TEXTURE AND OIL CONTENT OF PRE-DRIED POTATO CHIPS

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ABSTRACT

The objective of this work was to determine the effect of the pre-drying treatment over the texture evolution and the oil uptake of blanched potato slices during frying. Prior t o frying, potato slices (Panda variety, diameter: 37 mm, width: 2.2 mm) were blanched in hot water at 85 ºC for 3.5 min. Blanched potato slices were used as the control. Some blanched slices were additionally air-dried until reaching moisture contents of ~60g/100 g (wet basis). The texture and oil content of the slices were measured periodically during frying. Normalized Maximum Force (MFn) was the parameter used to model the textural changes in the potato slices during frying in both the initial tissue softening process and the later crust development process. Both the frying temperature and the pre-drying treatment had a significant effec ($P>0.05$) over the final texture and oil content of the fried potato chips. When frying at 120 ºC, potato chips were crispier and contain more oil than potato chips fried at 180 ºC. Pre-drying decreased dramatically the oil absorption and increased significantly ($P>0.05$) the crispness of the blanched potato slices after drying.