

Title Effect of cultivars, wound healing and storage on sensory quality and chemical components in pre-peeled potatoes

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### **Abstract**

This study deals with eating quality of pre-peeled potatoes. The effect of raw material quality (cultivar, duration of wound healing and storage) on chemical composition of raw potatoes, and sensory quality and aroma composition of cooked pre-peeled potatoes were determined. Potatoes were knife peeled, vacuum-packed, stored at 4 °C, and evaluated after 6 days of shelf-life. Significant differences in chemical composition, sensory quality and aroma composition were found among the 6 cultivars. Storage (0, 1½ and 6 months) also affected the sensory quality and the aroma composition. For surface hardening an effect of wound healing time (2 or 4 weeks at 14 °C) was observed, since 4 weeks resulted in lower intensity in surface hardening. During long-term storage the intensity in surface hardening decreased. The aroma compounds linalool, methional, nonanal and decanal were correlated to potato flavour and rancidness, whereas off-flavour/off-taste seemed to be correlated to nonvolatile components. Enzymatic browning of potatoes was positively correlated with PPO activity, tyrosin and chlorogenic acid as well as aspartic and glutamic acid, but negatively correlated to caffeic acid. The study showed that the quality of pre-peeled potatoes is very sensitive to raw material quality, and the time of year being processed.