial process.

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